



# **Final Environmental Assessment** **Rainbow Falls State Park Entrance Project**

Lewis County, Washington

FEMA-1734-DR-WA (Public Assistance)

April 2012



# **FEMA**

**U.S. Department of Homeland Security**

FEMA Region X

130 228<sup>th</sup> Street SW

Bothell, WA 98021

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*Prepared for:*

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130 228<sup>th</sup> Street SW

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*April 2012*

*[Cover Photo: Rainbow Falls State Park Northern Entrance]*

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## Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APE	Area of Potential Effect
BMP	best management practice
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DAHP	Washington Department of Archaeology and Historic Preservation
DBH	diameter at breast height
DNR	Washington Department of Natural Resources
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMD	Washington Emergency Management Division (Military Department)
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FR	Federal Register
GIS	geographic information system
GLO	General Land Office
HRA	Historical Research Associates
I-5	Interstate 5
ITE	Institute of Transportation Engineers
KCC	King County Code
LCC	Lewis County Code
LOS	level of service
MBTA	Migratory Bird Treaty Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PA	Public Assistance
PHS	Priority Habitats and Species
PNP	Private Non-Profit

PVC	Polyvinyl chloride
RV	Recreation Vehicle
SHPO	State Historic Preservation Officer
SPCC	Spill Prevention, Control, and Countermeasures
SR	State Route
State Parks	Washington State Parks and Recreation Commission
TESC	Temporary Erosion and Sediment Control
THPO	Tribal Historic Preservation Officer
TIA	Traffic Impact Analysis
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WNHP	Washington Natural Heritage Program
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

# 1.0 Purpose and Need for Action

## 1.1 INTRODUCTION

Heavy rains in December 2007 caused severe landslides, mudslides, and flooding in western Washington. Flooding of the Chehalis River destroyed a vehicle bridge that served as the public entrance to Rainbow Falls State Park, located near Dryad in Lewis County, Washington (Figure 1.1-1, *Project Location*). The president declared the flooding event a major disaster (FEMA 1734-DR-WA), making federal funding available for emergency work and repair or replacement of disaster-damaged facilities. The Washington State Parks and Recreation Commission (State Parks) has determined that it is not feasible to meet Washington State Department of Transportation (WSDOT) and Washington Department of Fish and Wildlife (WDFW) design requirements for replacing the damaged vehicle entrance bridge due to site constraints, and has applied through the Washington State Emergency Management Division (EMD) to the Federal Emergency Management Agency (FEMA) for funding of an alternate project. The alternate project involves redeveloping an existing service access road to serve as the public entrance to the park.

This Environmental Assessment (EA) has been prepared to help FEMA meet its environmental review responsibilities under the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality's (CEQ's) implementing regulations (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), and FEMA's implementing regulations (40 CFR Part 10). FEMA is also using the EA to document compliance with other applicable federal laws and executive orders, including the Endangered Species Act (ESA), the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the National Historic Preservation Act (NHPA), Executive Order (EO) 11988 (Floodplains), EO 11990 (Wetlands), and EO 12898 (Environmental Justice).

Based on the analysis presented in and public and agency comments received on the Draft EA, no significant impacts were identified. Therefore, FEMA has prepared a Finding of No Significant Impact (FONSI). See Section 4.1.1 for a summary of the process for review and comment on the Draft EA.

This document describes the purpose and need for the Proposed Action, the project alternatives, the affected environment and potential impacts on that environment resulting from the alternatives, cumulative effects, public involvement, and resources consulted.

The CEQ and FEMA regulations (44 CFR Section 10) that implement NEPA require NEPA documents to be concise, focus on the issues relevant to the project, and exclude extraneous background data and discussion of subjects that are not relevant or would not be affected by the project alternatives. Accordingly, the following subjects are not evaluated in detail for the following reasons:

