U.S. Fish & Wildlife Service

Hanford Reach National Monument Rattlesnake Unit

Draft Supplemental Environmental Impact Statement for Public Access

Estimated Lead Agency Total Costs Associated with Developing and Producing This DEIS

$178,000

[Inside Front Cover]

Hanford Reach National Monument

Rattlesnake Unit

Draft Supplemental Environmental Impact Statement

for Public Access

Prepared by

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PRODUCED IN THE LANDS DIVISION
PORTLAND, OREGON
LAND STATUS CURRENT TO: 04/18/2013
MAP DATE: 6/18/2018
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MERIDIAN: WILLAMETTE
FILE: R1_NWRS_FY18_060_2.mxd

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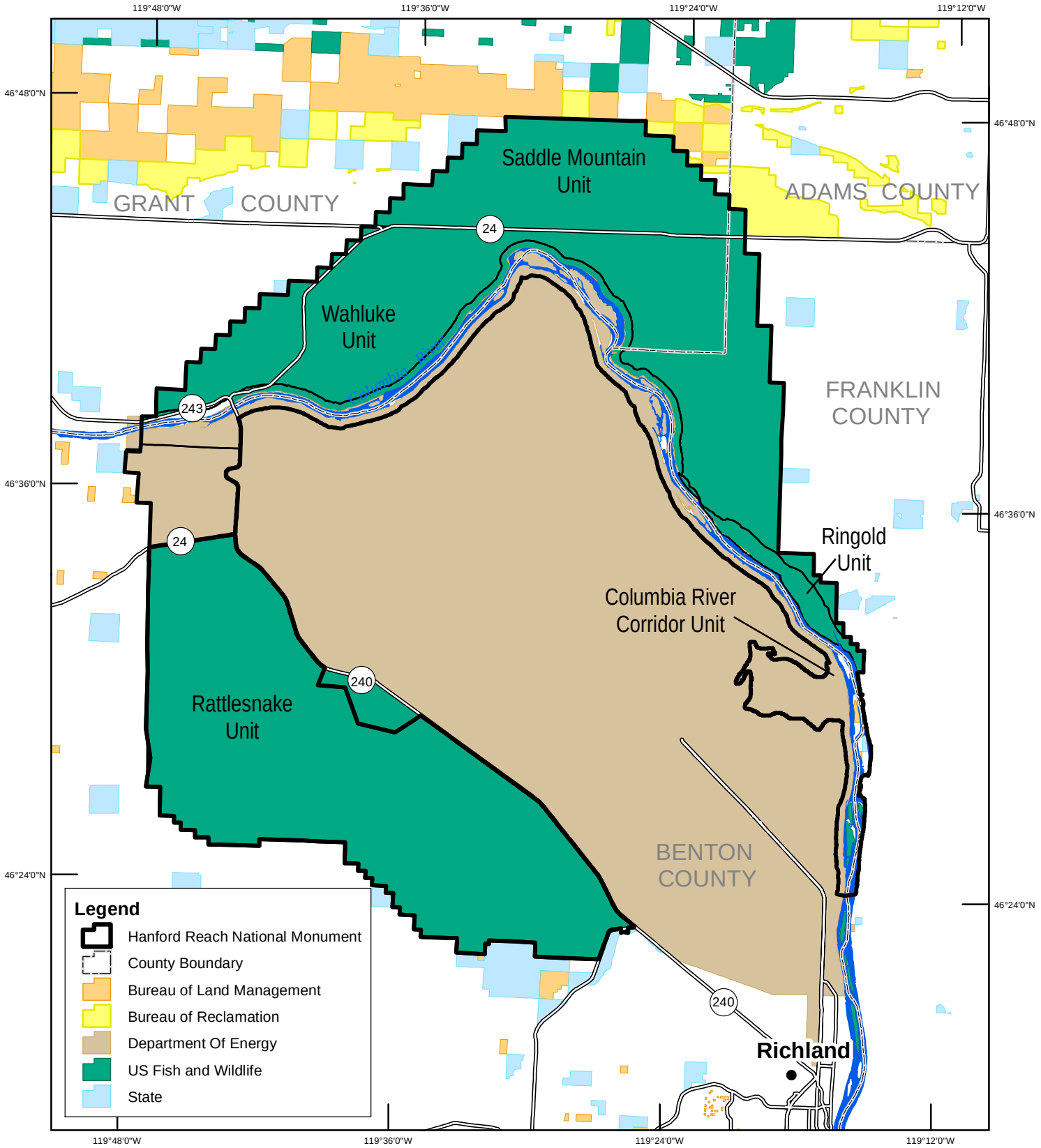
Hanford Reach National Monument

Adams, Benton, Franklin and Grant Counties, Washington

Map 2 - Land Management



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Saddle Mountain National Wildlife Refuge
Map Date: 7/26/2018
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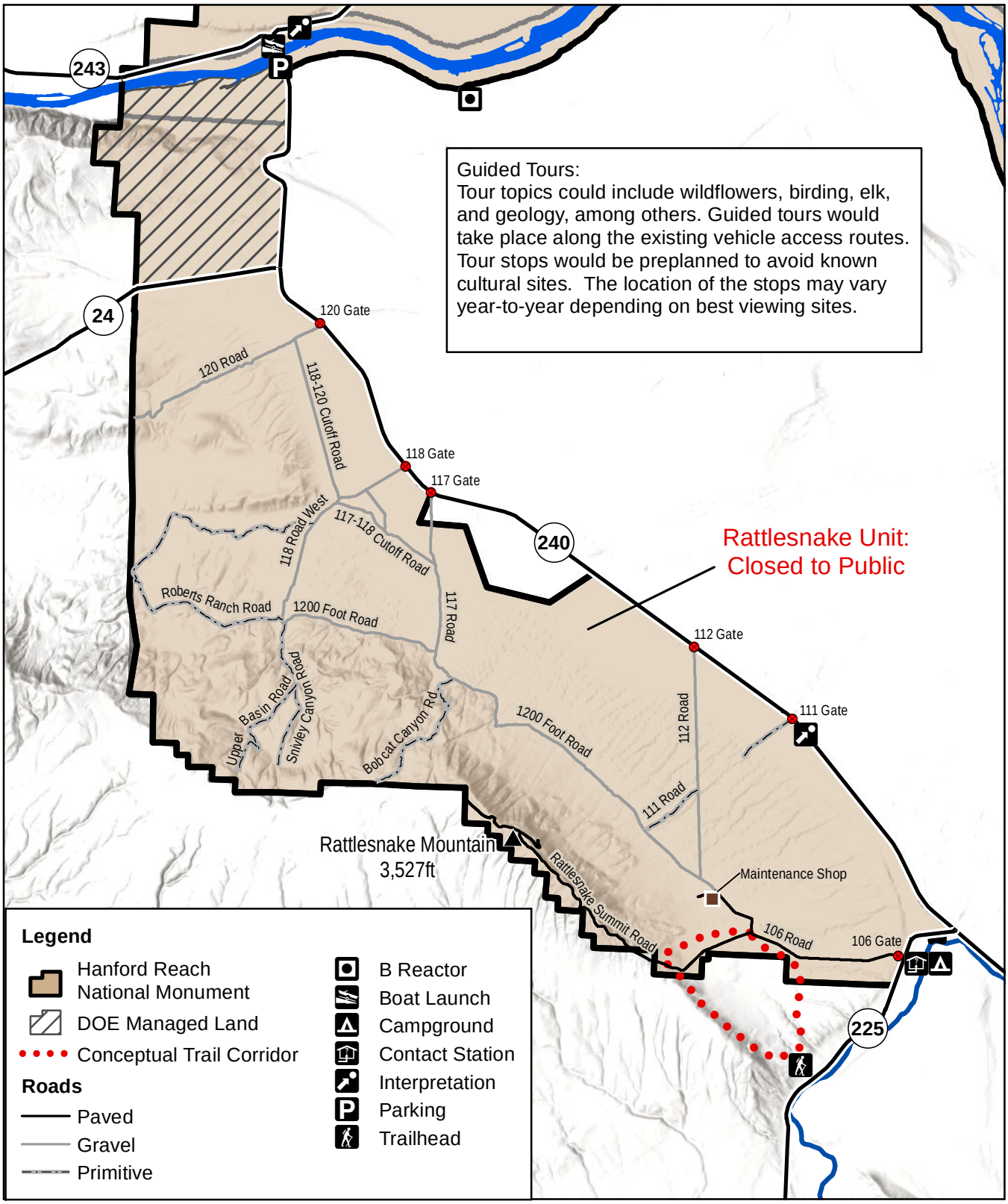
Adams, Benton, Franklin and Grant Counties, Washington

Map 3 - Alternative A



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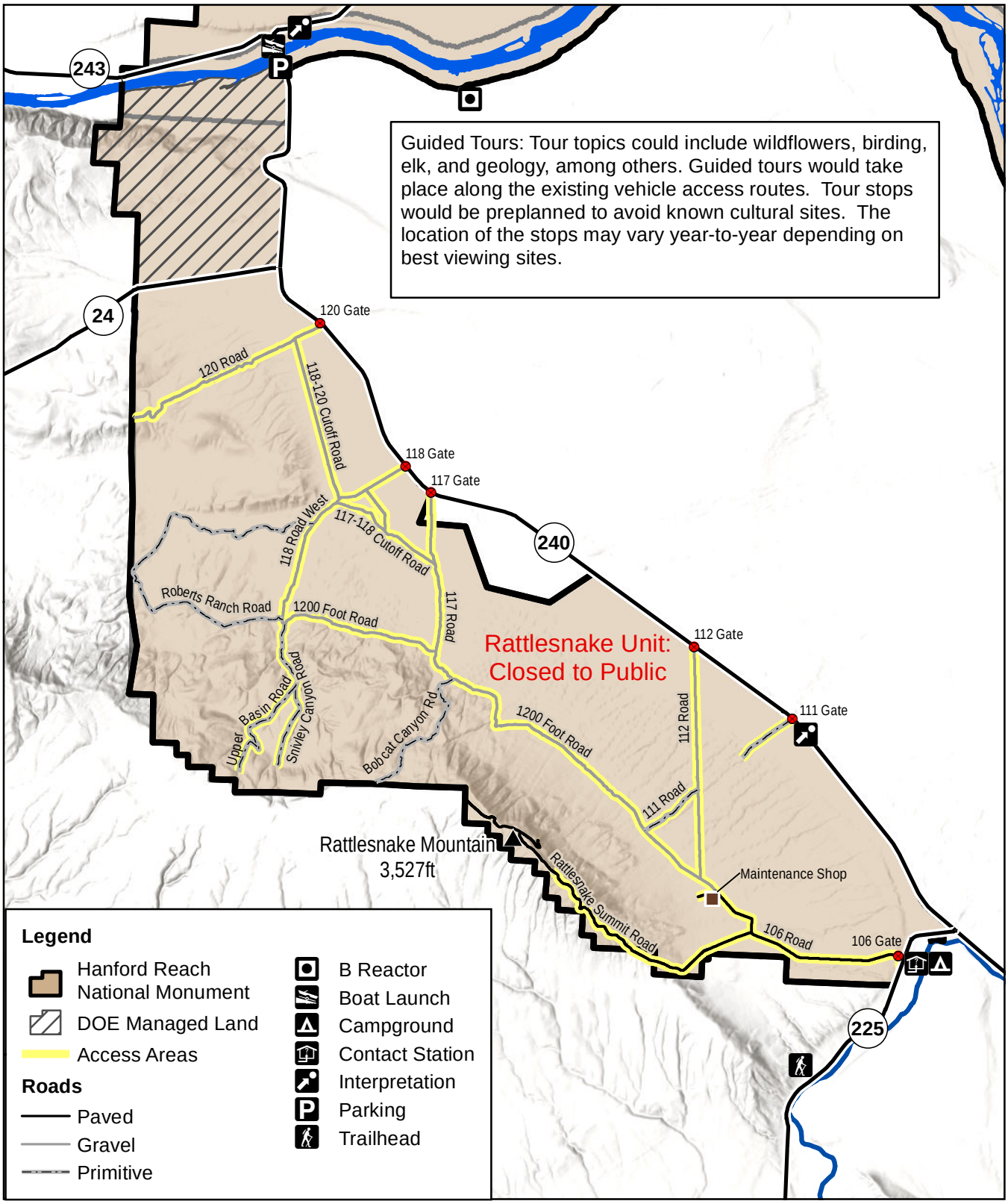
Hanford Reach National Monument

Adams, Benton, Franklin and Grant Counties, Washington

Map 4 - Alternative B, Tours



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Saddle Mountain National Wildlife Refuge
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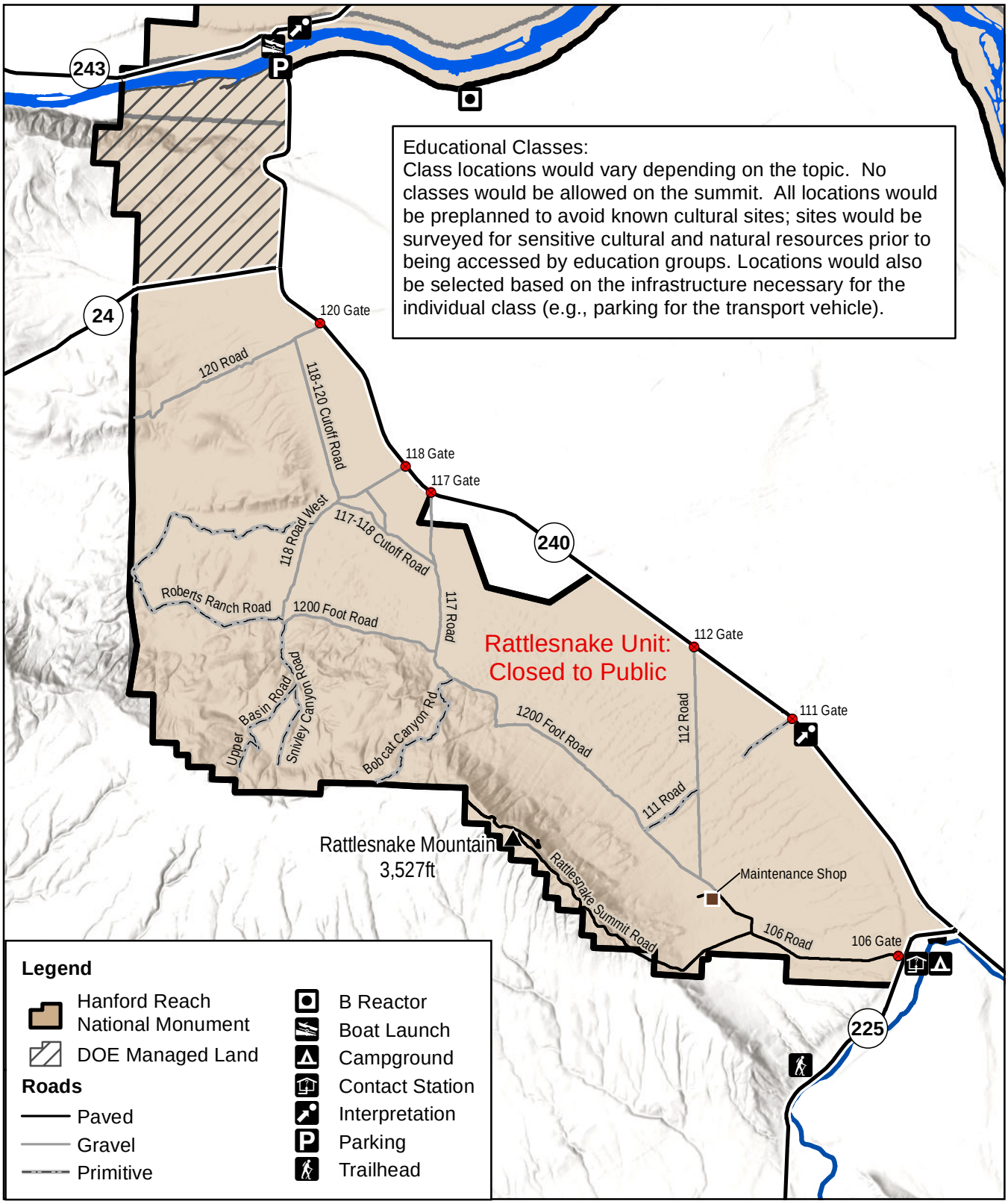
Hanford Reach National Monument

Adams, Benton, Franklin and Grant Counties, Washington

Map 5 - Alternative B, Classes



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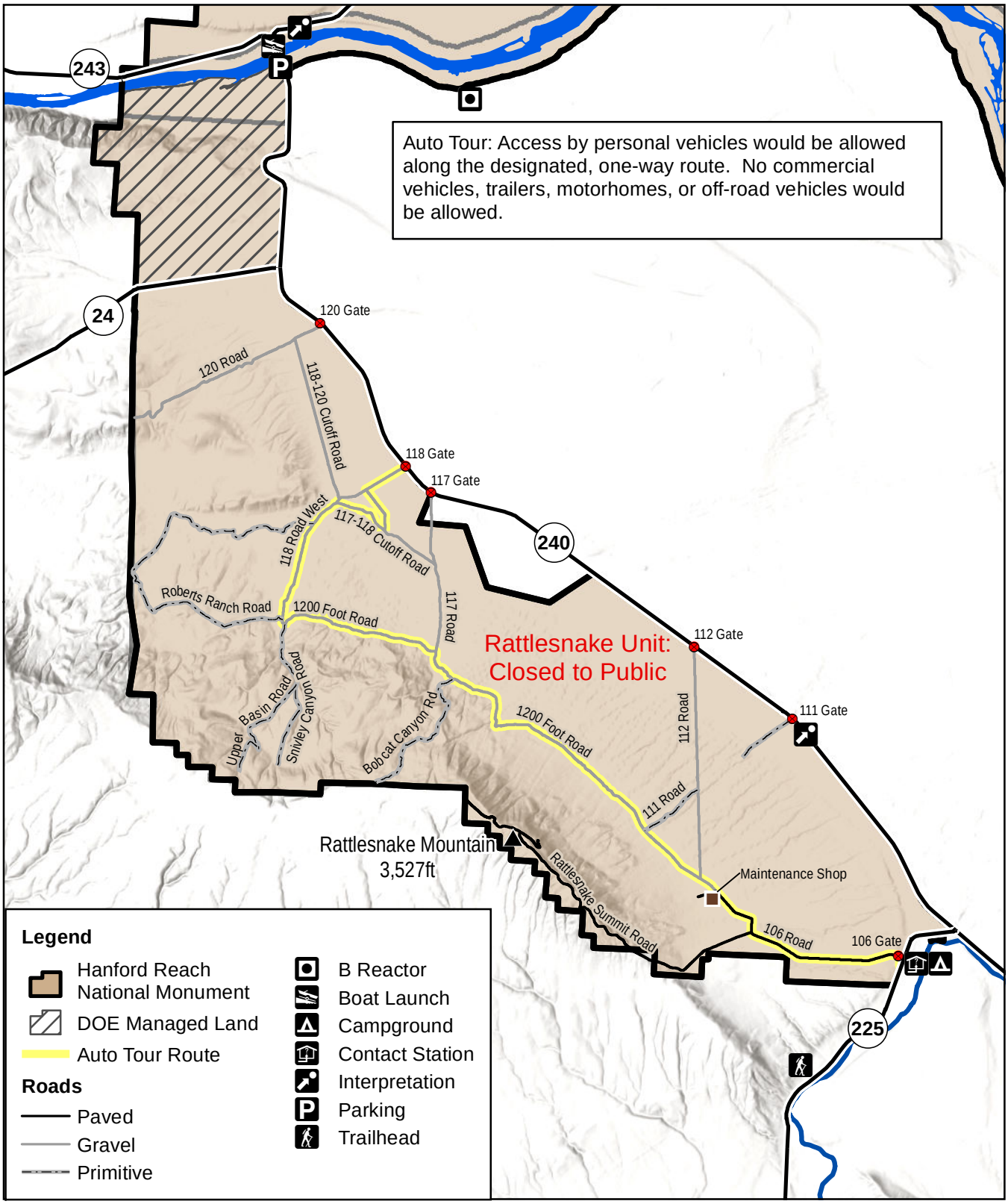
Map 6 - Alternative B, AutoTour



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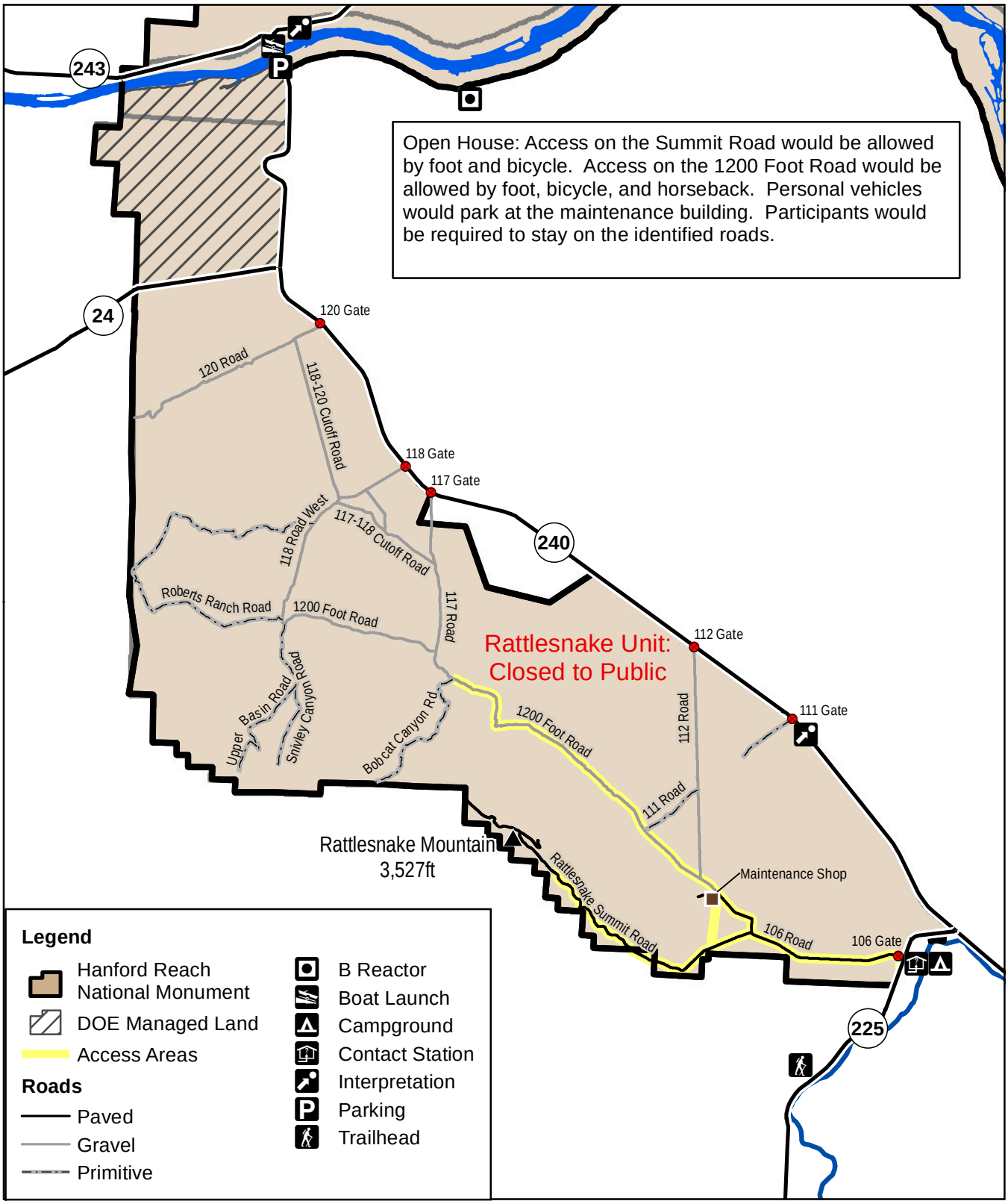
Adams, Benton, Franklin and Grant Counties, Washington

Map 7 - Alternative B, Open House



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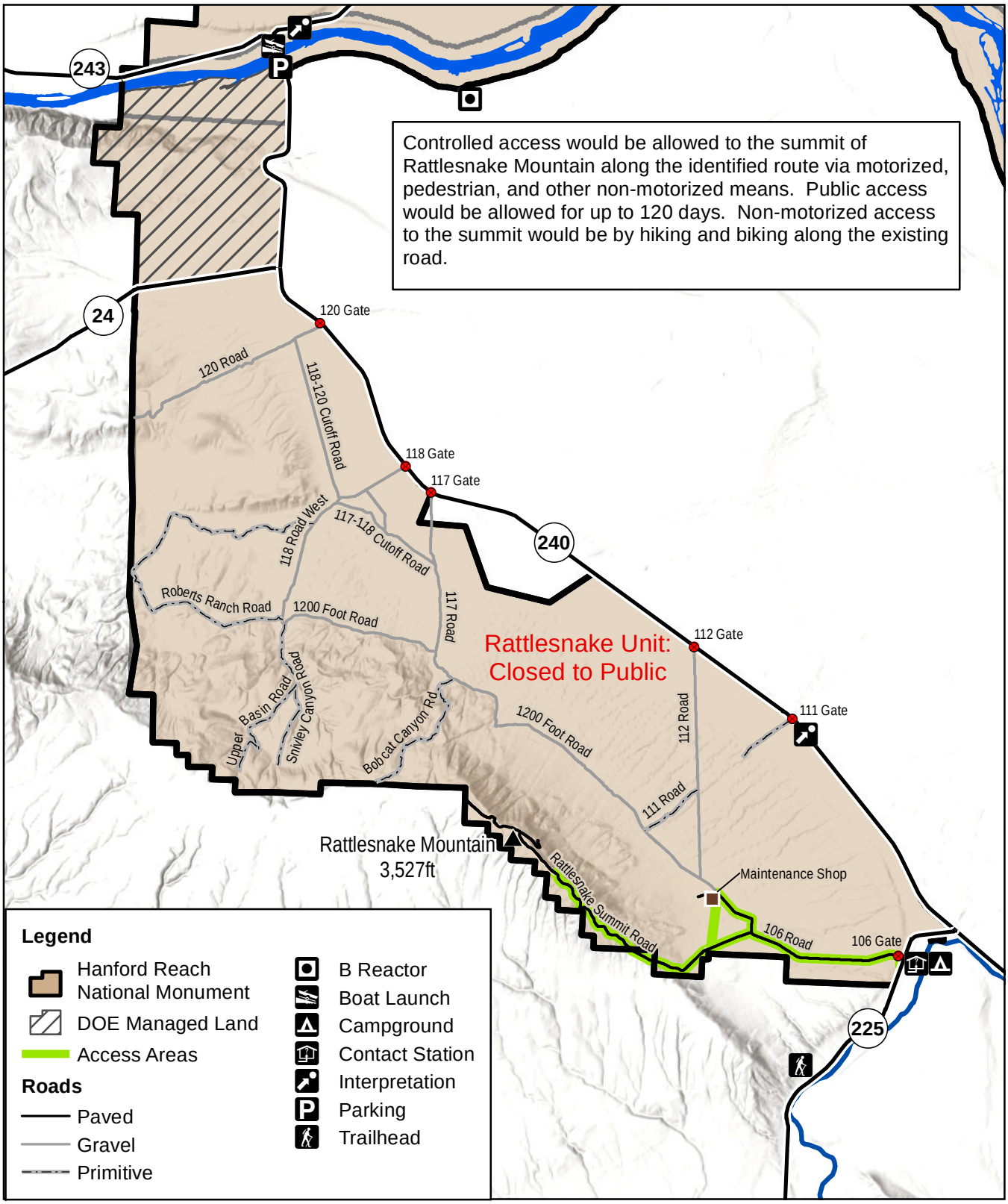
Adams, Benton, Franklin and Grant Counties, Washington

Map 8 - Alternative C, Controlled Summit Access



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1. Introduction

The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 (NDAA) directed the U.S. Fish and Wildlife Service (Service) to "provide public access to the summit of Rattlesnake Mountain on the Hanford Reach National Monument (Monument) for educational, recreational, historical, scientific, cultural, and other purposes, including: (1) motor vehicle access; and (2) pedestrian and other nonmotorized access" (Public Law 113-291, Section 3081). The NDAA also allows for cooperative agreements with others to assist with guided tours, including motorized tours, and maintenance of the access road to the summit of Rattlesnake Mountain.

On the 81,070-acre Rattlesnake Unit, the Service manages approximately 73,980 acres inside the boundaries of the Fitzner-Eberhardt Arid Lands Ecology (ALE) Reserve, located south of Washington Highway 240. Under the current Hanford Reach National Monument Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS; Service 2008), the Service-managed lands within the Rattlesnake Unit remain closed to public access. To protect sensitive natural and cultural resources, existing access, which is currently limited to research or environmental education activities, requires an approved Special Use Permit (SUP) or must be via a Service-led activity. Therefore, an amendment to the 2008 CCP/EIS is required before the NDAA directive can be implemented. While the NDAA directs the Service to provide public access to the summit of only Rattlesnake Mountain, the Service is also considering access to other portions of the Rattlesnake Unit on the Monument.

The 2008 CCP/EIS is intended to be a dynamic plan, based on the concept of adaptive management, and includes provisions for amendments and revisions. The proposed CCP amendment, evaluated in this draft supplemental environmental impact statement (DSEIS), is limited to the Service-managed lands within the Rattlesnake Unit.

1.1 Purpose and Need

The purpose of the CCP amendment is to provide public access to the Rattlesnake Unit, including the summit of Rattlesnake Mountain, within the Monument in a manner that is compatible with the NDAA, Presidential Proclamation 7319, public safety, protection of natural and cultural resources, and other existing laws, regulations, and policies that govern actions on the Monument (Appendices D, E, and H of the CCP/EIS). Public access is intended to support educational, recreational, historic, scientific, and cultural activities within the Rattlesnake Unit. The need for the action is directed by Section 3081 of the NDAA, which directs that public access for these purposes be provided to the summit of Rattlesnake Mountain on the Monument.

1.2 Description of the Planning Area

A detailed description may be found in the 2008 CCP/EIS. A brief summary is provided below.

1.2.1 Hanford Reach National Monument

The Monument, located near the Tri-Cities (Kennewick, Pasco, and Richland) in south-central Washington State, was established on June 9, 2000, and is managed by the Service and the Department of Energy (DOE).

The entry of the United States into World War II, and the race to develop an atomic bomb, led to a search for a suitable place to locate plutonium production and purification facilities. In 1943, the War Department (later to become the Department of Defense) took steps to identify a remote, easily defensible, geologically stable site with sufficient water, energy, and a moderate climate on which to build plutonium production reactors. The U.S. Army Corps of Engineers selected a site in Washington State near the towns of White Bluffs and Hanford. The War Department then acquired the land through condemnation and purchase of private lands and withdrawal of public lands within the basin formed by Rattlesnake Mountain and Saddle Mountain.

For more than 40 years, the primary mission at the Hanford Site was the production of nuclear materials for national defense. The Atomic Energy Commission, and later DOE, developed infrastructure and facility complexes to accomplish this work in the central portion of the site, but large tracts of land used as protective buffer zones for safety and security purposes remained largely undisturbed. These buffer zones preserved a nationally significant biological and cultural resource setting in the Columbia Basin region.

Starting in the early 1970s, there was a reduced need for large safety and security buffer zones around the Hanford Site, and the DOE transferred management of portions of the North, or "Wahluke," Slope (the area north of the Columbia River) to the Service—creating Saddle Mountain National Wildlife Refuge—and to the Washington State Department of Fish and Wildlife (WDFW). By the late 1980s, the primary DOE mission had changed from defense materials production to environmental restoration, waste management, and science and technology research, further decreasing the need for a large land base.

In 1997, the DOE transferred the administration of the ALE to the Service. In 1999, lands managed by the WDFW, known as the Wahluke Wildlife and Recreation Area, were transferred to the Service to be managed, under a DOE permit, as part of the National Wildlife Refuge System (Refuge System). The WDFW retained administration of the area around the Vernita Bridge under a DOE permit to provide access for sport fishing on the Columbia River.

In the 1980s, concerns for protection of the Hanford Site's natural and cultural resource values grew, as did interest in consolidating management under one natural resource agency. In 1988, Congress directed the Secretary of the Interior and the Secretary of Energy to evaluate the outstanding features of the Hanford Site and its immediate environment—including fish, wildlife, geology, scenery, recreational, historic, and cultural values—and to recommend alternatives for their preservation. The resulting 1994 Department of the Interior report, *Hanford Reach of the Columbia River Comprehensive River Conservation Study and Environmental Impact Statement*, identified the Service as best suited to protect those values. President Clinton created the Hanford Reach National Monument with Proclamation 7319 on June 9, 2000, through his powers under the American Antiquities Act of 1906, as amended (Public Law 59-209, 34 Stat. 225, 16 United States Code § 431–433). This new national monument consisted of 196,000 acres of buffer lands around what is generally known as Central Hanford, where the nuclear facilities were located.

The Monument is the only national monument managed by the DOE and one of only seven managed by the Service. Of the 196,000 acres that make up the Monument, the DOE currently administers approximately 29,000 acres and retains land ownership or control on all acreage. Approximately 165,000 acres are currently managed by the Service through its authorities under the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 United States Code § 668dd-ee), Presidential Proclamation 7319, and

through agreements with the DOE. The WDFW administers approximately 800 acres of the Monument through a permit with the DOE. Other state and federal agencies and utility districts maintain rights-of-way or manage small tracts of land within the Monument's boundaries.

In addition to the national monument designation, Rattlesnake Mountain, also known to local tribes as *Laliik*, has been determined to be a "historic property of cultural and religious significance to Indian tribes," or a Traditional Cultural Property (TCP), under the National Historic Preservation Act of 1966, as amended (NHPA), and the implementing regulations at 36 Code of Federal Regulations (CFR) Part 800. The 55,300-acre TCP encompasses approximately 75 percent of the Rattlesnake Unit.

1.2.2 Administration as a National Wildlife Refuge

In creating the Monument, President Clinton noted that, "The [Service] manages lands under its management jurisdiction pursuant to the National Wildlife Refuge System Administration Act . . ." (management guidance provided by the White House when the Proclamation was signed). A July 26, 2000, memorandum from Interior Secretary Bruce Babbitt further clarified the Monument to be administered as a unit of the Refuge System "[p]ursuant to the terms of the management agreements [between DOE and the Service] and the National Wildlife Refuge Administration Act . . ."

Under the National Wildlife Refuge System Administration Act, as amended, "The mission of the [Refuge] System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Mission Goals and Purposes policy, 601 FW 1).

The Refuge System has several goals:

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered;
- Develop and maintain a network of habitats for migratory birds, anadromous and inter-jurisdictional fish, and marine mammal populations that is strategically distributed and carefully managed to meet important life history needs of these species across their ranges;
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts;
- Provide and enhance opportunities to participate in compatible, wildlife-dependent recreation (hunting, fishing, wildlife observation, photography, environmental education, and interpretation);
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

Because the Monument is administered as a component of the Refuge System, the legal mandates and policies that apply to any national wildlife refuge apply to the Monument. In providing public access to the Rattlesnake Unit, the Service is required to protect the resources of the Monument and its role in the Refuge System. That is, the Service is required to protect the purposes for which the Monument was created.

1.2.3 Monument Purposes

The purposes of any national wildlife refuge are "specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit" (National Wildlife Refuge System Administration Act, as amended). In this instance, the purposes are defined in Proclamation 7319. The Proclamation specifically notes a list of resources deemed nationally significant, including:

- A shrub-steppe ecosystem, including breeding populations of steppe- and shrub-steppe-dependent birds, such as loggerhead shrikes, sage sparrows, sage thrashers, and ferruginous hawks;
- Water-related resources, including 46.5 miles of the 51-mile-long Hanford Reach of the Columbia River, fall Chinook salmon spawning areas, and sturgeon;
- Important archaeological and historic artifacts from more than 10,000 years of human occupation, including prehistoric pit houses, graves, spirit quest monuments, hunting camps, game-drive complexes, quarries, hunting and killing sites, and more recent human activity, such as homesteads and early towns;
- A diversity of native plant and animal species, including rare and sensitive plant species such as Umtanum desert buckwheat and White Bluffs bladderpod; habitat for migratory birds and resident species, including wintering habitat for bald eagles, white pelicans, and ducks; nesting sites for rare bird species, including prairie and peregrine falcons; mammals, including elk, beaver, badgers, and bobcats; and insect species new to science or not previously identified in the state of Washington;
- Microbiotic crusts;
- Significant geological and paleontological objects, such as the White Bluffs and Hanford Dune Field, and mammalian fossils of rhinoceros, camel, mastodon, and others.

The Monument Proclamation and an accompanying management guide provided by the White House set forth specific actions and established a basis for managing of the Monument. In addition, they set forth the following mechanisms for protection of the significant resources found:

- Federal lands were withdrawn from disposition under public land laws, including all interests in these lands, such as future mining claims;
- Off-road motorized and mechanized vehicle use were prohibited, except for emergency or other federally authorized purposes, including remediation purposes;
- The ability to apply for water rights from the Columbia River, sufficient to fulfill the purposes for which the Monument was established, was reserved;
- Livestock grazing was prohibited;
- The Service and DOE (subject to certain provisions) were established as the managers of the Monument;
- The Monument was to be managed by the Service under existing agreements with the DOE, including a land management transfer mechanism from the DOE to the Service;
- Clean-up and restoration activities were assured;
- Existing rights, including tribal rights, were protected.

1.3 Purpose of the Supplemental Environmental Impact Statement

The purpose of this DSEIS is to evaluate the reasonably foreseeable environmental effects resulting from allowing public access to the Rattlesnake Unit, including the summit of Rattlesnake Mountain,

as mandated by the NDAA. The reasonably foreseeable environmental effects are analyzed according to the National Environmental Policy Act of 1970 (NEPA) regulations.

1.3.1 History of the CCP Planning Process

The CCP and associated EIS were completed in August 2008, providing direction to the Service on management of the Monument for the subsequent 15 years (through 2023). The CCP provides the framework for making decisions on conserving natural, cultural, and recreational resources, managing visitor use, developing facilities, and addressing day-to-day operations of the Monument.

As part of the selected alternative for the CCP, the Rattlesnake Unit was delineated based on ecological characteristics (soils, flora, fauna), paleontological and geological features, and cultural/historical diversity and uniqueness. The CCP directs management in the Rattlesnake Unit to focus almost exclusively on preservation and restoration. It notes that it will also be influenced by special factors, such as the designation of the ALE as a research natural area (RNA). The Rattlesnake Unit was classified as a Closed Zone in the CCP/EIS to protect sensitive natural and cultural resources. Closed Zones prohibit unsupervised public access except through an SUP or other specific permission approved by the Service. The classification, however, included provisions for public access if under Service control and oversight. The CCP indicates that some public use might be compatible with resource protection goals in the Rattlesnake Unit if positioned, administered, and monitored properly. However, if public access were provided, intensive management through designated access points, trails, and road systems, as well as seasonal use restrictions, would be necessary to ensure resource protection.

1.3.2 History of Implementation of Public Access to the Rattlesnake Unit

The Service participated in NHPA Section 106 consultations for public access tours slated to start in 2010. The 2010 proposal was eventually abandoned by the Service due to tribal opposition. The Service announced another proposal in 2011 for tours that focused on shrub-steppe restoration; however, the tour was also abandoned after receiving opposition from area tribes.

In 2012, the Service changed its proposal to two guided wildflower bus tours on one day and invited the tribes' review. After considerable consultations with the tribes and State Historic Preservation Officer (SHPO), the Service sent a letter to the consulting parties explaining its justification for a determination of "no adverse effect" for the proposed wildflower tours. The tribes and Washington Department of Archaeology and Historic Preservation (DAHP) disagreed with the Service's finding. There was not enough time to resolve the disagreement with the Advisory Council on Historic Preservation (ACHP) under 36 CFR 800 regulations before the spring wildflower season, so the Service cancelled tours on the Rattlesnake Unit in 2012.

The Service then updated the NHPA Section 106 report to address tours proposed for 2013-2017 (up to twelve tours each spring). The Service resubmitted the updated report to the consulting parties and the ACHP in November 2012. Specifically, the Service wrote with reference to 36 CFR 800.5(c)(2)(i) and the ACHP's procedures when a SHPO and other consulting parties do not concur with an agency's determination of no adverse effect. The Service requested the ACHP's opinion as to whether the Service had correctly applied the criteria of adverse effect and to review the determination of no adverse effect. The ACHP did not respond. The regulations at 36 CFR 800 indicate that when the ACHP does not respond, an agency's responsibilities under NHPA Section

106 are fulfilled. During a phone call in December 2012, the Service received confirmation that the ACHP had no plans to respond.

The Yakama Nation and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) sought judicial review of the Service's decision to provide public wildflower tours within the *Laliik* TCP. The court order, issued on March 20, 2015, granted partial summary judgement in favor of the tribes. The Court found that the Service did not consult after deciding to expand the wildflower tours from two guided bus tours on one day to up to twelve tours each spring over a five-year period.

The court directed the Service to "reopen consultation with each affected Tribe in accordance with relevant provisions of Title 54, United States Code and any applicable regulations." The court also issued an injunction prohibiting the Service from implementing wildflower tours without first complying with the consultation requirements outlined by the court in the order.

1.3.3 Scope of this SEIS

Given the purpose and need identified above, this DSEIS considers alternative public access options for the CCP amendment not evaluated in the 2008 CCP/EIS. Chapter 2 also provides a discussion of alternatives raised during public scoping or other consultation and coordination efforts that were eliminated from consideration in this DSEIS. Information contained in the 2008 CCP/EIS is incorporated by reference whenever applicable. This document also draws on relevant information from DOE's *Final Environmental Assessment for Combined Community Communications Facility and Infrastructure Cleanup on the Fitzner/Eberhardt Arid Lands Ecology Reserve* (DOE 2009), which addresses conditions and activities on the summit of Rattlesnake Mountain, as appropriate.

1.4 Public Involvement and Scoping

Appendix C provides the complete Public Access Scoping Report, published in April 2016, which followed two public scoping meetings in Richland, Washington, and a 30-day public comment period. Chapter 5 of this DSEIS provides key details related to agency consultation and coordination, government-to-government consultation with Native American tribes, and the public scoping process.

2. Alternatives Considered

This chapter describes the alternatives considered in this DSEIS. The Council on Environmental Quality regulations direct that an EIS shall "... rigorously explore and objectively evaluate all reasonable alternatives ..." 40 CFR § 1502.14. Guidance from the Council on Environmental Quality further explains, "When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS" ("Forty Most Asked Questions ..." 46 FR 18027). The purpose and need for action dictates the range of alternatives that must be analyzed, because action alternatives are not reasonable if they do not respond to the purpose and need for the action.

This section describes the alternatives available to the Service, given reasonably foreseeable staffing and funding levels, to fulfill the public access mandate of the NDAA. For public access, there are potentially endless variations in time and mode of access. The FWS has designed the range of alternatives in this DSEIS to span the full spectrum of alternatives that would respond to the purpose and need for the action. Nevertheless, the alternatives do not provide all possible combinations of plan components. There are components of the alternatives that are somewhat separable, and FWS may combine elements from several of these alternatives in developing the eventual decision.

The main features of each alternative are summarized below, followed by a discussion of alternatives that were eliminated from detailed analysis.

2.1 Actions Common to All Alternatives

The alternatives described in this DSEIS have been developed using best management practices (BMPs) that are common to all alternatives. BMPs are specific management and policy decisions that the Service has committed to incorporate into management actions, as appropriate, regardless of the alternative selected. BMPs are used to avoid or mitigate potential environmental impacts from proposed actions.

2.1.1 Avoidance of Sensitive Resources

Under all alternatives, visitor activity areas, facilities, and both non-vehicular and vehicular travel routes will be sited to minimize effects by avoiding sensitive natural and cultural resources, as identified by Service specialists, wherever practical. While Rattlesnake Mountain is a sensitive area, the NDAA mandates public access, and thus the area cannot be avoided. Potential adverse effects from visitor use will be further minimized through closures or special restrictions at sites with seasonal protection needs or sites vulnerable to or experiencing resource damage. Group size limitations may be used for specific sites or activities, as needed, to protect sensitive resources. Visitor use will be managed using informational signs, educational materials, trails, protective devices, on-site staffing, and law enforcement patrols.

2.1.2 Proper Use of Chemicals in Controlling Invasive Species

Invasive species are already established on the Rattlesnake Unit. However, allowing more people and vehicles into the area will invariably further the spread of invasive species, introduce additional species, and/or augment stands already in place. This will be handled according to the Monument's *Invasive Plant Species Inventory and Management Plan for the Hanford Reach National Monument*, which prescribes a methodology for treatment that includes inventories and population mapping,

assessments of risk, prioritization of treatments, integrated treatment implementation, and effective monitoring. This approach considers direct effects on soils, vegetation, watershed function, and biodiversity in all treatment recommendations. In sensitive plant communities, the use of multiple tools (e.g., chemical, biological, cultural, mechanical) may be necessary to prevent weed invasion and spread, as well as disturbance of soils and plant community structure and function. Use of biological control agents (e.g., insects, microorganisms, pathogens) for control of non-native invasive plant species will be implemented in accordance with Service policies only after such organisms have been subjected to testing and evaluation by the U.S. Department of Agriculture and approved for release.

2.1.3 Restoration Activities

Native seeds and/or plants derived from the Columbia Basin will be used as a priority for all planting/restoration projects in the Rattlesnake Unit, should the need arise due to increased public access. Providers of native seed or native plants to the Monument will provide documentation for the origin of seed or plants and will also, in the case of seed, provide certification that the seed provided to the Monument is free of noxious weed contamination. These requirements will be included in any scope of work prior to contracting the production and supply of plant materials. Plant materials may be refused if they do not meet these requirements. Occasionally, small amounts of seed will be collected from the Monument to be provided to plant nurseries and grown into seedling plants to be replanted onto the Monument. In these cases, Monument staff will supervise the selection of species for collection and the actual collection of seed from plants on the Monument. Seed collection needs for species and amounts will be based on annual restoration and rehabilitation needs. Seed will be collected during the appropriate season, as dictated by plant species phenology, and the parent plant will not be damaged or harmed in any way during seed collection. Seed will be collected from no more than 20 percent of individuals within a population, and no more than 50 percent of the total seed production from individual plants will be collected annually.

2.1.4 Adaptive Management

Adaptive management is an approach to resource management that emphasizes adjusting management practices in response to what has been learned. Adaptive management decisions are based on the best available science, common sense, experience, experimentation, new scientific discoveries, and monitoring. As public use occurs on the Rattlesnake Unit, Service staff will make observations and adjust future access in order to address unforeseen circumstances. Aspects of the public use program that may be subject to adjustment include, but are not limited to, the hours of operation, types of tours (e.g., wildflower, elk viewing), locations, group sizes, and parking area capacity. The public use program will be annually reviewed to assess any necessary changes based on funding and staffing capacity, public interest, resource concerns, safety concerns or other applicable issues. The CCP/EIS and other plans covering management actions on the Rattlesnake Unit (e.g., fire management plan) allow for a range of actions in order to adapt to unforeseen circumstances.

2.1.5 Cultural Resource Inventories

Prior to implementation of any activity proposed through this DSEIS, the applicable cultural resource compliance investigation will be undertaken. This investigation may entail a literature review, records search, field survey, and tribal consultation. If cultural resources are present, appropriate

procedures will be implemented to protect them according to federal laws and Service policies and guidelines.

2.1.6 Fire Management

Fire management activities will conform to guidelines set forth in Service policy and the approved fire management plan for the Monument. Wildland fire will be suppressed when possible; suppression techniques will be designed to minimize surface disturbance in the vicinity of sensitive resources. Fire control policies will be implemented to reduce the risk of wildland fire.

2.1.7 Aesthetic Considerations

Implementation of any proposed action will be carefully planned with landscape integrity in mind so as to avoid detracting from the Monument's natural beauty, scenic vistas, and aesthetic appeal to the extent possible. Support infrastructure (e.g., temporary restrooms) will be planned to have an unobtrusive profile and to blend with the environment whenever possible.

2.2 Alternative A – No Action Alternative

The No Action Alternative consists of continued implementation of the 2008 CCP/EIS. Management of the Rattlesnake Unit would continue as currently directed through the CCP, focusing on preservation and restoration. The Rattlesnake Unit would continue to be a Closed Zone, prohibiting access except through an SUP or other specific permission approved by the Service (see sections 2.8.4 and 2.9.5 CCP for discussion). Existing permitted research and environmental education activities would continue, subject to environmental and cultural resource compliance, with seasonal use restrictions to protect sensitive resources and minimize chances of wildland fire events during periods of high fire danger. Public access would continue to be limited to locations along the periphery of the unit and to Service-led tours (e.g., wildflower tours). TThe Service previously consulted with area tribes and the Washington SHPO on offering up to twelve tours each spring between 2013 and 2017, so similar amounts of public access would be likely (see Section 1.3.1.2). The Service would need to satisfy NHPA Section 106 requirements before conducting such tours on the unit.

Current use of the Rattlesnake Unit includes management activities associated with Service and DOE operations. Service-permitted access to the Rattlesnake Unit has been primarily associated with research activities.

The summit is currently the site of a consolidated emergency management and communications facility consisting of two communications towers and an operations and maintenance building. This infrastructure provides public safety and emergency communications support for organizations such as the DOE, Energy Northwest, Benton and Franklin Counties, regional cities, and local, state, and federal agencies (DOE 2009). Access to the summit by contractors, administered by the DOE, occurs via the existing Rattlesnake Summit Road. The summit is also culturally important to local Native American tribes who visit it periodically for religious and traditional purposes. .

2.3 Alternative B – Expanded Public Access

Under this alternative, the Service would expand public access to the Rattlesnake Unit through the implementation of four programs related to recreation and education. The unit would remain a

Closed Zone, but with the inclusion of Designated Use Zones, which would allow restricted public use of designated sites, trails, or roads. Public access would be allowed for up to 28 days per year, with the following initial set of activities:

- Guided tours to the summit up to 20 days per year.
- Environmental education classes up to four days per year, not including access to the summit.
- Open houses (foot, bicycle, and horseback) up to two days per year. Foot and bicycle access would include the summit.
- Personal auto tours up to two days per year, not including access to the summit.

The distribution of days to activities could change over time as demand changes, new information becomes available, or new opportunities arise. However, the total number of public access days would not exceed 28 per year.

The majority of public access visits would take place in the spring and fall, with the precise distribution of days/activities dependent on weather, fire conditions, wildlife needs (e.g., nesting), staffing, and other unforeseen considerations. Access would be along existing paved and gravel roads; no new road or trail construction is included under any alternative. Prior to public access, areas will assessed for cultural and natural resource sensitivity.

For all access programs described below, the Service would coordinate with area tribes to select dates that avoid overlap with tribal use periods. Tribes would also be invited to participate in all public access programs, such as through direct on-site interaction with visitors and printed educational materials. Following initial implementation, the Service would continue to monitor, evaluate, and adjust programs, as needed, in coordination with local tribes.

Guided Tours: Proposed guided tours would be limited to a maximum of two tours per day up to 20 days per year. Topics could include wildflowers, birding, elk, and geology, among others. Guided tours would take place along the existing vehicle access routes, including the Rattlesnake Summit Road (5.5 miles, rough and missing pavement), the 1200 Foot Road (9.7 miles, gravel), and the 118 Road (3.4 miles, dirt with some gravel) (Map 4). Vehicle access would be provided to the summit of Rattlesnake Mountain via tour bus or van, as well as throughout the Rattlesnake Unit. Personal vehicles would not be allowed in the Rattlesnake Unit for guided tours beyond potentially parking at the Service maintenance building. Tour stops would be preplanned to avoid known cultural sites, although the location of the stops may vary year-to-year depending on best viewing sites. Participants would have to remain within 200 yards of the road. Tours would be limited to 45 participants per tour, including Service and contracted personnel (e.g., vehicle drivers) that lead tours, with no more than 30 participants per vehicle. Partners assisting in tour activities to provide additional information and background (e.g., tribal members, DOE representatives) would not be counted as tour participants. In addition, all participants would be under Service or docent supervision.
Rules of conduct would be developed and distributed to participants before access is allowed, including, but not limited to: (1) no collection of any materials; (2) staying within the prescribed tour area; (3) remaining quiet to avoid wildlife disturbance; and (4) avoiding stepping on native plants and microbiotic crust to the extent possible. Restrooms would be provided on tour vehicles, if possible, at previously disturbed areas (e.g., Service maintenance building), or at designated areas with portable toilets. No portable toilets would be allowed on the summit of Rattlesnake Mountain. Law enforcement would be available to enforce rules and regulations.

Environmental Education Classes: These visits would be for teacher-led student groups. To avoid impacts to biological and cultural resources, teachers would be required to attend Service-led training before being allowed to lead groups in the Rattlesnake Unit. No classes would be allowed on the

summit of Rattlesnake Mountain (Map 5). The Service would control the days, hours, locations used, points of entry, and other necessary stipulations for educational groups. Locations would be preplanned to avoid known cultural sites; sites would be surveyed for sensitive cultural and natural resources prior to being accessed by education groups. Locations would also be selected based on the infrastructure necessary for the individual class (e.g., parking for the transport vehicle). Classes would be limited to two per day, up to four days per year, with one Service-trained educator for every 15 students, up to 60 students and teachers per class. Rules of conduct and other logistics would be handled as described above for guided tours.

Open Houses: Proposed open houses would be allowed up to two days per year and would allow access by foot or bike on the Summit and 1200 Foot Roads, including access to the summit of Rattlesnake Mountain. Horseback riding would be allowed on the 1200 Foot Road, which does not go to the summit of Rattlesnake Mountain. No access to other parts of the Rattlesnake Unit would be allowed (Map 7). Personal vehicles would park at the Service maintenance building adjacent to the Nike Missile Site, a heavily disturbed area. Parking, and thus access, would be limited to space available at the Service maintenance building and would be on a first-come, first-served basis; additional entry would be allowed only as space becomes available. Law enforcement and Service staff/docents would be on-site to monitor all public use. Rules of conduct would be similar as for the above programs; however, participants would be required to stay on the roads, horses would be limited to the 1200 Foot Road, and no horse feed would be allowed on-site. Horse waste would be collected after any event with horses by volunteers and Service personnel.

Personal Auto Tours: This program would allow access by personal vehicles along a designated one-way route on existing paved, gravel, and dirt roads two days per year. The route would follow the 1200 Foot Road, entering at the 106 Gate, turning onto the 118 Road, and exiting through the 118 Gate onto Highway 240 (Map 6). No access to the summit would be allowed, and participants would not be allowed to exit their vehicles along the tour route, except at designated and monitored sites. Roads not included in the route would be barricaded. Law enforcement and Service staff/docents would be on-site to monitor all public use. In order to accommodate auto tours, or to mitigate impacts to Service roads after the tours, an additional 2-3 road gradings each year may be required to smooth the road surface or to redistribute gravel.

No commercial vehicles, trailers, motor homes, or off-road vehicles would be allowed. The speed limit would be enforced at 25 miles per hour. A maximum of 420 passes would be available on program days, valid for a specific two-hour block of time. Rules of conduct would be developed and distributed to participants before access is allowed. Restrooms would be provided at previously disturbed areas, such as the Service maintenance building.

2.3.1 Resolution of Effects to Cultural Resources

Under Alternative B, increased public access to Rattlesnake Mountain will affect Laliik TCP's value as a historic property of religious and cultural significance to Indian tribes. Section 106 of the NHPA directs the federal agency to seek ways to resolve adverse effects through avoidance, minimization, or mitigation. Avoidance is not an option, as the NDAA directs public access within the TCP. The exact suite of minimization and mitigation measures, if any, that could be included in the proposed action will be determined following consultation with the affected tribes and completion of the Section 106 process under the NHPA. Drawing from prior instances where the TCP has been affected, mitigation measures have included assistance to the affected tribes to complete traditional use studies or similar studies of an ethnographic nature. These types of methods for resolving adverse

effects to the TCP have no potential to affect resources; therefore, no environmental effects resulting from mitigation are expected in the Project area.

Increased public access may also affect other cultural resources but these effects would be avoided or minimized. Any avoidance or minimization measures would be consistent with the alternatives described in this section and would occur within the study area.

2.4 Alternative C – Enhanced Summit Access

This alternative would allow controlled access to the summit of Rattlesnake Mountain through motorized, pedestrian, and other non-motorized means. Public access would be allowed up to 120 days per year: 1) subject to staffing and funding; 2) when fire and weather conditions allow; and 3) when the area is not closed for Native American use or Combined Community Communications Facility (CCCF) maintenance. Public access to other areas within the Rattlesnake Unit would not be allowed. The Rattlesnake Unit would remain a Closed Zone with the inclusion of a Designated Use Zone (Map 8). Summit access would be subject to these conditions:

- In the event of road upgrades to the Rattlesnake Summit Road, a limited motorized route would be open seasonally (see below) during regular business hours, beginning at the 106 Gate and leading up the Rattlesnake Summit Road to the top of Rattlesnake Mountain.
    - Visitors driving to the summit would not be allowed to leave their vehicles, except at a designated area at the eastern end of the summit where the parking area for the observatory (now removed) once was, approximately 0.25 acres.
- Current road conditions would allow for hiking and bicycling, and these activities would be restricted to the existing road bed.
    - Hikers and cyclists would park at the existing Service maintenance building and Nike missile site and would access the Rattlesnake Summit Road via the existing power transmission line corridor.
    - Parking, and thus access, would be limited to space available at the Service maintenance building and would be on a first-come, first-served basis; additional entry would be allowed only as space becomes available.
- Rules of conduct for all visitors would be similar to those defined in Alternative B.
- Unlike Alternative B, horseback riding would not be allowed.
- There would not be any access to other areas of the Rattlesnake Unit.
- Seasonal or episodic closures of the restricted public access route would or may be required during:
    - Fire season, approximately July through September.
    - Other periods of high fire danger.
    - Sensitive periods for wildlife (e.g., breeding season).
    - High wind events.
    - The winter due to ice and frost creating sliding conditions.
    - Periods of use by Native American tribes.
    - Times when the road is in use by construction or maintenance equipment.
    - Other periods when public safety, resource protection, or site security are of concern.
- Off-road vehicles, vehicles with trailers, motor homes, and other over-sized vehicles would not be allowed on the Rattlesnake Summit Road.
- On-site monitoring (e.g., law enforcement, fire protection) would be required during public use periods.

As discussed in Section 3.18, currently the Rattlesnake Summit Road is unsafe for public vehicular travel. Motorized access would require numerous safety upgrades to the existing Rattlesnake Summit Road prior to access by personal vehicles that are legal for highway use. These would include:

- Repair of missing pavement to ensure the safe passage of two vehicles traveling in opposite directions.
- Repair of most guardrails, which have fallen into disrepair.
- Installation of warning signs at critical points, such as where the road begins an 18 degree ascent/descent.

As noted, access would be limited to a maximum of 120 days per year. This is based on a three-month fire closure, three months in winter when conditions would be treacherous and an estimated two months when the area would be closed for Native American use, facility maintenance and unsafe weather conditions (i.e., high wind, lightning potential). This also represents the maximum number of days that current staffing levels might allow. The CCP/EIS provides a full discussion of why the area should remain a Closed Zone and why Service personnel need to be onsite during periods of public access.

At this point in time, there is no foreseeable funding for road repairs and road repairs are not a part of this proposed action. Rather, this proposed action is focused on the visitor access. Should funding be made available in the future, a separate environmental analysis under NEPA would be required to assess the impacts of road repairs.

2.4.1 Resolution of Effects to Cultural Resources

Similar to Alternative B, Alternative C will result in increased public access to Rattlesnake Mountain and will affect the Laliik TCP's value as a historic property of religious and cultural significance to Indian tribes. The exact suite of minimization and mitigation measures, if any, that could be included in the proposed action will be determined following consultation with the affected tribes and completion of the Section 106 process under the NHPA. The methods of resolving adverse effects, including mitigation, will have no potential to affect resources; therefore, no environmental effects are expected in the Project area.

Increased public access may also effect other cultural resources but these effects would be avoided or minimized. Any avoidance or minimization measures would be consistent with the alternatives described in this section and would occur within the study area.

2.5 Alternatives Considered But Eliminated

During the scoping process, many suggestions were received regarding public access to the Rattlesnake Unit. However, apart from comments related to environmental impacts, all of the suggestions fell into three broad categories: allow broad public access, do not allow public access, and allow limited public access. Alternatives A and B cover limited public access. Allowing broad public access and not allowing public access are addressed here.

2.5.1 Allow Broad Public Access

Allowing broad public access was discussed in the CCP/EIS and was eliminated. Instead, the Service considered changing the classification of the Rattlesnake Unit to an Open Zone designation. After

careful consideration, this was eliminated from further analysis due to substantial environmental risks. Extensive public use activities would threaten resources within the Rattlesnake Unit through destruction of microbiotic crusts, disturbance of native plant communities and sensitive wildlife habitats, spreading of non-native invasive plant species, and increased risk of wildland fire. Further analysis and rationale can be found throughout the CCP/EIS. This alternative would therefore not meet the need to provide public access as required by the NDAA in a manner consistent with protection of natural and cultural resources in the Rattlesnake Unit.

2.5.2 Prohibited Access and Activities

This DSEIS does not consider alternatives that include actions or access already found to be prohibited under current law, the Monument Proclamation, Service policies, or inconsistent with Monument management objectives. While the NDAA changed the activities allowed on the Rattlesnake Unit, it narrowly defined what additional access to allow. The following proposed activities were submitted during the scoping process, but were not considered further as they were outside the mandates of the NDAA and in conflict with existing laws, Service policies, etc (see Appendix C)[If the scoping report is attached and provides an explanation as to why these are not compatible, provide a citation to that here]. Many of these were addressed in the CCP/EIS (Appendices H and I).

- Cross-country all-terrain vehicle access.
- Cross-country biking.
- Biking on trails.
- Target shooting.
- Backpacking or camping, including campgrounds.
- Dog walking, except for hunting purposes.
- Hang-gliding and paragliding.
- Cross-country horseback riding.
- Sport hunting within the Rattlesnake Unit (excluding hunting as a population control measure).

2.6 Preferred Alternative

For the purposes of this DSEIS, the Service believes that Alternative B – Expanded Public Access would best meet the requirements of the NDAA while accounting for staffing, budgets, resource needs, restrictions associated with a TCP, Native American needs, and minimizing impacts to natural and cultural resources. Coupled with current and foreseeable staffing and funding limitations, Alternative B represents the most viable alternative. Likewise, Alternative B respects the nature of the Rattlesnake Unit and its significance to Native American tribes, while allowing for substantial public use of the area.

The Service believes Alternative A does not meet the intent of the NDAA because it was enacted to change management direction as described in the CCP/EIS. Congress is mandating an increase in public use in the NDAA.

As discussed above, upgrading the Rattlesnake Summit Road to acceptable safety standards for private vehicle travel is not included as part of any action alternative. Those road upgrades are beyond current funding levels, and there is no additional funding likely in the foreseeable future. Providing the maximum 120 days of access under Alternative C likewise will be difficult to accomplish. It would require diversion of staff and funds from the other refuges that make up the

Mid-Columbia River National Wildlife Refuge Complex. In addition, Alternative C represents a higher level of risk to the natural and cultural resources found on the Rattlesnake Unit and a higher level of public safety risk, given the condition of the road to the summit. Without additional resources for road improvement and staffing, it is unlikely that Alternative C could be fully implemented and: 1) would be limited to hiking and bicycling access; and 2) would be able to accommodate access at something less than 120 days, independent of other constraints, such as weather or fire conditions. The final number of access days that current staffing could support would need to be determined once implementation began.

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3. Affected Environment

The affected environment of the Monument, including the Rattlesnake Unit, is described in detail in the CCP/EIS. As the affected environment remains largely unchanged, that information is incorporated in this DSEIS by reference. Updated information on the condition of the affected environment for these resources since the CCP/EIS was completed is provided, as appropriate.

Portions of the Rattlesnake Unit are also described in DOE's *Final Environmental Assessment for Combined Community Communications Facility and Infrastructure Cleanup on the Fitzner/ Eberhardt Arid Lands Ecology Reserve* (DOE 2009), and relevant information is reiterated here, as needed.

For all resources, the action area considered in this DSEIS is the Rattlesnake Unit. This area encompasses all potential direct and indirect effects of the alternatives.

3.1 Methods and Sources of Information

A great deal of information currently exists regarding the resources in the Monument. Extensive research and environmental monitoring have been, and are currently being, conducted on Monument lands. In many cases, however, comprehensive inventories of Monument lands have not been completed to a level sufficient for intensive management of natural and cultural resources.
The best available information was used to update the existing conditions on the Rattlesnake Unit and the rest of the Monument, where applicable. The information used in this analysis was obtained from a variety of sources:

- Other DOE reports and NEPA documentation, especially the Comprehensive Land Use Plan.
- Relevant scientific literature.
- Existing databases and inventories.
- Consultations with other resource professionals.
- Service knowledge of resources based on field visits and experience.
- Specific citations are provided in the text below.

3.2 Climate

The CCP/EIS addressed wind, temperature, humidity, precipitation, fog, visibility, and severe weather for the area. While newer data is available, there are no discernable changes within such a short time.

3.3 Hydrology

The CCP/EIS described surface waters (streams, springs, runoff, infiltration, and flooding), the vadose zone, and groundwater (confined and unconfined aquifers). There have been no known changes to the hydrology of the Rattlesnake Unit.

3.4 Environmental Contaminants

Within what is known as Central Hanford (where the nuclear production occurred), there have been several changes and considerably more information generated since the CCP/EIS was completed.

However, within the area covered by this DSEIS, there are no known changes to the conditions described in the CCP/EIS.

3.5 Air Quality

Since 1999—the date of air quality information contained within the CCP/EIS—Washington has achieved 100 percent compliance with federal air quality standards (Washington Department of Ecology 2018). In 1999, an area just east of the Monument did not meet standards. However, currently, three areas to the west (upwind with regard to prevailing winds) and the Tri-Cities are of concern with regard to ozone. Despite these areas of concern, none are extensive enough to threaten air quality on the Rattlesnake Unit according to maps maintained by the Washington Department of Ecology.

3.6 Water Quality

The CCP/EIS described water quality within streams, seeps, springs, the vadose zone, and groundwater. There have been no known changes to the water quality of the Rattlesnake Unit.

3.7 Geology and Geomorphology

The CCP/EIS addressed the geologic history of the Monument (e.g., underlying basalt, tectonics, sedimentary deposits, Missoula Floods). It also looked at its geomorphology (physical and structural characteristics, strata, surface soils, landslides, and special features like sand dune fields). There have been no known changes or additional information identified for the Rattlesnake Unit.

3.8 Paleontology

The Monument contains a treasure trove of prehistoric animal fossils from the late Miocene, mainly mammals, fish, and invertebrates, as well as petrified wood, all of which are described in the CCP/EIS. All of these known resources are well removed from the areas where access will occur. No additional information is available for paleontological resources.

3.9 Plants and Plant Communities

The CCP/EIS has an extensive description of the plants and plant communities found on the Rattlesnake Unit. Plants are one of the resources most likely to potentially be affected by providing additional public access, so this DSEIS includes a summary of the information on vegetation in the CCP/EIS. There is little new information available to include in this DSEIS.

The lands within the Rattlesnake Unit represent one of the largest remaining intact shrub-steppe habitats within the Columbia Basin eco-region. While these lands have been affected by catastrophic fire events, including wildfires occurring after 2008, this land base has not been significantly disturbed by humans for more than 60 years. Consequently, the area has remained a prime example of successional recovery, including a mixture of early successional communities as well as recovering bunchgrass/sagebrush communities. The rarity of large blocks of shrub-steppe habitat led, in part, to the designation of the ALE as an RNA. Shrub-steppe associations here are also more biologically diverse than on surrounding lands.

One human-made and 18 natural plant communities, ranging in size from 2 to 29,360 acres, have been identified and mapped in the ALE portion of the Rattlesnake Unit where public access is proposed. The 19 potential communities were composed of 28 cover types.

In general, ecological conditions in the ALE improve with increasing elevation and more northerly aspects; the ALE has the largest expanses of loamy soils and north-facing aspects in the Monument. Plant communities above roughly 900 feet elevation support the largest contiguous expanses of high-quality shrub-steppe in the Monument and the single largest element occurrence of high-quality bluebunch wheatgrass grassland in the Columbia Basin. Big sagebrush/bluebunch wheatgrass and three-tip sagebrush/bunchgrass communities cover more than 40,000 unbroken acres. The crest of Rattlesnake Mountain supports high-quality, low-growing lithosol communities on the shallow rocky soil. While also ecologically valuable, the lower elevation areas are dominated by generally lower-quality big sagebrush/Sandberg's bluegrass and big sagebrush/cheatgrass. Element occurrences of winterfat/Sandberg's bluegrass, black greasewood/alkali saltgrass, and a small occurrence of bitterbrush/dune complex at lower elevations add to the diversity and uniqueness of the site.

Two major spring systems, Snively and Rattlesnake, cross the western half of the site. These provide important aquatic and riparian habitats in an otherwise arid landscape.

The most ecologically important element occurrences in the ALE are the big sagebrush/ bluebunch wheatgrass and three-tip sagebrush/bluebunch wheatgrass or Idaho fescue communities that cover large areas on Rattlesnake Mountain. Other element occurrences of note include significant areas of winterfat/Sandberg's bluegrass on the lower slopes of Rattlesnake Mountain, the big sagebrush/Sandberg's bluegrass occurrences on the flats in the Dry and Cold Creek Valleys, the willow riparian complex associated with the springs and creeks, and a degraded but uncommon example of black greasewood/saltgrass.

Also potentially affected are microbiotic crusts. Throughout much of the shrub-steppe region, a living crust covers some or all of the soil between plants. This soil crust—referred to as microbiotic, cryptobiotic, or cryptogamic—is composed of algae, fungi, lichens, and mosses. More than 10 species of organisms can be present on as little as 0.8 square-inches of soil. As a unit, these assemblages are often compact and fragile. Microbiotic soil crusts are especially well developed in relatively undisturbed areas, such as those that occur in the Rattlesnake Unit. Although the ecological role of the microbiotic crust is not fully understood, it clearly plays an important role in shrub-steppe ecosystem functions by reducing erosion, contributing nitrogen and organic carbon to the soil, and increasing infiltration of precipitation into the soil.

3.10 Wildlife

The CCP/EIS extensively describes the aquatic and terrestrial wildlife found on the Monument. As with plants, this is a resource that might be impacted by increased visitor use, which will be addressed in Chapter 4. However, there are no informational updates to the descriptions found in the CCP/EIS.

Despite being a desert, the presence of numerous water sources, a variety of structural habitat types (e.g., talus slopes, cliff faces, sand dunes), and unusual habitats (e.g., brackish pools) provide for a wide diversity of wildlife. The Monument is home to a large number and diversity of insect species, potentially over 15,000 species, reflecting the complexity and undisturbed quality of the shrub-steppe habitat. Approximately 258 species of birds have been documented on or near the Monument, with

regionally significant breeding populations of steppe- and shrub-steppe-dependent birds found in the upland areas, such as the Rattlesnake Unit. All of the ALE is designated as an Important Bird Area by the WDFW and Audubon Washington (DOE 2009). Common reptiles include the pygmy short-horned lizard and western rattlesnake (DOE 2009).

There is also an abundance of mammals, from small mice, voles, and jackrabbits, to large game animals, such as Rocky Mountain elk and mule deer, as well as predators like coyotes, bobcats, and an occasional cougar. A total of 44 species of mammals have been documented in the Monument, but it is possible that others use the Monument, as well. Elk in the area are part of the Rattlesnake Hills Elk Herd, which is cooperatively monitored by the Service and WDFW.

3.11 Threatened and Endangered Species

The information in the CCP/EIS regarding threatened and endangered plant and animal species on the Monument remains generally applicable for this report. Following is a summary of that information.

3.11.1 Endangered, Threatened, or Rare Wildlife

The Columbia Basin distinct population segment of pygmy rabbit (*Brachylagus idahoensis*) remains federally listed as endangered, and while the wild population is likely extirpated, about 100 individuals bred by the Service have recently been reintroduced to habitats historically occupied by the species (Service 2012). A final recovery plan for the species was completed in December 2012, with the goal of increasing the number, distribution, and security of free-ranging subpopulations of the pygmy rabbit within the Columbia Basin (Service 2012). This species is also listed as endangered by Washington State. Pygmy rabbits are not currently found on the Monument, but the Monument, including the Rattlesnake Unit, is within the recovery zone.

3.11.2 Endangered, Threatened, Rare, or Special Interest Plants and Communities

In May 2013, two plant species noted in the CCP/EIS as candidates for listing were formally listed as threatened under the Endangered Species Act—the White Bluffs bladderpod (*Physaria tuplashensis*; 78 FR 70001) and Umtanum desert buckwheat (*Eriogonum codium;* 78 FR 76995-77005). These plants occur in localized small populations and are found nowhere else in the world.

The only federally listed species known to occur in the Rattlesnake Unit is the Umtanum desert buckwheat. However, this plant is only found along the Umtanum Ridge, well to the west and outside of the proposed public access areas.

There are numerous vascular plant species found on the Monument listed by the Washington Natural Heritage Program as endangered, threatened, or sensitive in the state of Washington. None of the species potentially present on the Hanford Site that are on the rare plant species list are federally listed, apart from Umtanum desert buckwheat and White Bluffs bladderpod. These state-listed species are awned halfchaff sedge (listed by Washington as threatened), desert dodder (threatened), Geyer's milkvetch (threatened), scarlet ammannia (threatened), loeflingia (threatened), lowland toothcup (sensitive), persistent sepal yellowcress (threatened), rosy pussypaws (threatened), Umtanum desert buckwheat (endangered), White Bluffs bladderpod (threatened), and white eatonella (threatened). Of these, none are known to occur within the area proposed for public access.

Eight special habitat areas have been delineated on the Hanford Site. However, none occur within the proposed public use area on the Rattlesnake Unit.

3.12 Special Status Species and Communities

The Monument, including the Rattlesnake Unit, is home to many sensitive plant communities and species that are not officially listed by federal or state agencies as threatened or endangered but are of management concern within the state of Washington. This includes plant communities, rare plants, invertebrates, amphibians, reptiles, fish, birds, mammals, species new to science, and recreational/ commercially important species. Special-status species are species that are known to occur in the Monument, have historically occurred in the Monument, or have potential habitat that exists in the Monument. The CCP/EIS provides extensive descriptions of these communities and species, and there are no updates available to that information.

3.13 Noxious and Invasive Species

Invasive alien plant species pose one of the most serious threats to the native biodiversity, wildlife habitat, and scenic values for which the Monument was created and for which the entire Hanford Site is well known. The CCP/EIS provides specific detail on where these species occurred in 2008 on the Rattlesnake Unit. Since that time, some of those areas have been treated, while other patches of weeds have been identified, but none of the treatments or newly identified patches are outside of the bounds of what was analyzed in the CCP/EIS. Specific information on locations of weeds is available through the Service's McNary National Wildlife Refuge office.

3.14 Cultural Resources – History and Physical Resources

The CCP/EIS described the cultural history of the Monument, including the Native American tribes that were here at the time of Euro-American exploration and settlement, the history of that exploration and settlement, and the history of the Hanford Nuclear Reservation. There is no new information to add to that discussion.

The CCP/EIS also addressed the archaeological and historical resources found on the Monument. The Monument's Rattlesnake Unit contains lithic scatters, rock cairns, historical trails, pre-contact and ethnographic camp sites, talus pits, abandoned ranches, gas wells, cisterns, foundations, and historic, domestic, and industrial trash. Among the 125 documented sites, 68 are pre-contact Native American archaeological sites and 57 are post-contact historic period sites. Two archaeological districts (the Snively Canyon Archaeological District and the Rattlesnake Springs Sites Archaeological District) lie within the Rattlesnake Unit.

As part of a DOE action to remove unneeded infrastructure on the ALE, four historic buildings along the Rattlesnake Mountain ridgeline and 12 historic buildings at the base of the mountain (including most of a former Nike missile installation) were demolished (DOE 2009). These facilities were eligible for the National Register of Historic Places (National Register) as contributing properties to the Manhattan Project and Cold War Era Historic District. In anticipation of Hanford Site demolition activities, the Manhattan Project and Cold War Era Historic District Treatment Plan mitigated potential adverse effects for all historic Hanford Site buildings (DOE 2009). In addition, the DOE consolidated all communications equipment and antennas into one facility, the CCCF, in order to reduce the manmade footprint on the top of Rattlesnake Mountain. Finally, the observatory on the top of Rattlesnake Mountain was moved to Wallula Junction near McNary National Wildlife Refuge.

3.15 Cultural Resources – Tribal Uses and Connection

The Rattlesnake Unit is rich in cultural resources. For at least 13,000 years, the area has been the homeland of Native Americans. When Euro-American explorers arrived in the early 1800s, Native Americans inhabited numerous villages and fishing camps in the mid-Columbia River Basin. Neighboring groups, known today as the Yakama, Umatilla, Cayuse, Walla Walla, Palouse, Nez Perce, and Middle Columbia Salish, frequented the area to gather resources and trade. Treaties in 1855 specified that the Native Americans would cede millions of acres of their homelands to the United States; the Monument contains lands within the ceded territories of the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) and the CTUIR. Descendants of these Native Americans are affiliated with the Wanapum, Yakama Nation, CTUIR, and Nez Perce Tribe, and they retain traditional, cultural, and religious ties to the area. The landscape is replete with archaeological and other cultural resources from their long presence.

Rattlesnake Mountain, Yakima Ridge, and Umtanum Ridge are all culturally significant properties. Rattlesnake Mountain itself has been determined to be a historic property of religious and cultural significance to Indian Tribes, or traditional cultural property (TCP), under the NHPA. It is eligible for listing on the National Register under what are known as Criterion A (associated with events that have made a significant contribution to the patterns of our history) and Criterion B (associated with the lives of significant persons in our past). Rattlesnake Mountain, or *Laliik* as it is known to regional tribes, has a long association with the religious and cultural practices and beliefs of regional Native Americans, especially the Washani community. None of the information contained in the CCP/EIS has changed.

3.16 Visual/Aesthetic Resources

Since the CCP/EIS was completed, four events/activities have significantly modified the landscape of the Rattlesnake Unit.

- The removal of unnecessary structures, including the observatory, positively benefitted aesthetic resources.
- The establishment of the CCCF was a general, positive improvement.
- Three large fires burned the Rattlesnake Unit, with two of those fires burning much of Rattlesnake Mountain and large areas that had been restored from pre-CCP fires.
- While the large fires negatively impacted the landscape, Service restoration efforts following the fires have offset some of those impacts and have positively benefitted aesthetic resources.

3.17 Visitor Use and Experience

Currently, there are no changes to visitor use since the CCP/EIS was completed. For three years (2012-2014), the Service lead spring wildflower tours for approximately 140–150 people each year, spread over a four-day period. These tours were discontinued in 2015 (see Alternative A discussion). Due to this decision, the current status of visitor use and experience is that covered in the CCP/EIS.

3.18 Infrastructure

Apart from the CCCF and unused buildings removal noted above, the only significant change to infrastructure is the severe degradation of the road to the top of Rattlesnake Mountain. Since the CCP/EIS, large sections of the road have become potholed, the road surface has disintegrated into

small pieces, and the few existing guardrails have fallen further into disrepair through collapse and/or rusting.

The following excerpt is from the Federal Highway Administration road report:
In 2013, the Federal Highway Administration (FHWA) completed an inventory and assessment of roads in the Saddle Mountain National Wildlife Refuge, including the Rattlesnake Summit Road (Route 300, FHWA 2013). During the assessment, the FHWA collected data on the following distresses and conditions:
Fatigue Cracking – Interconnected cracks forming small irregular shapes.
Longitudinal Cracking – Cracks running parallel with the roadway in the direction of traffic.
Transverse Cracking – Cracks perpendicular to the roadway going across the lane or lanes.
Block Cracking – Interconnected cracks forming large blocks.
Edge Cracking – Cracks running along the edge of the pavement surface.
Patches – Original surface repaired with new asphalt patch material.
Potholes – Holes or depressions in the pavement.
Rutting – Surface depressions in the wheel paths.
Roughness – Evenness of pavement for serviceability.
Drainage – Ability of the road surface to drain water based on proper slope.

Based on the evaluation of these distresses and conditions, the FHWA rates road conditions as being in either an Excellent, Good, Fair, Poor, or Failed condition. The FHWA calculates a Condition Rating for each homogenous pavement section, which can be up to one mile in length.

From Gate 106 to the top of Rattlesnake Mountain, the road is 8.91 miles long, of which the lower 5.43 miles are asphalt paved and the upper 3.48 miles are unpaved. Only the first mile is wide enough to be considered a two-lane road (16 feet wide), with the remainder of the road being a single lane (12 feet wide). Within the first five miles of the road, which includes the steepest sections, FHWA rated a number of areas as having failed. The entirety of the fifth mile was rated as being either failed or in poor condition. The flatter, summit section of the road was rated as being in either good or fair condition.

A “failed” asphalt road section is severely deteriorated. Signs of structural failure appear along with severe and extensive fatigue cracking, distortion, potholes, or extensive patches in poor condition. Under these conditions, the FHWA concludes that failed road sections have no remaining service life (RSL) and recommends reconstruction (FHWA 2013).

An asphalt road in “poor” condition is beginning to show signs of structural distress. Fatigue cracking is medium to high extent and medium severity. Cracking will be severe. The surface may have severe block cracking and show. Patches are in fair to poor condition. There is moderate distortion or rutting and occasional potholes. Under these conditons, the FHWA recommends rehabilitation of poor road sections and estimates they have an RSL of only 1-6 years.

The FWHA developed a preliminary cost estimate to repair to the first five miles of road at $1,651,500 and replacement at $6,510,100. These preliminary estimates typically underestimate actual costs (FHWA 2013).

3.19 Socio-Economic Setting

The population and socio-economic composition in the area surrounding the Monument has changed since the CCP/EIS was completed. However, the fact that the population in the area has grown considerably or has changed in composition is not a factor in the environmental impact assessment because the activities proposed are size-limited (e.g., class size, tour participants, parking limitations) and expected to be 100 percent filled regardless of the area's socio-economic setting.

3.19.1 Demographics

The area around the Tri-Cities is the fastest growing area in the state of Washington and one of the fastest growing in the country. According to the U.S. Census Bureau, the estimated population of Benton, Franklin, and Yakima counties was approximately 540,500 residents on July 1, 2017. Many of the distinguishing characteristics of the population (e.g., age, sex) changed only slightly since the CCP/EIS, except one: The Hispanic population has grown considerably and now accounts for more than half the population of Franklin County, an estimated 53 percent.

Substantial Native American populations are located within the Census assessment area (approximately 10,000 people). Census block groups within the assessment area that are predominantly Native American populations are primarily located on the Yakama Indian Reservation in Yakima County, Washington. However, other Native American populations located outside the assessment area also have an interest in the Monument based on treaty rights.

Data for four communities—Kennewick, Pasco, Richland, and Prosser—and three counties—Benton, Franklin, and Yakima—in the state of Washington were evaluated as part of this environmental justice analysis. The counties are those closest to the Rattlesnake Unit. The tables below update the information in the CCP/EIS for minority, including Native American populations, and low-income data for these communities and counties.

Future opportunities for tribal members to exercise treaty rights are dependent upon the health of the ecosystems. The tribes assert that a treaty right to hunt, fish, or gather plants is diminished (if not voided) if the wildlife, fish, or plants have vanished or are contaminated to the extent that they threaten human health. These resources, particularly the resources with cultural and religious connotations, do not have equivalent value for the general population. Treaty-reserved tribal fishing rights have been recognized within the Hanford Reach. The tribes also have an interest in continuing/renewing traditional uses, such as gathering of foods and medicines, hunting, and other uses.

Table 3.19.1 Race Distribution in Seven Sample Communities and the State of Washington, 2017.

Race	Representative Communities							
	Kennewick	Pasco	Prosser	Richland	Benton Co.	Franklin Co.	Yakima Co.	State
White (Not Hispanic)	54,269 (66.5%)	27,891 (38.2%)	3,727 (59.5%)	44,319 (78.8%)	139,512 (70.4%)	37,126 (40.3%)	108,083 (43.2%)	5,087,745 (68.7%)
Hispanic or Latino (of any race)	20,483 (25.1%)	40,595 (55.6%)	2,280 (36.4%)	6,074 (10.8%)	43,399 (21.9%)	49,103 (53.3%)	123,595 (49.4%)	940,529 (12.7%)
Black or African American	1,714 (2.1%)	1,752 (2.4%)	0 (0.0%)	787 (1.4%)	3,567 (1.8%)	2,580 (2.8%)	3,753 (1.5%)	311,041 (4.2%)
American Indian and Alaska Native	490 (0.6%)	292 (0.4%)	163 (2.6%)	394 (0.7%)	2,378 (1.2%)	1,566 (1.7%)	16,012 (6.4%)	140,709 (1.9%)
Asian	1,551 (1.9%)	1,533 (2.1%)	13 (0.2%)	2,756 (4.9%)	6,143 (3.1%)	2,211 (2.4%)	3,573 (1.5%)	659,111 (8.9%)
Native Hawaiian/ Pacific Islander	82 (0.1%)	73 (0.1%)	69 (1.1%)	56 (0.1%)	396 (0.2%)	369 (0.4%)	751 (0.3%)	59,246 (0.8%)
Two or More Races	3,836 (4.7%)	2,482 (3.4%)	532 (8.5%)	2,643 (4.7%)	6,341 (3.2%)	240 (2.6%)	7,005 (2.8%)	348,070 (4.7%)
Total Population	81,607	73,013	6,264	56,243	198,171	92,125	250,193	7,405,743

Notes: Percentages may not exactly equal 100 due to rounding. Source: U.S. Census Bureau 2017.

Table 3.19.2 Low Income Statistics in Seven Sample Communities and the State of Washington, 2012–2016.

	Representative Communities							
	Kennewick	Pasco	Prosser	Richland	Benton Co.	Franklin Co.	Yakima Co.	State
Median Household Income, 2012–2016 (2016 $)	$52,134	$57,440	$53,268	$69,833	$61,147	$58,284	$45,700	$62,848
Per Capita Income in last 12 months (2016 $)	$25,266	$20,542	$24,157	$36,224	$29,529	$20,997	$20,653	$32,999
Persons Living In Poverty (%)	17.6%	16.9%	12.2%	10.5%	10.5%	14.9%	18.2%	11.3%
Persons Living In Poverty (#)	14,160	11,928	737	5,773	20,337	13,434	45,078	823,544

Notes: Percentages may not exactly equal 100 due to rounding. Source: U.S. Census Bureau 2016.

3.20 Special Area Designations

There have been no changes to special designations on the Rattlesnake Unit, and only one change nearby. The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015—the same legislation that requires the Service to provide access to Rattlesnake Mountain—established the Manhattan Project National Historical Park, of which the B Reactor and associated facilities are a part. The Rattlesnake Unit still remains, or contains in whole or in part, an Important Bird Area, RNA, National Register, Washington Heritage Register, *Laliik* TCP, National Environmental Research Park, and Hanford Site Protective Safety Buffer Zone. Full descriptions of these designations can be found in the CCP/EIS.

3.20.1 Land Use

As discussed above, the Rattlesnake Unit is a part of the Monument jointly managed by the DOE and the Service. Due to its unique and sensitive resources, management in this unit focuses almost exclusively on preservation and restoration. This supports the requirements of the RNA, as well as the unit's inclusion in the National Wildlife Refuge System. Public access is not allowed, except when approved through an SUP or other special permission from the Service.

4. Environmental Impacts of Alternatives

Chapter 4 identifies the potential environmental effects of proposed management actions on natural, cultural, and recreational resources within the Rattlesnake Unit. The analysis here follows that set forth in the CCP/EIS, which includes a detailed description of how those resources addressed were identified and includes those required by NEPA.

4.1 Effects Severity Ratings

The Monument, including the Rattlesnake Unit, served as a buffer zone around Central Hanford for more than 60 years, with extensive research and environmental monitoring conducted on lands directly associated with the DOE's mission. However, comprehensive inventories have in many cases not been completed to a level sufficient for intensive resource management. In-depth resource inventories for cultural resources, wildlife, vegetation, and public use activities are either underway or pending. The information used in this NEPA analysis was obtained from relevant scientific literature, existing databases and inventories, consultations with other professionals, and personal knowledge of resources based on field visits and experience.

The thresholds and severity ratings defined below were used to analyze the scope, scale, and intensity of effects on natural, cultural, and recreational resources.

Negligible: Resources would not be affected, or the effects would be at or near the lowest level of detection. Resource conditions would not change or would be so slight that there would not be any measurable or perceptible consequence to a population, plant community, cultural resource, recreation opportunity, or visitor experience.

Minor: Effects would be detectable but localized, small, and of little consequence to a population, plant community, cultural resource, recreation opportunity, or visitor experience. Mitigation, if needed to offset adverse effects, would be easily implemented and successful.

Moderate: Effects would be readily detectable and localized, with consequences to a population, plant community, cultural resource, recreation opportunity, or visitor experience. Mitigation measures would be needed to offset adverse effects, would be extensive in nature, moderately complicated to implement, and would probably be successful.

Major: Effects would be obvious and would result in substantial consequences to cultural resources, populations, plant communities within the local area and region, recreation opportunities, or visitor experiences. Extensive mitigating measures would be needed to offset adverse effects, would be large-scale in nature and very complicated to implement, and would not have a guaranteed probability of success. In some instances, major effects would include the irretrievable loss of the resource.

Time and duration of effects have been defined as shown below.

Short-term: An effect that generally would last less than a single year or season.

Long-term: A change in a resource or its condition that would last longer than a single year or season.

4.2 Effects on Soils, Geological, and Paleontological Resources

There are no known paleontological resources within the areas of the Rattlesnake Unit where access might occur. Under all alternatives, highlighting geologic resources through interpretative and educational activities and materials will make a greater portion of the population aware of their existence. Once these resources become more widely known, they could be at heightened risk of

damage from illegal activities. However, through careful implementation of education programs and on-site law enforcement, adverse effects on these resources are anticipated to be negligible.

4.2.1 Alternative A – No Action

Under the No Action Alternative, the Rattlesnake Unit would remain closed to general public access. Public access would be through an SUP or by docent-led activities, such as tours. This level of use would incur negligible impacts to soils or other geologic resources, consistent with those evaluated in the CCP/EIS.

4.2.2 Alternative B – Expanded Public Access

Under Alternative B, negligible soil erosion and minor compaction within a localized area may occur from motorized use of established auto routes and from walking off-road during guided tour stops. This effect would be limited, as activities would be restricted to a maximum of 28 days each year, have a limited number of participants according to each activity, and be of a limited duration on any given day (e.g., two hours for an auto tour, approximately seven hours for an open house day). On-site walking during guided tour stops would also be limited to within 200 yards of the existing road, and open house visitors on foot, bicycle, or horseback would be required to stay on existing roads, with parking at already hardened sites. Therefore, minor, localized impacts to soils would be expected.

No impact would be expected to the underlying geology of the Rattlesnake Unit from Alternative B. All public access would be along or adjacent to existing roads and trails; therefore, no ground disturbance would occur, and there would be no impacts to geological resources.

4.2.3 Alternative C – Enhanced Summit Access

Similar to Alternative B, negligible soil erosion and minor, localized compaction may occur under this alternative from motorized use of auto routes and visitors hiking on trails. An estimated 50-foot area along any hiking trail could experience minor impacts from visitors venturing off-trail (Service 2008). While summit access would be open more days of the year than under Alternative B, the total ground area of the Rattlesnake Unit open to visitors would be more limited. As under Alternative B, the underlying geology of the Rattlesnake Unit would not be affected.

There would likely be short-term impacts associated with road repairs and upgrades that would be needed before private vehicles could be allowed on the road. Additional NEPA analysis may be required in the event of major repairs or upgrades. Minor road repairs are covered under the CCP/EIS and by other documentation undertaken by the DOE.

4.3 Effects on Biological Resources – Vegetation

Effects on vegetation from visitor use occur primarily through trampling. Trampling of vegetation bends, weakens, and breaks leaves and branches and damages photosynthetic surfaces, seed production, and carbohydrate reserves, eventually killing some species. Trampling and resultant soil compaction and erosion can expose roots and kill plants, providing an opportunity for weed invasion. Depending on soil type, vegetation cover, topography, and use intensity, effects on soils resulting from visitor use include compaction, reduced water infiltration, increased runoff and erosion potential, and inhibited seed germination and plant growth. The greatest effects of trampling typically

occur at the initial impact, even if it is of low intensity; these effects increase incrementally with levels of use.

The presence of non-native invasive plant species can alter ecosystem structure and function, disrupt food chains and other ecosystem characteristics vital to wildlife, and dramatically modify key ecosystem processes, such as hydrology, productivity, nutrient cycling, and fire regime. Such species can displace native species, reduce forage and cover for wildlife, and increase the rate, intensity, and severity of wildfire.

Some weed species, such as yellow star-thistle, render large blocks of land unusable for many wildlife species. Due to the sharp needle-like spines that radiate from the plant, some animals avoid these areas or suffer physical injury when passing through infested sites. Other habitats are lost through the spread of weed species, such as Russian knapweed, which expands through underground root systems, thereby changing native plant community structure and reducing forage availability. Some weed species (e.g., knapweed) contain allelopathic agents that sterilize the soils around them and do not let native species grow within their zone of influence.

Recreational uses can spread invasive species by varied mechanisms, such as transport on recreational equipment, clothing, and footwear, and through equestrian uses, either in fecal material or in feed. Vehicle undercarriages can rapidly collect and distribute weed seeds.

Successful management of noxious weeds requires the development of a long-term strategic plan, incorporating prevention programs; educational materials and activities; and sustainable, long-term, integrated approaches that improve degraded plant communities, enhance the integrity of the ecosystem, and prevent re-invasion or encroachment by other noxious weed species.

4.3.1 Alternative A – No Action

Under the No Action Alternative, the Rattlesnake Unit would remain closed to general public access. Public access would be through an SUP or by docent-led activities, such as tours. This level of use would incur negligible impacts to habitat and vegetation, consistent with those evaluated in the CCP/EIS.

4.3.2 Alternative B – Expanded Public Access

Actions under Alternative B may disturb small areas of vegetation from visitors walking off-road at guided tour stops, educational class stops, and open house days. Microbiotic crusts would be at greatest risk from trampling. Crust disruption can result in decreased organism diversity, soil nutrients, stability, and organic matter. Intact crust areas adjacent to disturbed areas can also be buried through wind and water erosion processes (USGS 2001). However, there are few areas on the Rattlesnake Unit where fires have not impacted crust, and all activities would be either focused away from these areas, or would be supervised by staff/docents who are trained in minimizing impacts.

In the CCP/EIS analysis, an estimated 50-foot corridor on either side of hiking areas would be assumed to experience minor adverse effects on vegetation from visitors venturing off access roads. The same is assumed for use of existing roads for hiking, bicycling, and horseback riding under this alternative. The total area of vegetation affected under this alternative would be approximately 303 acres (25 miles of road by 100 feet). The impacts to vegetation could be higher under this alternative due to the allowance of horses. However, due to the limited number of days and the presence of law

enforcement and other monitoring, impacts to vegetation under Alternative B would be expected to be minor and localized.

With more visitors, there would be a small increased risk of invasive species introduction and human-caused wildfire. Each of these potential effects would be minor due to limiting the program to 28 days annually and active oversight by the Service or docents. In this Closed Zone, Service-led/approved activities would include stipulations designed to prevent the spread of invasive species. Since public access activities would be allowed only at times of the year when the risk of human-caused fire is low, and would be prohibited during periods of high or extreme fire risk, there would be a small increase in risk of human-caused wildfire.

Horseback riding would be allowed for a very limited number of days per year during open houses under this alternative. Horses may spread seeds of invasive species via their droppings. Thus, there would be an increased risk of invasive species introduction, but since manure would be removed from roads under this alternative, the increase in risk would be minor compared to current levels and negligible as compared to other sources (e.g., wind-blown, maintenance vehicles).

The auto tours could generate considerable dust for the duration of the tour day (nine hours). However, vegetation on the Rattlesnake Unit is well adapted to dust, and impacts would be negligible.

Disturbance to vegetation would be further reduced by on-site staff supervision of visitors and primary reliance on disturbed areas (i.e., existing facilities, roads) for public use facilities, such as parking and restrooms. Therefore, impacts to vegetation under Alternative B would be minor and localized.

4.3.3 Alternative C – Enhanced Summit Access

Disturbance to vegetation under this alternative would be similar to Alternative B, with a more limited geographic extent but longer timeframe for public use. In the CCP/EIS analysis, an estimated 50-foot corridor on either side of hiking areas would be assumed to experience minor adverse effects on vegetation from visitors venturing off-trail or access roads. The same is assumed for use of existing roads for hiking and bicycling under this alternative. The total area of vegetation impacted under this alternative would be approximately 109 acres (9 miles of road by 100 feet). Therefore, impacts to vegetation under Alternative C would be minor and localized.

There would likely be short-term effects associated with road repairs and upgrades that would be needed before private vehicles would be allowed on the road. Additional NEPA analysis may be required in the event of major repairs or upgrades. Minor road repairs are covered under the CCP/EIS and by other documentation undertaken by the DOE.

4.4 Effects on Biological Resources – Wildlife

Human activities affect animals through four primary mechanisms: (1) exploitation or harvest through hunting; (2) disturbance; (3) habitat modification; and (4) pollution. It is assumed that effects specific to the Rattlesnake Unit would occur primarily through disturbance and habitat modification, with additional effects anticipated from non-point source pollution such as litter and car exhaust.

A variety of animal behavior responses could result from human activity, depending on a range of variables associated with the activity. Examples of such variables include type, distance, direction of

movement, speed, predictability, frequency, magnitude, and location of the activity. Wildlife disturbance can precipitate behavioral changes, such as avoidance, habituation, or attraction. Disturbance of wildlife species that habituate to human use tends to be greater when recreational activities occur away from established use areas, such as parking areas and trails. Conversely, disturbance effects may be somewhat minimized by establishing designated sites and routes for visitor activities in relation to such species (except for habituation, which is a disturbance response, and which would be exacerbated in established use areas). Physiological responses can include the "fight or flight" response, with elevated heart and respiratory rates, or the "freeze" response, with inhibition of activity and reduced heart and respiratory rates. The implications of disturbance are often heightened during sensitive life stages, such as breeding, overwintering, and rearing of young. Depending on the disturbance variables, the long-term effects on individual animals include altered behavior, reduced vigor, lower reproductive success, and/or death.

Human activities can also alter the suitability of an area as wildlife habitat. For example, effects on soils can alter the presence and characteristics of vegetation, in turn influencing the suitability of the site to serve as habitat for wildlife species that are dependent on a particular assemblage of species or particular vegetative structure. Moreover, habitat suitability for prey animals affects the habitat's suitability to support predators.

4.4.1 Alternative A – No Action

Under Alternative A, minor, localized disturbance to wildlife may occur from Service-approved visitation in the Rattlesnake Unit. The impacts would be the same as those described in the CCP/EIS and would be minimized by avoiding areas during species-specific sensitive periods (e.g., elk calving). If the trail proposed in the CCP/EIS were constructed, there would be direct habitat alteration.

4.4.2 Alternative B – Expanded Public Access

Alternative B would result in disturbance to wildlife from the audible and visible presence of humans and vehicles. Trampling invertebrates, when public access occurs away from road or trail beds, could potentially lead to reduced invertebrate populations that serve as food for birds and other wildlife (Service 2008). However, given the extremely limited area of impact, time limitation (28 days/year), and supervised nature of visitor programming, these effects would be temporary and minor. As in Alternative A, sensitive periods or areas of sensitivity for wildlife of concern would be avoided, thereby greatly reducing any impacts.

In the case of human-caused fire, which could result from increased vehicle use, impacts would range from minor to major depending on the size, location, and intensity of the fire. However, the risk of fire would be minimized through timing of public use activities (avoiding times of high-fire risk) and BMPs. With the exception of educational classes, visitation would be supervised, and any fire starts should be quickly suppressed. Educational classes would have a strict no-flames policy, and teachers/ docents would be taught fire-avoidance techniques.

Given the safeguards to be implemented, any impacts from this alternative are expected to be minor, localized, and transitory.

4.4.3 Alternative C – Enhanced Summit Access

Effects to wildlife under this alternative would be similar to those of Alternative B. Public access would be controlled and monitored, so disturbance to wildlife from the audible and visible presence of humans would be similar to Alternative B, but of longer duration and intensity due to a longer open period and higher number of vehicles. Increased road use would be expected to result in increased wildlife mortality, especially small mammals and reptiles. However, disturbance would be limited to the summit and Rattlesnake Summit Road. The risk of trampling invertebrates may be somewhat higher with the concentration of use in a more limited area than under Alternative B.

There would be temporary, localized impacts from road upgrades and repair. Requirements to stay on-trail or on-road (except for a designated area at the summit), on-site monitoring, and limiting access hours outside of active dawn/dusk periods for wildlife would reduce potential adverse impacts. An estimated 50-foot corridor on either side of hiking areas would be assumed to experience minor adverse effects on vegetation from visitors venturing off access roads. Since impacts would be within a narrow corridor, most wildlife would easily move into areas without disturbance. As in Alternative A, sensitive periods or areas of sensitivity for wildlife of concern would be avoided, thereby greatly reducing any impacts. Therefore, impacts to wildlife under Alternative C would be temporary, minor, and localized.

4.5 Threatened and Endangered Species

None of the alternatives would impact threatened or endangered species, either at the state or federal level, because there are no known threatened or endangered species populations within the area of use. The federally threatened Umtanum desert buckwheat is within the Rattlesnake Unit, but well-removed from any area being considered for public access. The only potential impact to the buckwheat would be through wildfire, and for the reasons and measures outlined in Alternative B above, as well as the fact that the buckwheat is upwind of the prevailing westerly winds, impacts from wildfire are not expected.

4.6 Effects on Cultural Resources

Cultural resources are the physical evidence of human history, including archaeological sites, artifacts, and historic structures and buildings. They also include places and landscapes that are culturally significant to Native Americans. These are unique and irreplaceable, and damage to them is difficult or impossible to reverse.

Looting and vandalism are the most damaging effects to resources. The looting of artifacts from an archaeological site can lessen or destroy the site's scientific value. Historic structures that have been vandalized can be costly to repair, and if unique, character-defining features are compromised or stolen, the structure's ability to convey its historic significance may be permanently damaged. Archaeological sites can also be damaged by repeated foot traffic and off-road vehicle use (including parking vehicles off paved areas and existing roads). These activities can damage or displace artifacts and archaeological features.

Culturally significant places and landscapes where aesthetic or spiritual value is of prime importance can be affected by the evidence of public access, such as litter or vehicle tracks. The presence of the public, along with noise and visual distrubance, during certain times of the year can also affect places and landscapes that are used for traditional or religious purposes.

The resolution of adverse effects to historic properties can take a variety of forms, depending on the nature of the resource, the effect to it, and the input from stakeholders such as the SHPO, tribes, and the public. Although the resolution of effects is often thought of as "mitigation" of effects, the Section 106 implementing regulations state that the federal agency should "develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties."

The Section 106 implementing regulations require that federal agencies consider both direct (physical) and indirect (atmospheric) effects. Of the two, the resolution of direct effects is often the most straightforward as it deals with physical effects that are often easy to predict, identify, and resolve. The resolution of indirect effects can be less straightforward as those types of effects (auditory and visual effects) require a greater understanding of the resource and the intangible qualities that make it important. Avoidance, minimization, or mitigation of indirect effects requires that managers work closely with the people who ascribe importance to a property.

For direct effects, avoidance can be implemented by moving the location of a specific activity away from a historic property so that is not physically affected. Minimization could entail limiting public access to an area within or near a historic property or ensuring that the public is properly escorted. Minimization can also be accomplished through brochures or educational videos that raise awareness to the presence of historic properties and the types of damage that can be done to them (similar to "Leave No Trace" education). For archaeological sites, mitigation of direct effects is often thought of as data recovery through excavation but a variety of mitigation measures are possible. These can include mapping and collection of artifacts from the surface by professional archaeologists; partial site excavation; detailed mapping and photography of archaeological features; or complete data recovery through site excavation. Mitigation for historic buildings and structures often takes the form of high resolution photography and historic research; although other methods are available.

In addition to physical effects, increased public access to Rattlesnake Mountain may have indirect effects to historic properties, especially for those properties whose significance is related to intangible qualities such as viewsheds or soundscapes. These effects can include the presence of the public during certain times of the year when traditional practitioners require solitude or can occur because of increased noise or unwanted sounds.

Like physical effects, intangible effects can be resolved through avoidance, minimization, and mitigation. Avoidance could be achieved by prohibiting public access during specific periods of time or from specific places. Minimization could mean restricting the number of visitors or vehicles. Mitigation for these type of effects often takes the form of creative or "off site" mitigation. Examples of this might include: 3D mapping of a property that can be accessed online as part of a story map; educational posters or panels; or recording traditional stories and songs related to the property.

4.6.1 Alternative A – No Action

Under the No Action Alternative, the Rattlesnake Unit would remain a Closed Zone, and public use would continue through the issuance of a limited number of SUPs or other special programs, such as Service-led tours. As outlined in the CCP/EIS, including the compatibility determinations (Appendix I of the CCP/EIS), any public access includes strict protection measures to avoid known cultural

resources. In addition, review of federal activities would continue to be accomplished through the NHPA Section 106 process. Therefore, no impacts to cultural resources are anticipated under the No Action Alternative, apart from those discussed in the CCP/EIS.

4.6.2 Alternative B – Expanded Public Access

Alternative B has the potential to impact cultural resources by increasing public presence within the Rattlesnake Unit, including the summit of Rattlesnake Mountain. The Service has initiated the NHPA Section 106 process to identify and assess effects of the proposal on historic properties. The Service will continue to consult with the tribes and SHPO to resolve adverse effects identified in the consultations by avoidance, minimization, or mitigation.

There are several known archaeological sites and historic structures within the study area. Because of this, the Service will take appropriate steps required by law and regulation to address effects to those resources.

The Laliik TCP is a historic property of cultural and religious significance to Indian tribes and there are some expected effects to the TCP. As discussed above, evidence of the presence of visitors such as litter or vehicle tracks will affect the value of the TCP as a religious or cultural resource. The controlled public access described in Alternative B, including close monitoring of visitors by Service staff or docents, will help to minimize these physical effects to the TCP. Public access under Alternative B will also result in less tangible effects to the TCP such as the presence of people and loss of solitude. Alternative B seeks to minimize these intangible effects through timing of access, but some effects to the TCP will remain. The Service will continue to work through the Section 106 process with the tribes and SHPO to more clearly define the impacts to cultural resources and to resolve those adverse effects.

As discussed in this DSEIS, numerous measures will be implemented to ensure that there are stipulations in place to protect cultural resources. These measures may include production and distribution of educational materials, strict fire policies, vehicle limitations, access restrictions, on-site presence of fire and law enforcement personnel, and other protective measures. Of greatest importance, however, are the operational parameters that all activities will be monitored by Service staff or trained docents, and the footprint of all areas to be used for public access will be subject to review and compliance under Section 106 of the NHPA. Due to these measures, there would be negligible impacts to cultural resources other than to the Laliik TCP discussed above. Any adverse effects to that TCP determined and resolved through the Section 106 process.

4.6.3 Alternative C – Enhanced Summit Access

The impacts, assessment, and conclusions are the same under Alternative C as those of Alternative B.

4.7 Effects on Interpretation and Education

One of the CCP/EIS's target goals is to increase awareness of the Monument and appreciation for its resources. The Rattlesnake Unit is especially suited to achieving this goal due to its more than 70-year closure, its cultural significance, and its role as a research area. There exists a great potential to increase awareness of Native American culture and why this area is important to area tribes.

Interpretation and education programs, activities, and materials would have beneficial effects on Monument and Rattlesnake Unit resources by increasing public awareness of, and appreciation for, these resources, informing visitors about proper resource use, and instilling a sense of stewardship in both visitors and the community.

4.7.1 Alternative A – No Action

Under this alternative, the Rattlesnake Unit would remain a Closed Zone with limited public access and limited opportunities for environmental and cultural education. There would be some access, as described in the CCP/EIS, for activities such as tours, but the number of participants would be quite limited (approximately 600 per year maximum, based on 30 people per tour, two tours per day, for 10 days), and thus the opportunities for interpretation would be limited. As a result, while the effects on interpretation and education would be positive, they would be minor.

4.7.2 Alternative B – Expanded Public Access

As in Alternative A, the Rattlesnake Unit would remain a Closed Zone, but public access would be expanded by including Designated Use Zones, which would restrict the use to designated sites, trails, or roads. Under the initial Service-lead tour/auto tour/open house days/classes breakdown, there would be up to 4,400 people accessing the area annually. This number is based on:

(1) 30 people per Service-lead tour, 2 tours per day, 20 days per year, for a total of 1,200 tour participants;
(2) parking space at the Service maintenance building for 100 cars for open house days, 3 people per car, 2 shifts of cars per day, 2 days per year, for a total of 1,200 participants;
(3) 400 cars per day on auto tour days, 2 people per car, 2 days per year, for a total of 1,600 participants;
(4) 25 students per class, 4 classes per day, 4 days per year, for a total of 400 participants.

This represents a significant opportunity for the Service and other entities (e.g., Native American tribes) to increase public awareness of the Monument and its resources, especially those found on the Rattlesnake Unit. It also represents an increase in the ability of local educational organizations to teach students. Still, this is a limited number of people, especially in light of the local population base, so the impacts are expected to be moderate, albeit positive and long-term.

4.7.3 Alternative C – Enhanced Summit Access

Under Alternative C, the number of participants would be expected to be around 9,600 per year. This offers the largest number of people, and, like Alternative B, provides for a mix of passive and active recreational opportunities. It adds the opportunity to drive to the summit, but it loses two opportunities from Alternative B—horseback riding and an opportunity to see other areas of the Rattlesnake Unit. However, this alternative could only be implemented with increased funding for road safety repairs and upgrades. This alternative would be expected to have a moderate positive impact for interpretation and education in the area.

4.8 Effects on Recreation and Public Use

Another goal of all of the CCP/EIS is to provide high-quality recreational opportunities for the public. All of the alternatives would provide some level of increased public recreation.

4.8.1 Alternative A – No Action

Under this alternative, the Rattlesnake Unit would remain a Closed Zone with limited public access and limited opportunities for recreation. There would be some access, as described in the CCP/EIS, for activities such as tours, but the number of participants would be quite limited (approximately 600 per year maximum), and thus the opportunities for recreation would be limited. Construction of a trail, as identified in the CCP/EIS, would greatly increase recreational opportunities, but there are currently no plans to build a trail. This alternative represents a minor positive impact for recreation.

4.8.2 Alternative B – Expanded Public Access

As in Alternative A, the Rattlesnake Unit would remain a Closed Zone, but controlled public access would be significantly expanded. There would be up to 4,000 people (excluding classroom participants) accessing the area annually for recreation. Alternative B represents a blend of both passive (driving and tours) and active (hiking, biking, and horseback riding) recreational opportunities, thereby allowing a good cross-section of the public with different interests and abilities an opportunity to experience the Rattlesnake Unit. Still, this is a limited number of people, especially in light of the local population base, so the impacts are expected to be minor positive.

4.8.3 Alternative C – Enhanced Summit Access

Under Alternative C, the number of participants would be expected to be around 9,600 per year. This offers the largest number of people, and, like Alternative B, provides for a mix of passive and active recreational opportunities. It adds the opportunity to drive to the summit, but it loses two opportunities from Alternative B—horseback riding and an opportunity to see other areas of the Rattlesnake Unit. However, this alternative could only be implemented with increased funding for road safety repairs and upgrades. This alternative would be expected to have a moderate positive impact for recreation in the area.

4.9 Effects on Aesthetics and Solitude

Under all alternatives, existing roads and the CCCF at the summit of Rattlesnake Mountain affect the aesthetics of the site.

4.9.1 Alternative A – No Action

Under Alternative A, the Rattlesnake Unit would remain a Closed Zone, and public access would be strictly limited to a few Service-lead tours during the course of the year. This alternative does not differ from current management and use of the Rattlesnake Unit. If tours are provided, additional 1-3 road gradings may be required to smooth the road surface or to redistribute gravel. Impacts due to crowding and road dust would be negligible and transitory.

4.9.2 Alternative B – Expanded Public Access

Under Alternative B, there could be a large number of participants (depending on the activity) concentrated into a relatively small area of the Rattlesnake Unit. During the open house days at full capacity, Service vehicles, bicycles, horses and riders, etc., could be in view at any time. Under Alternative B, the auto tours on open house days have the potential to generate large clouds of dust, especially if the day is calm. This would likely have a negative impact to participants ranging from minor to major. However, the majority of public use would be for guided tours, with limited group

sizes and numbers of vehicles. Therefore, impacts to aesthetics due to crowding and road dust would be moderate to major, but transitory for the two-day period annually, and minor.

In order to accommodate auto tours, or to mitigate impacts to Service roads after the tours, an additional 2-3 road gradings may be required to smooth the road surface or to redistribute gravel. This would create temporary periods of machine noise and dust. However, this corrective action, while additive, would be: 1) indistinguishable from regular, ongoing maintenance work; 2) temporary; 3) on already disturbed surfaces; 4) localized; and 5) of very short duration (approximately 2-3 hours per grading). As such, impacts are anticipated to negligible.

Auto tours themselves would introduce machine noise and dust. As tours would be limited to small passenger vehicles, noise would be quite localized. Dust, however, depending on weather conditions could be extensive over a nine hour period (the period of public access). This impact would be transitory, though, lasting only for the tour period itself. Impacts are thus considered to be moderate, but temporary with no lasting effect.

4.9.3 Alternative C – Enhanced Summit Access

The same discussion from Alternative B above applies here, although the number of participants at any given time would likely be less (once the initial rush of participants in the early days is over), they will be concentrated in a smaller area—the Rattlesnake Summit Road corridor and a small area on the summit of Rattlesnake Mountain—and extend over a longer period of time. The anticipated effects would again be expected to be negligible to minor, depending on crowd size and weather conditions.

4.10 Effects on Special Area Designations

Apart from the impacts to the TCP, as discussed in Section 4.6 in the CCP/EIS, there would be no effects to any of the special area designations that apply to the Rattlesnake Unit under any of the alternatives. Effects to the TCP are discussed above in Section 4.6.

4.11 Effects on Social, Economic, and Infrastructure Resources

Each of the alternatives is anticipated to have not more than negligible impacts on socio-economics in the area. All of the proposed activities are single-day activities, and it is unlikely that they would attract large numbers of participants from outside the vicinity of the Mid-Columbia Basin. There are no businesses like hotels or restaurants nearby. There are no on-site or nearby residents to be affected by the proposed activities. Traffic is not expected to be significantly higher than that already present from Hanford Site workers, so area roads would not be impacted. No special equipment is needed for any of the proposed activities, at least beyond what participants already likely own, so area stores would not be impacted.

None of the alternatives would result in any changes in land ownership or primary use of the land. The Rattlesnake Unit would remain a Closed Zone focused on environmental and cultural resource protection. No new facilities, roads, or other factors that could change land use are included in any of the alternatives.

4.11.1 Alternative A – No Action

Under this alternative, there would not be any anticipated effects beyond those identified and analyzed in the CCP/EIS.

4.11.2 Alternative B – Expanded Public Access

Alternative B would increase traffic on the 1200 Foot Road for the auto tour. This would bring additional rutting and compaction of gravel, which would require an additional 2-3 gradings per year with related noise and dust. However, this would be of short duration and not have any lasting environmental impact and is thus considered to be a negligible impact (see also Section 4.9).

4.11.3 Alternative C – Enhanced Summit Access

If funding were secured for upgrading Rattlesnake Summit Road, it would have a minor to major positive impact to the road, depending on the level of upgrades.

4.12 Indirect and Cumulative Effects

Council on Environmental Quality (CEQ) regulations, which implement the provisions of NEPA, define several different types of effects that should be evaluated in an EIS, including direct, indirect, and cumulative effects. Direct effects are addressed in the resource-specific sections of this chapter (Sections 4.1 through 4.11). This section addresses indirect and cumulative effects. The analyses in this section primarily focus on effects associated with reasonably foreseeable future events and/or actions regardless of what entity undertakes that action.

CEQ (40 CFR § 1508.7) (CEQ 1997) provides the following definition of indirect effects:

> [Impacts that are] caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems including ecosystems.

CEQ (40 CFR § 1508.7) (CEQ 1997) provides the following definition of cumulative effects:

> The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

4.12.1 Indirect Effects

With the possible exception of effects to the TCP, which will be evaluated with the assistance of the area tribes, the Service, and DOE, all of the actions being discussed within this DSEIS are low-impact; limited in scale, duration, and location; overseen by the Service and/or trained docents; monitored for impacts by on-site personnel; and/or have strict protective measures to accompany the activity. The Service cannot foresee any indirect impacts from any of the alternatives. If, however, such impacts become evident through the on-site activity monitoring, the Service will re-evaluate the activity and either curtail or modify it to mitigate those indirect impacts.

4.12.2 Cumulative Effects

The Service is unaware of any other action currently being undertaken on the Monument, including the Rattlesnake Unit, proposed for the Monument, being undertaken on nearby lands, or being proposed for nearby lands that would create any cumulative effect situation. Again, should such impacts become evident through the on-site activity monitoring, the Service will re-evaluate the activity and either curtail or modify it to mitigate those indirect impacts.

4.13 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources occur when an action so alters the resource that it cannot be restored or returned to its original or pre-disturbance condition. It means that future options are lost as a result of a decision to use or modify resources that are renewable only over a long period of time.

Irretrievable commitments of resources are the lost production or use of renewable resources caused by allocation decisions. Opportunities are foregone for the period of time that the resource cannot be used, but can return once the use ends.

Because there are no new construction projects, or anything else being proposed through the alternatives in this DSEIS of a permanent or semi-permanent nature, there are no irreversible or irretrievable commitment of resources.

4.14 Environmental Justice

On February 11, 1994, President Clinton signed Executive Order 12898, requiring federal agencies that administer and implement programs, policies, and activities that affect human health or the environment to identify and avoid “disproportionately high and adverse” effects on minority and low-income populations.

The Service’s environmental justice guidelines state that environmental justice is one of the factors considered when developing an environmental analysis. These guidelines stipulate that environmental justice should be addressed similarly to other environmental concerns and should include identification, avoidance, minimization, and mitigation. To correctly identify potential inequities, the environmental justice analysis requires preliminary census research and may require more detailed studies of communities/populations in combination with effective community outreach. This process is intended to ensure that projects are developed in a manner that avoids disproportionately high and adverse effects on minority and low-income populations.

The Service is required to undertake activities in support of Executive Order 12898 in all Service programs and activities. Incorporation of environmental justice principles is an implementation of NEPA, Title VI of the Civil Rights Act, Uniform Relocation Act, and other regulations and guidance that affect social, economic, and environmental factors, public health, and public involvement. As discussed above in Section 4.6, public access will have some effects to cultural properties and, especially with the TCP, those effects will disproportionately affect local tribal communities for whom the TCP is an important religious and cultural resource. The Service will continue to work through the § 106 process to more clearly define and resolve any adverse effects to the TCP or other cultural resources of importance to the tribes.

For other than cultural resources,one of the alternatives disproportionately affect low-income families, disadvantaged populations, minorities, or any other group. Most, if not all, of the activities being considered will be free, and everyone will have an equal opportunity to participate. No activity requires expensive equipment, specialized training, etc. The only potential immediate cost may be a nominal cost to enter a lottery if demand for an activity (e.g., a wildflower tour) greatly exceeds capacity, but the cost would be set so as not to exclude anyone.

5. Consultation, Coordination, and Public Outreach

The NEPA process requires considerable outreach and coordination to complete an EIS. An SEIS requires almost all of the same consultation and coordination, with one exception: A formal Notice of Intent need not be published in the *Federal Register*. Below is a summary of public and governmental interaction to date.

5.1 Agency Consultation and Coordination

The DOE and SHPO are consulting government agencies on this DSEIS and the NHPA Section 106 process.

5.2 Consultation with Native American Governments

Consultation with the tribes is ongoing. Because much of the area under consideration holds cultural significance to area tribes, the affected tribes, along with the DOE and the Service, formed a Tribal Working Group to assist the Service with implementation of the NDAA. This group also includes the SHPO to help to ensure that access is provided in a manner that is respectful and protective of the natural and cultural resources found in the Rattlesnake Unit. The ACHP has been a participant in the NHPA Section 106 process, including Tribal Working Group meetings.

The first meeting of the Rattlesnake Unit Access Tribal Working Group was held on October 1, 2015. At that meeting, the four tribes in attendance (CTUIR, Nez Perce Tribe, Wanapum, and Yakama Nation), the DOE, and the Service shared their interests, concerns, and suggestions regarding public access within the Rattlesnake Unit. The Working Group met again on March 2, 2016. Comments from the tribal participants included the need for greater NEPA and NHPA review of the proposed access for Rattlesnake Mountain. Suggestions included writing an EIS and completing a cultural resource management plan (CRMP) for the Rattlesnake Unit. In July and August 2016, the Service met with each of the Working Group tribes individually to discuss the public access proposal.

Additional meetings of the Tribal Working Group were held on March 2, 2017, April 6, 2017, and March 28, 2018. Further meetings will be scheduled as appropriate to support completion of the NHPA Section 106 process and to ensure continual and meaningful input from the tribes to the development of an access plan.

Formal NHPA consultation was initiated on December 20, 2016, when the Service contacted the SHPO to present its determination for the Area of Potential Effect. The SHPO concurred on December 21, 2016. On March 17, 2017, the Service met with the CTUIR to discuss the public access proposal. The Working Group met again on April 6, 2017, to discuss the proposal and the need for a CRMP and Sacred Sites Policy. On October 10, 2017, the Service sent a draft cultural resources report to the Working Group that included the Service's proposal for historic property identification efforts. Comments on the proposed access plan and draft cultural resources report were received from the Working Group in March 2018 and were discussed at a Working Group meeting on March 28, 2018.

Below is a summary of tribal consultations to date:

- June 2015: The Service initiates technical-level conversations with the Yakama Nation, CTUIR, Nez Perce Tribe, and Wanapum.

- July 2015: The Service invites participation of the tribes in an NDAA Tribal Working Group for formal consultation.
- October 1, 2015: An NDAA Tribal Working Group Meeting is held.
- March 2, 2016: An NDAA Tribal Working Group Meeting is held.
- July 29, 2016: An individual consultation is held between the Yakama Nation and the Service.
- August 9, 2016: An individual consultation is held between the Wanapum and the Service.
- August 25, 2016: An individual consultation is held between the CTUIR and the Service.
- August 26, 2016: An individual consultation is held between the Nez Perce Tribe and the Service.
- March 17, 2017: An individual consultation is held between the CTUIR and the Service.
- March 27, 2017: The Service holds a coordination meeting with the ACHP, DOE, and Washington Department of Archaeology and Historic Preservation (DAHP) for tribal consultation for NDAA access.
- April 6, 2017: An NDAA Tribal Working Group Meeting is held.
- May 12, 2017: The Service sends a letter, April 2017 meeting minutes, and a timeline to the tribes.
- October 10, 2017: The Service sends a draft cultural resources report to the tribes, DAHP, DOE, and ACHP for review.
- March 28, 2018: An NDAA Tribal Working Group meeting is held. The draft cultural resources report and other aspects of the undertaking are discussed.

5.3 Formal Scoping

Prior to developing an EIS, the scope of the document—that is, what will be covered and in what detail—must be determined. Scoping is open to the public and state and local governments, as well as affected federal agencies. This open process gives rise to important opportunities for better and more efficient NEPA analyses, and it offers the public and agency participants the chance to voice their concerns early.

The scoping period has specific objectives: (1) identify the affected public and agency concerns; (2) identify those concerns early in the EIS process; (3) facilitate an efficient EIS preparation process through the assembly of cooperating agencies, assignment of EIS development/writing tasks, ascertainment of all the related permits and reviews that must be scheduled concurrently, and establishment of time frames; (4) define the issues and alternatives that will be examined in detail in the EIS, while simultaneously devoting less attention and time to issues which cause no concern; and (5) save time in the overall process by helping to ensure that draft statements adequately address relevant issues, reducing the possibility that new comments will cause a statement to be rewritten or supplemented.

5.3.1 Notice of Request for Comments and Public Meetings

A Notice of Request for Comments and Public Meetings was published in the *Federal Register* on October 7, 2015 (80 FR 60701), initiating the public scoping comment period, announcing public meetings, and requesting comments on issues and opportunities for potential access alternatives to consider for the Rattlesnake Unit. The scoping period closed November 13, 2015.

In addition to the *Federal Register* notice, the Service issued a press release to area media. Local television stations and newspapers provided coverage about the scoping and public meetings, as well

as covering the meetings themselves. Several organizations (e.g., Lower Columbia Basin Audubon Society) notified their members of the public scoping through newsletters and electronic means.

5.3.2 Scoping Meetings

On October 14, 2015, two public scoping meetings were held. The meetings were held at the Hanford Reach Interpretive Center, in Richland, Washington. Approximately 70 people attended the afternoon meeting, with another 30 in attendance for the evening meeting.

The meetings were conducted in an "open house" format. Following short presentations by the Project Leader and the Visitor Services Manager for Mid-Columbia River National Wildlife Refuge Complex, attendees met one-on-one with Service personnel to discuss access issues and options for visiting the Rattlesnake Unit. Comments were recorded on flipcharts and by collecting written comments.

5.3.3 Results of Scoping

A total of 145 comment letters were received through public scoping. Scoping comments were also captured during public and tribal meetings. All scoping comments were reviewed and grouped by issue. The *Hanford Reach National Monument Rattlesnake Unit Public Access Scoping Report* in Appendix C details the public access options/issues, as well as environmental and cultural considerations raised by members of the public.

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Appendix A: Abbreviations

ACHP	Advisory Council on Historic Preservation
ALE	Fitzner-Eberhardt Arid Lands Ecology Reserve
CCCF	Combined Community Communications Facility
CCP	Comprehensive Conservation Plan
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRMP	Cultural Resource Management Plan
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
DAHP	Washington Department of Archaeology and Historic Preservation
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DSEIS	Draft Supplemental Environmental Impact Statement
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FR	Federal Register
Monument	Hanford Reach National Monument
National Register	National Register of Historic Places
NDAA	Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
Refuge System	National Wildlife Refuge System
RNA	Research Natural Area
ROD	Record of Decision
RSL	Remaining Service Life
SEIS	Supplemental Environmental Impact Statement
Service	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Office/Officer
SUP	Special Use Permit
TCP	Traditional Cultural Property
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
WDFW	Washington Department of Fish and Wildlife

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Appendix B: List of Preparers

Name	Background	DSEIS Contributions
Brita Woeck Consultant, Tetra Tech, Inc.	B.S. Wildlife Science/Quantitative Science M.S. Wildlife Ecology and Management 15 years' experience with NEPA	Writer, consultant on developing effects sections
Dan Haas Visitor Services Manager, Mid-Columbia National Wildlife Refuge	B.S. Zoology B.A. Business Administration M.S. Resource Development 25 years' experience with NEPA	Lead developer, writer
Trevor Fox Project Leader, Mid-Columbia National Wildlife Refuge Complex	B.S. Fisheries and Wildlife M.S. Wildlife Resources	Reviewer, advisor on alternatives, environmental effects, public outreach, liaison to Regional Office and tribes
Charlie Stenvall Refuge Supervisor, Regional Office Former Project Leader, Mid-Columbia National Wildlife Refuge Complex	Humboldt State University, B.S. Wildlife Management 33 years with U.S. Fish and Wildlife Service Refuge management and operations	
Robin Michel Archeologist, Mid-Columbia National Wildlife Refuge Complex	University of Arkansas, M.A. Anthropology 22 years' experience in archaeology/cultural resource management.	Writer, advisor for cultural and archeological resources
Kevin O'Hara Conservation Planner, Regional Office		Reviewer of NEPA section
Liz Cruz Geographer/GIS Specialist, Regional Office		Development of location and alternatives maps
Nicole McCarthy Technical Writer/Editor, Regional Office	18 years with U.S. Fish and Wildlife Service	Reviewer, editor

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Appendix C: Scoping Report

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Dated: April 18, 2016

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1.0 Introduction

The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 (NDAA) directed the U.S. Fish and Wildlife Service (Service) to "provide public access to the summit of Rattlesnake Mountain on the Hanford Reach National Monument (Monument) for educational, recreational, historical, scientific, cultural, and other purposes, including—(1) motor vehicle access; and (2) pedestrian and other nonmotorized access" (Public Law 113-291). The NDAA also allows for cooperative agreements with others to assist with guided tours, including motorized tours, and maintenance of the access road to the summit of Rattlesnake Mountain.

While the NDAA directs the Service to provide public access to Rattlesnake Mountain only, we are also considering access to other portions of the Rattlesnake Unit on the Monument. This is consistent with management direction laid out in the 2008 *Hanford Reach National Monument Comprehensive Conservation Plan and Environmental Impact Statement* (CCP/EIS), which considered public access for the entire Rattlesnake Unit. The Service-managed lands within the Rattlesnake Unit lie within the boundaries of the Fitzner-Eberhardt Arid Lands Ecology (ALE) Reserve south of Highway 240.

This report discusses (1) relevant background, (2) the issues and opportunities identified during the initial scoping conducted in compliance with the National Environmental Policy Act (NEPA), and (3) the next steps in our process to analyze which Rattlesnake Unit public access opportunities may be in compliance with the NDAA and other relevant laws and policies.

1.1 Purpose and Need

The statement of purpose and need is, in some respects, the most important part of a NEPA document. The purpose and need explains why the Service is proposing to take action, the objectives the Service intends to achieve, and the social need to which the Service is responding. It is used in framing a range of alternatives to be analyzed. The scoping process initiates the Environmental Assessment (EA) that will evaluate the effects of potential access alternatives in compliance with NEPA. The EA will analyze alternatives that at least partly achieve the Service's objectives. Alternatives that do not meet purpose and need do not need to be analyzed.

For this process, the purpose is to provide public access to the Rattlesnake Unit, including the summit of Rattlesnake Mountain, within the Monument in a manner that is compatible with the NDAA, Presidential Proclamation 7319, and other existing laws, regulations, and policies that govern actions on the Monument. The need for the action is directed by the NDAA.

1.2 Description of Planning Area

1.2.1 Hanford Reach National Monument Background

The Monument, located near the Tri-Cities (Kennewick, Pasco, and Richland) in south-central Washington State, was established on June 9, 2000, and is managed by the Service and the Department of Energy (DOE). The land comprising the Monument has an unusual and colorful background. The entry of the United States into World War II and the race to develop an atomic bomb led to a search for a suitable place to locate plutonium production and purification facilities. In 1943, the War Department (later to become the Department of Defense) went in search of a remote, easily defensible, geologically stable site with plenty of cool water, abundant energy, and a moderate climate on which to build secret plutonium production reactors. The U.S. Army Corps of Engineers selected a site in Washington State near the isolated desert towns of White Bluffs and Hanford. The War Department then acquired the land through condemnation and purchase of private lands and withdrawal of public lands within the basin formed by Rattlesnake Mountain and Saddle Mountains.

For more than 40 years, the primary mission at the Hanford Site was the production of nuclear materials for national defense. During that time, management activities and development practices were driven by needs related to nuclear production, chemical processing, waste management, and research and development. The Atomic Energy Commission, and later the DOE, developed infrastructure and facility complexes to accomplish this work in the central portion of the site, but large tracts of land used as protective buffer zones for safety and security purposes remained largely undisturbed. These buffer zones preserved a nationally significant biological and cultural resource setting in the Columbia Basin region.

In the early 1970s, there was a reduced need for large safety and security buffer zones around the Hanford Site, and the DOE transferred management of portions of the North or "Wahluke" Slope (the area north of the Columbia River) to the Service—creating the Saddle Mountain National Wildlife Refuge—and to the Washington State Department of Fish and Wildlife (WDFW). By the late 1980s, the primary DOE mission had changed from defense materials production to environmental restoration, waste management, and science and technology research, further decreasing the need for a large land base. In 1997, the DOE transferred the administration of the ALE Reserve to the Service. In 1999, lands managed by WDFW, known as the Wahluke Wildlife and Recreation Area, were transferred to the Service to be managed, under a DOE permit, as part of the National Wildlife Refuge System (Refuge System). The WDFW retained administration of the area around the Vernita Bridge under DOE permit to provide access for sport fishing on the Columbia River.

In the 1980s, concerns for protection of the Hanford Site's natural and cultural resource values grew, as did interest in consolidating management under one natural resource agency. In 1988, Congress directed the Secretary of the Interior and the Secretary of Energy to identify and evaluate the outstanding features of the Hanford Site and its immediate environment—including

fish, wildlife, geology, scenery, recreation, historic and cultural values—and recommend alternatives for their preservation. The resulting 1994 Department of the Interior report, *Hanford Reach of the Columbia River Comprehensive River Conservation Study and Environmental Impact Statement*, identified the Service as best suited to protect those values. President Clinton created the Hanford Reach National Monument with Proclamation 7319 on June 9, 2000, through his powers under the American Antiquities Act of 1906, as amended (Public Law 59-209, 34 Stat. 225, 16 United States Code § 431–433). This new national monument consisted of 196,000 acres of buffer lands around what is generally known as Central Hanford, the area where nuclear material production and processing took place.

The Monument is the only national monument managed by the DOE and one of only seven managed by the Service. Of the 196,000 acres that make up the Monument, the DOE currently administers approximately 29,000 acres and retains land surface ownership or control on all acreage. Approximately 165,000 acres are currently managed by the Service through its authorities under the National Wildlife Refuge System Administration Act (16 United States Code § 668dd–ee) and through agreements with the DOE. The WDFW administers approximately 800 acres of the Monument through a permit with the DOE. Other state and federal agencies and utility districts maintain rights-of-way or manage small tracts of land within the Monument boundaries.

1.2.2 Administration as a National Wildlife Refuge

In creating the Monument, President Clinton noted that, "The [Service] manages lands under its management jurisdiction pursuant to the National Wildlife Refuge System Administration Act . . ." (management guide provided by the White House when the Proclamation was signed). A July 26, 2000, memorandum from Interior Secretary Bruce Babbitt further clarified the Monument to be administered as a unit of the Refuge System: "Pursuant to the terms of the management agreements [between the DOE and the Service] and the National Wildlife Refuge Administration Act . . ."

Under the National Wildlife Refuge System Administration Act, "The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Mission Goals and Purposes policy, 601 FW 1).

The Refuge System has several goals:

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered;

- Develop and maintain a network of habitats for migratory birds, anadromous and inter-jurisdictional fish, and marine mammal populations that is strategically distributed

and carefully managed to meet important life history needs of these species across their ranges;

- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts;

- Provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, and environmental education and interpretation); and

- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

Because the Monument is administered as a component of the Refuge System, the legal mandates and policies that apply to any national wildlife refuge apply to the Monument. In providing public access to the Rattlesnake Unit, the Service is required to protect the resources of the Monument and its role in the Refuge System. That is, the Service is required to protect the purposes for which the Monument was created.

1.2.3 Monument Purposes

The purposes of any national wildlife refuge are "specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit" (National Wildlife Refuge System Administration Act). In this instance, the purposes are defined in Proclamation 7391. The Proclamation specifically notes a list of resources deemed nationally significant, including:

- A shrub-steppe ecosystem, including breeding populations of steppe- and shrub-steppe-dependent birds, such as loggerhead shrikes, sage sparrows, sage thrashers, and ferruginous hawks;

- Water-related resources, including 46.5 miles of the 51-mile-long Hanford Reach of the Columbia River, fall Chinook salmon spawning areas, and sturgeon;

- Important archaeological and historic artifacts from more than 10,000 years of human occupation, including prehistoric pit houses, graves, spirit quest monuments, hunting camps, game-drive complexes, quarries, hunting and killing sites, and more recent human activity, such as homesteads and early towns;

- A diversity of native plant and animal species, including rare and sensitive plant species such as Umtanum desert buckwheat and White Bluffs bladderpod; habitat for migratory

birds and resident species, including wintering habitat for bald eagles, white pelicans and ducks; nesting sites for rare bird species, including prairie and peregrine falcons; mammals, including elk, beaver, badgers and bobcats; and insect species new to science or not previously identified in the state of Washington;

- Microbiotic crusts; and

- Significant geological and paleontological objects, such as the White Bluffs and Hanford Dune Field, and mammalian fossils of rhinoceros, camel, mastodon, and others.

The Monument Proclamation and an accompanying management guide provided by the White House set forth specific actions and established a basis for managing of the Monument. In addition, they set forth the following mechanisms for protection of the significant resources found:

- Federal lands are withdrawn from disposition under public land laws. This includes all interests in these lands, such as future mining claims.

- Off-road motorized and mechanized vehicle use is prohibited, except for emergency or other federally authorized purposes, including remediation purposes.

- The ability to apply for water rights.

- Livestock grazing is prohibited.

- The Service and DOE (subject to certain provisions) are established as the managers of the Monument.

- A land management transfer mechanism from DOE to the Service.

- Clean-up and restoration activities are assured.

- Existing rights, including tribal rights, are protected.

1.2.4 Area under Consideration

Rattlesnake Mountain runs along the southwestern edge of the Rattlesnake Unit. The axis of Rattlesnake Mountain runs from southeast to northwest and rises approximately 3,000 feet from the toe of the mountain to the crest (with elevations of over 3,450 feet). The slopes of Rattlesnake Mountain are as steep as 60 percent and have been incised by numerous watercourses that seasonally flow into Dry Creek or Cold Creek. West of Rattlesnake Mountain at the southwest corner of the Unit are the Rattlesnake Hills. North of the Rattlesnake Hills, the eastern end of the Yakima Ridge enters the unit and is visible from State Routes 240 and 243.

Most of the topography found at the lower elevations of the Rattlesnake Unit is gently rolling or relatively flat. The north edge of the unit is located several miles east of the State Route 240-State Route 24 junction and overlooks the Columbia River Valley.

The lands within the Rattlesnake Unit represent one of the largest remaining intact shrub-steppe habitats within the Columbia Basin eco-region. While these lands have been impacted by catastrophic fire events, this land base has not been significantly disturbed by humans for more than sixty years. Consequently, the area has remained a prime example of successional recovery, including a mixture of lower successional communities as well as recovering bunchgrass/sage communities. Shrub-steppe associations here are more biologically diverse than on surrounding lands. Studies conducted in the unit have documented a rare plant population found nowhere else, Umtanum desert buckwheat. The rarity of large blocks of shrub-steppe has led, in part, to the designation of the ALE Reserve as a Research Natural Area.

This unit is also rich in cultural resources and contains some of the earliest known cultural sites in the Monument. For at least 13,000 years the area has been the homeland of Native Americans. When Euro-American explorers arrived in the early 1800s, Native Americans currently referred to as the Wanapum inhabited numerous villages and fishing camps scattered throughout the area of the mid-Columbia River Basin. Neighboring groups, known today as the Yakama, Umatilla, Cayuse, Walla Walla, Palus, Nez Perce and Middle Columbia Salish, frequented the area to trade, gather resources, and conduct other activities. Descendants of the Native Americans are affiliated with the Wanapum, Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Reservation (CTUIR) and Nez Perce Tribe of Idaho and they retain traditional, cultural, and religious ties to the area. The landscape is filled with archaeological and other cultural resources from their presence. The 1855 treaties specified that the Native Americans would cede millions of acres of their homelands to the United States. The area contains lands within the ceded territories of the Yakama Nation and the CTUIR. Rattlesnake Mountain (Laliik), Yakima Ridge, and Umtanum Ridge are all culturally significant properties. Rattlesnake Mountain is a formally designated property "of traditional religious and cultural importance," or Traditional Cultural Property (TCP) under the National Historic Preservation Act of 1966, as amended (NHPA), and the 36 Code of Federal Regulation (CFR) 800 regulations implementing it. The TCP encompasses approximately 55,300 acres or 75 percent of the ALE unit. Laliik is a TCP because of its long association with the religious and cultural practices and beliefs of regional Native Americans, especially the Washani community, and is considered a sacred site. The area continues to be an important place where visions, songs, and resources are obtained.

As noted earlier, the NDAA requires the Service to provide access to Rattlesnake Mountain only, but our assessment includes all Service-managed lands within the Rattlesnake Unit. Within the Rattlesnake Unit (81,070 acres), the Service manages the ALE Reserve (73,930 acres), and the DOE manages the northwestern portion of the unit, an area formerly known as the McGee Ranch (7,140 acres). This report covers the ALE Reserve (Map 1).

[MAP OMITTED – See Maps section of this report.]

2.0 Description of Scoping Process

Scoping is the term used in the Council on Environmental Quality (CEQ) Regulations implementing NEPA (40 CFR Parts 1500 et. seq.) to define "the early and open process for determining the scope of issues to be addressed in a NEPA process." Scoping is open to the public and Tribal, state, and local governments, as well as to affected Federal agencies. Scoping is meant to provide opportunities to contribute ideas and feedback for consideration early in the NEPA process.

2.1 Outreach

A Notice of Request for Comments and Public Meetings was published in the *Federal Register* on October 7, 2015 (80 FR 60701), initiating the initial public scoping comment period, announcing public meetings, and requesting comments on issues and opportunities for potential access alternatives to consider for the Rattlesnake Unit. The initial scoping period closed November 13, 2015.

In addition to the *Federal Register* notice, the Service issued a press release to area media. Local television stations and newspapers provided coverage about the scoping and public meetings, as well as covering the meetings themselves. Several organizations (e.g., Lower Columbia Basin Audubon Society) notified their members of the scoping through newsletters and electronic means.

On October 14, 2015, two public scoping meetings were held. The meetings were held at the Hanford Reach Interpretive Center, in Richland, Washington. Approximately 70 people attended the afternoon meeting, with another 30 in attendance for the evening meeting; 76 signed-in to be added to the mailing list for this scoping report.

The meetings were conducted in an "open house" format. Following short presentations by the Project Leader and the Visitor Services Manager of Mid-Columbia River National Wildlife Refuge Complex, which administers the Monument, the attendees met one-on-one with Service personnel to discuss access issues and options to the Rattlesnake Unit and the ALE Reserve. Comments were recorded on flipcharts and people were also encouraged to provide their own written comments.

Comments received from the public during the scoping process were grouped based on the issues raised and are substantive comments are summarized in this report. This scoping report is not meant to resolve issues. Instead, it identifies the nature and extent of issues that may be addressed as environmental assessments are prepared and actions analyzed. Some of the issues identified will be analyzed further, while others may be eliminated because they are not allowed by law, policy or a lack of resources to implement.

2.2 Rattlesnake Unit Access Tribal Working Group

Because much of the area under consideration, including Rattlesnake Mountain, is part of the Laliik Traditional Cultural Property and holds tremendous cultural significance to area tribes, the affected tribes, along with the DOE and the Service, formed a Tribal Working Group to assist the Service with implementation of the NDAA. This group will help to ensure that access is provided in a manner that is respectful and protective of the natural and cultural resources found in the Rattlesnake Unit.

The first meeting of the Rattlesnake Unit Access Tribal Working Group was held on October 1, 2015. At that meeting, the four tribes in attendance (Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Wanapum Band, and Yakama Nation), the DOE, and the Service shared their interests, concerns, and suggestions regarding public access within the Rattlesnake Unit. Specifically, the primary concern raised by the Tribes was protection of the area as a sacred site. Collectively, the Tribes stated they do not support public access because it will have a negative impact on the qualities which make the area a sacred site.

Additional comments/questions are summarized as follows:

- Additional Government-to-Government consultation will be needed.
- No new groundbreaking activities.
- No motorized access.
- What is the status of the road to the top, i.e., condition and ownership?
- Only want access to consist of 2 visits/days every 10 years.
- There should not be open access.
- Will not support trails.
- There should never be access to the top.
- What is the status of NEPA coverage for public access?
- Hold a lottery for public access with guides.
- Don't have an issue with access outside the TCP.
- Concerns related to operational security and emergency response.
- How would impacts be mitigated?

3.0 Results of Public Scoping

During the initial public scoping period, 145 comment letters were received, mostly as emails. Scoping comments were also captured during public and tribal meetings. All scoping comments were reviewed and grouped by issue. Comments considered non-substantive because they are not relevant to public access on the Rattlesnake Unit (e.g., access to the White Bluffs) are not included below.

3.1 Public Use and Access Issues Submitted

- Re-establishment of guided tours. The types of tours specifically mentioned include:
  - Wildflower.
  - Sightseeing.
  - Guided hikes.
  - Photography.
  - Birdwatching.
  - Geology.
  - Guided mountain bikes.
  - Astronomy.
  - History.
  - Plants and plant communities.
- Specifics for tours included duration, timing, and implementation. Ideas offered include:
  - Tours on the first weekend of every month.
  - Tours in the spring.
  - Recreational tours on weekends and educational/school tours during the week.
  - No tours during hunting season.
  - Charging a fee.
  - Limiting mountaintop access to already disturbed areas.
  - Tours led by Native Americans.
  - Tours led by Service staff or guides under Service instruction, including volunteers, only.
  - Guides must be certified by the Service and follow guidelines established by the agency.
  - Tours provided for specific-interest groups/clubs.
  - Limits on tour group size.
- Virtual video tours available at the Hanford Reach Interpretive Center and other facilities.
- Automobile access:
  - Full, unregulated access to the Rattlesnake Unit.
  - No public motor vehicle access.
  - Only vehicles related to Service-controlled tours allowed.
- All-terrain vehicle (ATV) access.
- Biking on existing roads, including the road to the summit of Rattlesnake Mountain.
- Cross-country biking.
- Biking on new constructed trails.
- Hiking on existing roads.
- Cross-country hiking.
- Construction of new trails for hiking, specifically:
  - From Highway 225 to the mountaintop.
  - From Highway 240 to the mountaintop.
  - From Crooks Road (south side of Rattlesnake Mountain) to the mountaintop.

  - From the WDFW parking area southeast of the Monument to the mountaintop.
  - On the extreme southern and eastern ends of the Rattlesnake Unit as an extension of existing trails on WDFW lands.
  - From Hodges Ranch to the mountaintop.
  - From Bennett/North Rotha Roads to Snively Canyon.
  - From Franks Road to the mountaintop.
  - Through the former McWhorter Ranch.
  - From Horn Rapids Park to the mountaintop.
  - From the summit of Rattlesnake Mountain to Rattlesnake Spring/Cold Creek/Yakima Ridge as part of a connection for a longer trail system.
  - Linking of new trails into a system of trails connecting with Badger Mountain trails, as part of a Ridgeline Trail in the Tri-Cities, etc.
- Horseback riding on existing roads.
- Horseback riding on designated trails.
- Cross-country horseback riding.
- A horse camp at Snively Spring.
- Consideration of multiple access points for hiking, biking, and/or horseback riding.
- Wildlife and plant observation opportunities.
- Install an elk feeding station to enhance viewing opportunities.
- Hunting.
- Target shooting.
- Hang gliding or paragliding.
- Camping or backpacking, including campgrounds and open camping.
- Dog walking.
- Skiing.
- Access for research and monitoring.
- Access via commercial guiding.
- Access for group meditation.
- Access for special events, such as charity events, road races, teacher training.
- Access for the disabled.
- Methods for controlling or limiting access, including:
  - A self-regulating hiking allocation system (e.g., only allowing access on a first-come, first-served basis; access would be limited to those who were able to get a parking space within a designated parking area with a limited number of spaces).
  - A lottery system.
  - A permit system.
  - Access fee.
  - Guided access only.
  - Open-access days. Several days each year, provide open access for appropriate types of access. Provide shuttles for those unable to hike, bike, etc. Use guides and/or volunteers to ensure compliance with rules.
  - Hours of access, including consideration of 24-hours-per-day and daylight hours only.

  - Partitioning of access days based on use type (e.g., select days of the week set aside for hikers only with no motor vehicle access).
  - Partitioning of different zones for different activities.
- Ensure that the access road to the summit of Rattlesnake Mountain is entirely within Federal Government ownership or that the Federal Government has approved access.
- Construction of additional facilities and support/amenities, specifically:
  - Parking areas.
  - Picnic areas/tables.
  - Signs to communicate regulations.
  - Interpretive signs.
  - An anemometer on Rattlesnake Mountain to facilitate public safety.
  - Pull-off areas along the road to allow brake-cooling and create viewpoints.
  - Restrooms.
  - Boundary markers to denote areas of Native American concern (i.e., to prevent trespass).
  - Shaded areas.
  - Barriers on the mountaintop to protect people from falling.
  - More informational and viewing pullouts along Highways 240 and 225.
  - Shops/snack bars.
  - Timed gate to let vehicles into the area for whatever access is provided.
  - Helicopter pad on Rattlesnake Mountain for emergencies.
  - Fencing along the entire length of the road to ensure visitors remain within the corridor.
  - Windbreak on the mountaintop.
  - Gondola, tram, or ski lift.
  - An amusement park with waterslides and rollercoasters.
  - Observatory.
- Construction of new roads.
- Repair and/or improve the existing road (including related structures, such as guardrails) to allow for public use, either for automobiles, bicycles, or motorbikes.
- Provide a shuttle service to the summit of Rattlesnake Mountain.
- Maintain the existing network of utility roads throughout the Rattlesnake Unit.
- Access along the 1,200-foot road, including to Snively Canyon.
- Additional law enforcement, including through partnerships (e.g., the Benton County Sheriff's Office and Hanford Patrol).
- Public safety concerns, including:
  - Risks from severe weather, such as high winds and cold temperatures.
  - Risks from unmapped hazardous structures, such as abandoned gas wells.
  - Risks from being trapped on the mountain by fire or severe weather, complicated by the existence of only one access road.
  - Long response times due to distance and isolation.
  - Lack of cell phone coverage.
- Volunteers and support organizations:

  - Use volunteers, including existing organizations like the Washington Trails Association, to offset costs and staffing limitations.
  - Create a new organization, similar to Friends of Badger Mountain, to manage access, seek funding for development, etc.
  - Develop a program to train volunteers to assist with access.
  - Develop a contract with Native American tribes to pay tribal members to monitor access and provide guiding services.
- Prioritize the access of particular groups over others (e.g., senior citizens or Hanford retirees getting priority for access).
- Limiting access only to Native Americans.
- Providing equal access to all.

3.2 Environmental and Cultural Considerations Submitted

- Impacts of allocation/redirection of resources (e.g., money, staff time) to provide public access to the Rattlesnake Unit on management of the rest of the Monument and other refuges of the Mid-Columbia River National Wildlife Refuge Complex.
- Potential for disturbance of cultural resources.
- Preservation of existing Native American and early settler artifacts.
- Impacts to the designated Traditional Cultural Property.
- Development of a Cultural Resources Management Plan.
- Impacts of short- and/or long-term conversion of habitat from road improvements and construction of trails, parking lots, etc., including habitat fragmentation.
- Protection of rare, sensitive, threatened, and/or endangered plant species and plant communities and plant communities near the summit.
- Protection of xeric, spring, and riparian areas with distinctive plants/communities.
- Protection of sensitive and slow-regenerating biological soil crusts.
- Protection of native plants and their habitats.
- Protection of the native genetic bank, including use of local seeds for any restoration activities.
- Trampling of vegetation, especially when users do not stay on trails or within designated areas.
- Increased risk of the introduction and/or spread of noxious plants due to public access.
- Increased risk of wildfire due to increasing public use.
- Protection of wildlife resources.
- Timing of tours and other access, as well as any construction activities, in a manner that is compatible with wildlife cycles (e.g., breeding birds), habitat needs, and research operations.
- Seasonal closures if there are any wildlife migrations in the area and/or periods of extreme sensitivity for a wildlife species.
- Development of a Travel Management Plan to address protection of plants and habitats
- Increased potential for erosion due to allowing public access.

- Need to address human waste as a result of allowing public access. This would be further compounded if dogs and/or horses were allowed.
- Littering due to public access.
- Emergency response.
- Ongoing research and monitoring.
- Environmental and cultural education:
  - Native American tribes should provide information and education from their perspective.
  - Allow special classroom access.
  - Build a Cultural Center at the base of Rattlesnake Mountain to promote awareness and education of Native American traditions.
  - Publish a small brochure exclusively about the Rattlesnake Unit, highlighting history, resources, cultural background, and protection of the area.

4.0 Access Options Eliminated from Consideration by Law or Previous Analysis

Current management, laws, or policy can address some of the actions/issues raised during scoping. These are listed in this section.

4.1 Actions Not Permitted Under Proclamation 7319 or Existing Law/Policy

The following are actions that cannot be allowed according to Proclamation 7319, which established the Monument, or are prohibited by law.

- Cross-country all-terrain vehicle (ATV) access.
- Cross-country biking.
- Biking on new constructed trails.
- Gondola, tram, or ski lift.
- Amusement park.
- Target shooting
- Limiting access to Native Americans only.

4.2 Actions Previously Analyzed

The following are actions that were previously analyzed in the Monument CCP/EIS, including appropriate use findings and compatibility determinations, and found to be inconsistent with Monument management objectives.

- Backpacking or camping, including campgrounds.
- Dog walking, except for hunting purposes.
- Hang gliding and paragliding, including launch facilities for these uses.
- Cross-country horseback riding.
- Sport hunting within the Rattlesnake Unit (excluding controlled elk hunting as a population control measure).

5.0 Next Steps

All relevant comments and access options will be considered as we continue our process to provide public access to the Rattlesnake Unit. However, some options will not be evaluated further because they are not allowed by law (e.g., off-road motorized and mechanized vehicle use); do not meet Service policy (e.g., cross-country hiking or cross-country horseback riding); or have been previously analyzed within a NEPA process such as the CCP/EIS and determined to be inconsistent with Monument management objectives (e.g., backpacking or camping).

Some options that have been identified through public scoping have been previously analyzed within the CCP/EIS and selected as part of the Monument's management direction. With available resources or an expectation that those resources could be made available in the near future, these options could be implementable, pending other compliance as appropriate:

- Re-establishing guided tours.
- Ensuring that the access road to the summit of Rattlesnake Mountain is entirely within Federal Government ownership, or that the Federal Government has approved access.
- Partnering with Native American tribes to provide information and education from their perspective.
- Allowing special classroom access.
- Publishing a small brochure exclusively about the Rattlesnake Unit, highlighting history, resources, cultural background, and protection of the area.
- Using volunteers to offset costs and staffing limitations.
- Developing a program to train volunteers to assist with access.
- Allowing access for special events, such as charity events, teacher training, etc.

Other options would require additional NEPA analysis, such as:

- Provide open-access days several times each year for appropriate and compatible types of access. Provide shuttles for public safety, as needed.
- Allow biking on the existing roads, including the road to the summit of Rattlesnake Mountain, on open-access days.
- Allow hiking on existing roads on open-access days.
- Allow horseback riding on existing roads on open-access days.
- Allow access along the 1200-Foot Road to Snively Canyon on open-access days.

These and other options would be evaluated under alternatives in a forthcoming EA.[30] The EA will be drafted to evaluate the effects of potential access options that meet the purpose and need (Section 1.1) and that the Service could implement in a reasonable timeframe. Alternatives will be formulated by identifying a range of reasonable combinations of public uses and management practices that address issues identified during public scoping. Based on further analysis, there will likely be other access options, in addition to those listed in Section 4, that are deemed inconsistent with law or policy. The final selected access option could be any one of the alternatives or a combination of alternative strategies. In addition, the Service will fulfill its other regulatory obligations, including the provisions of the NHPA.

The NHPA establishes the Federal government's policy on historic preservation and the programs through which that policy is implemented. Concurrent with the NEPA process and prior to implementation of any actions to fulfill the purpose and need for public access to the Rattlesnake Unit, the Service will conduct the NHPA Section 106 process, including consultation with Native American tribes, Washington State Historic Preservation Office, and other interested parties. The Service will consult with Native American tribes to identify their concerns about historic properties; advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; articulate their views on the undertaking's effects on such properties; and participate in the resolution of adverse effects.

[30] It was determined that an SEIS was the appropriate analysis.

Appendix D: Species List

Plants

Common Name	*Scientific Name*
Alkali Saltgrass	*Distichlis stricta*
Antelope Bitterbrush	*Purshia tridentata*
Awned Halfchaff Sedge	*Lipocarpha aristulata*
Big Sagebrush	*Artemisia tridentata* var. *wyomingensis*
Black Greasewood	*Sarcobatus vermiculatus*
Bluebunch Wheatgrass	*Pseudoroegnaria spicata*
Cheatgrass	*Bromus tectorum*
Desert Dodder	*Cuscuta denticulata*
Geyer's Milkvetch	*Astragalus geyeri*
Idaho Fescue	*Festuca idahoensis*
Loeflingia	*Loeflingia squarrosa* var. *squarrosa*
Lowland Toothcup	*Rotala ramosior*
Persistentsepal Yellowcress (aka Columbia Yellowcress)	*Rorippa columbiae*
Rosy Pussypaws	*Cistanthe rosea*
Russian Knapweed	*Centaurea repens*
Sandberg's Bluegrass	*Poa secunda*
Scarlet Ammannia	*Ammannia robusta*
Three-tip Sagebrush	*Artemisia tripartita*
Umtanum Desert Buckwheat	*Eriogonum codium*
White Bluffs Bladderpod	*Physaria tuplashensis*
White Eatonella	*Eatonella nivea*
Winterfat	*Eurotia lanata*
Yellow Starthistle	*Centaurea solstitialis*

Animals

Common Name	*Scientific Name*
American Beaver	*Castor canadensis*
American Badger	*Taxidea taxus*
Bald Eagle	*Haliaeetus leucocephalus*
Bobcat	*Lynx rufus*
Chinook Salmon	*Oncorhynchus tshawytscha*
Cougar	*Felis concolor*

Coyote ..... *Canis latrans*
Ferruginous Hawk ..... *Buteo regalis*
Loggerhead Shrike ..... *Lanius ludovicianus*
Mule Deer ..... *Odocoileus hemionus*
Peregrine Falcon ..... *Falco peregrinus*
Prairie Falcon ..... *Falco mexicanus*
Pygmy Rabbit ..... *Brachylagus (Sylvilagus) idahoensis*
Pygmy Short-horned Lizard ..... *Phrynosoma douglassii*
Rocky Mountain Elk ..... *Cervus elaphus*
Sage Sparrow ..... *Amphispiza belli*
Sage Thrasher ..... *Oreoscoptes montanus*
Western (Pacific) Rattlesnake ..... *Crotalus viridis*
White Sturgeon ..... *Acipenser transmontanus*
White Pelican ..... *Pelecanus erythrorhynchos*

Appendix E: References

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Appendix F: Distribution List

Individuals:

Gary Adams
Rudolph Allemann
Marshall Almarode
Don Andrews
Clay Antieau
Sherry & Zenen Antoniak
Roy Barnes
Max Benitz
Debbie & Carl Berkowitz
Dave Berkowitz
Ted Bienerth
Bruce Bjornstad
Neal Blankenship
Randy Bowerman
John & Phyllis Brimhall
Mary Brooks
Ron Buckland
Stephanie Button
David Cannon
Sue Carver
Mickie Chamness
George Champlain
Rebecca Chaney
Dan Chappel
Ron Chitwood
Terry Clark
Victoria Clark
Alan Colbum
Max Conner
Roberta Copenhefer
Holly Anna Cougar Tracks
Hector Cruz
Ralph Curran
Danna Dal Porto
Mark Darrach
Doug DeFord
Susan DeFord
Jill Doel
Nancy Doran
Timothy Dove
Mary & Jerry Edel
Chad Eder
Terri Edwards
Mike Estes
Melissa Eversole
Doug Fassett
Gary Fetterolf
Carl Fies
Cheryl Fix
Linda Freepons
Dean Gano
Ken Gano
Doreen Gardner
Gregory Gauck
Racquel Gellner
Eric & Michele Gerber
Dave Gerdes
Steve & Diane Goheen
Gretchen Graber
Sharon Grant
Andrew Greene
Patrick Grengs
Craig & Elizabeth Groendyke
Sharon Groff
Kari Hale
Evan Halladay
Maureen Hamilton
Chris Hansen
Robert Harris
Chuck Harris
Christine Hayes
Arlen Herrington
R.J. Hoch
Ronald Holeman
George Hunt
Matt Huntington
Will Hutson
Tom Johnson
Jim & Doris Kelly
Elton Kerr
Mark & Lois Killinger
Mike Korenko
Brian LaBree
Roger Lahti
Jim Langdon
Pam Larsen
Neal Lassila
DeCoteau Littlebull
Hollie Logan
Robert Longmeier
Michael Martin
Kessler Martin
Terry Mast
Jennifer McCann
Geoff McMichael
John Michaud
Ray Miles
Gary Miller
Marilyn Miller
Terry Miller

Individuals:

Jon Millet
Tom Moal
Tom Moore
Lori Nelson
Laurie Ness
Bruce Nicoll
Donna No Last Name Given
Eric No Last Name Given
Jim Notch
Mark Painter
David Painter
Layne Papenfuss
Jeff Penuel
Kate Perry
Matt Peters
P.J. Philip
John Price
Jennifer Quesnell
Jason Reathaford
Cathy Ricard
Kent Richert
William Rickard
Jenny Rieke
Robert Risinger
Ann Roberts
Byron Robertson
Rene Rojas
Diana Ruff
James Schroeder
Carole Schuh
Michael Scrimsher
Zach Scrimsher
Lori Selby
Richard Shallman
Wendy & Frank Shaw
Jeff Short
Howard Sill
Fen & Karin Simmons
Christine Simonen
Brian Skeels
Janson Sloughter
Karrie Smith
Linda Smith
Peter Smith
Randy Smith
Steven Sontag
Karen Sowers
Gary Spanner
Steve Spencer
Brian Standley
Donald Staringer
Kit Steichen McBurney
Roger Stephens
Marc Stevenson
Dion Sunderland
John Swedlund
Bill Thackaberry
Russ Treat
Ron Tucker
Mike Vandeman
Ben Volk
Douglas Wadley
Gene Wallace
Jim Walter
Doug Waltman
Dana Ward
Ellwood Werry
Virgil Wertenberger
Kevin Wheelwright
Karen Wieda
Chuck Wierman
Janice, Ian, & Stephen Williford
Cole Willis
Scott & Pamela Woodward
Crystal Worcott

Organizations:

Backcountry Horseman of Washington
Chinook Cycling Club
Friends of Badger Mountain
Friends of Mid-Columbia River National Wildlife Refuges
Hanford Reach Interpretive Center
Ice Age Floods Institute
Lower Columbia Basin Audubon Society
Native Plant Society, Columbia Basin Chapter
Nomad Trail Runners of Eastern Washington
Purplesage Riders
Rattlesnake Ridge Riders
Richland Rod & Gun Club
Ridges to Rivers
Tapteal Greenway
Tri-Cities Visitor & Convention Bureau
TRIDEC
Visit TRI-CITIES

Tribes:

Rex Buck, Jr., Wanapum
Gary Burke, Confederated Tribes of the Umatilla Indian Reservation
JoDe Goudy, Yakama Nation
Shannon Wheeler, Nez Perce Tribe

NDAA Tribal Working Group:

Aaron Ashley, Confederated Tribes of the Umatilla Indian Reservation
Alyssa Buck, Wanapum
Rex Buck, Jr., Wanapum
Teara Farrow Ferman, Confederated Tribes of the Umatilla Indian Reservation
Karen Lutz, Department of Energy
Phil Rigdon, Yakama Nation
Doug Shoop, Department of Energy
Michael Sobotta, Nez Perce Tribe
Asa Washines, Yakama Nation
Shannon Wheeler, Nez Perce Tribe

Local Agencies & Elected Officials:

Benton City Mayor Linda Lehman
Benton County Parks
Benton County Commissioner James Beaver
Benton County Commissioner Jerome Delvin
Benton County Commissioner Shon Small
Benton County Commissioners Office
Kennewick Mayor Steve Young
Richland Mayor Robert Thompson
Pasco Mayor Matt Watkins
Prosser Mayor Randy Taylor
Sunnyside Mayor Julia Hart
West Richland Mayor Brent Gerry

State Agencies:

Washington Department of Ecology
Washington Department of Fish and Wildlife
Washington Department of Natural Resources
Washington Natural Heritage Program
Washington State Historic Preservation Officer
Washington State Parks

Federal Agencies:

Advisory Council on Historic Preservation
Bureau of Land Management, Oregon/Washington State Office
Department of Energy, Richland Operations
Environmental Protection Agency
National Park Service, Seattle Office
National Park Service, Manhattan Project National Historical Park

Media:

Columbia Basin Herald
Dayton Chronicle
East Oregonian
El Mundo
KEPR-TV
KNDU-TV
KONA Radio
KVEW-TV
KWSU Public Radio
KTNR Yakama Nation Radio
La Voz Hispanic Newspaper
Mattawa Area News
Moses Lake Sun Tribune
Nez Perce Newspaper
Northwest Public Radio
Oregon Public Broadcasting
Prosser Record-Bulletin
Spokesman Review
Sunnyside Sun News
The Entertainer
Tri-Cities Journal of Business
Tri-City Herald

Media:

Walla Walla Union-Bulletin

Wenatchee World
Yakama Nation Review
Yakima Herald

State Elected Officials:

Senator Sharon Brown
Senator Jim Honeyford
Senator Mark Schoesler
Senator Maureen Walsh

Representative Bruce Chandler
Representative Mary Dye
Representative Larry Haler
Representative Bill Jenkin
Representative Brad Klippert
Representative Terry Nealey
Representative Joe Schmick
Representative Davis Taylor

Federal Elected Officials:

Senator Maria Cantwell
Senator Maria Cantwell, Richland Office
Senator Patty Murray
Senator Patty Murray, Yakima Office
Representative Dan Newhouse
Representative Dan Newhouse, Tri-Cities Office

U.S. Fish & Wildlife Service
Hanford Reach National Monument
64 Maple Strteet
Burbank, WA 99323

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hanfordreach@fws.gov
www.fws.gov/refuge/hanford_reach/

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Front cover: Rattlesnake Mountain. ©Jesse Poole
Back cover: Rattlesnake Mountain surrounding habitat. © Jesse Poole