Subject	Analysis
Geology and Shoreline Stability	Both the No Action and the Proposed Action alternatives would affect the northern access road to Rainbow Falls State Park and areas directly adjacent (the project site). There are no unique or protected geologic resources or geologic hazards in the project vicinity, and the project is located away from the shorelines of all nearby rivers and streams (the Chehalis River and Marcuson Creek). The project would have no effect on geology or shoreline stability.
Land Use and Socioeconomics	The project alternatives are not anticipated to affect land use or socioeconomic conditions.
Visual Quality	The Proposed Action would involve clearing vegetation, including trees, within the construction footprint of the project. However, the visual impacts would be minimal and limited to the immediate area; no designated visual resources are present in the area.
Air Quality	The project is not located in a nonattainment area. It is located in a rural area with low population density and low traffic volumes. Construction would create dust and vehicle emissions; however, impacts would be minor and temporary. Air quality impacts associated with traffic are not expected to increase above current levels.
Noise	The project is located in a rural area, with low population density and low traffic volumes. The project is not predicted to increase traffic levels or traffic-related noise above existing conditions. Construction activities would temporarily increase noise levels in the project vicinity; this is anticipated to be a minor, temporary effect.

## 1.2 BACKGROUND AND LOCATION

The project is located within Rainbow Falls State Park, approximately 30 miles west of Chehalis in Lewis County, Washington. The project is located on the border of Sections 6 and 7 of Township 13 North, Range 4 West. The project coordinates are: 46.63443 N (latitude)/ -123.23362 W (longitude). See Figure 1.1-1, *Project Location*.

Rainbow Falls State Park is a 139-acre park that includes forested areas, wetlands, open space, and 3,400 feet of riparian habitat along the Chehalis River (State Parks 2009a) (Figure 1.2-1, *Project Vicinity*). State Route (SR) 6 and the Chehalis River bisect Rainbow Falls State Park, with a campground, picnic areas, and other site amenities located to the north of the SR 6/Chehalis River corridor, and hiking trails located to the south (Figure 1.2-2, *Rainbow Falls State Park Map*).

The original public entrance from the park's inception through the 1960s was located off of a county road (Leudinghaus Road) along the northern boundary of the park (State Parks 2009a) (Figures 1.2-1 and 1.2-2). In the 1960s, State Parks constructed a vehicle bridge over the Chehalis River, providing public access directly from SR 6 to the northern portion of Rainbow Falls State Park (State Parks 2009a) (Figure 1.2-1). The vehicle bridge was 15 feet wide (single lane) by 140 feet long (2,100 square feet); it was a three-span pre-stressed concrete girder (support beam) bridge supported by two in-water concrete girder supports (15 feet wide x 3 feet thick x 22 feet high). This bridge remained the official public entrance to the park from the 1960s until the flooding event of 2007 (State Parks 2009a). State Parks staff continued to use the northern entrance off of Leudinghaus Road for operations and maintenance purposes.

During the 2007 flood, the Chehalis River rose 17 feet above the average level; floodwaters along with woody debris and a park footbridge (originally located upstream and also destroyed by the flood event) struck the vehicle entrance bridge causing it to collapse into the river. The two concrete

girder supports, bridge deck, girders, guard rail, and concrete curb were destroyed and the bridge abutments were undermined by scouring. Additionally, approximately 250 linear feet of a 3-inch diameter insulated polyvinyl chloride (PVC) water line attached to the underside of the bridge was destroyed. This water line was part of the park's water system, connecting a water source located on the south side of SR 6 and the Chehalis River to the park's facilities on the north side of SR 6 and the river (Figure 1.2-3, *Photo of Damage*). The 2007 storm also damaged the park office located near the public entrance bridge. Today, the northern entrance off of Leudinghaus Road is used as the sole egress and ingress to the park, and there are no vehicle or pedestrian bridges connecting the northern and southern parts of the park.

The northern entrance consists of an approximately 24-foot wide gravel road that, until the 2007 storm, had not been used for public access since the 1960s. The gravel access road also was damaged during the 2007 flood event and is currently in poor condition; it is rough with numerous potholes. The northern entrance road splits into two directions approximately 110 feet from Leudinghaus Road, connecting to paved roadways leading west toward the campground and south toward the park headquarters and day use area (Figures 1.2-1 and 1.2-2). A recreational vehicle (RV) pump-out station is located at this intersection. The northern entrance is not considered suitable as a public entrance to the park in its current configuration because it has no designated entrance and exit lanes, is not designed to accommodate larger vehicles (e.g., RVs, vehicles with camping or horse trailers, etc.), does not include tapers (a gradual increase in the width of a roadway on the outside for a short distance to allow for acceleration and deceleration onto an intersecting roadway or access) to accommodate deceleration entering into the park and acceleration departing from the park onto Leudinghaus Road, and lacks an on-site management presence (e.g., staffed entrance kiosk/station).

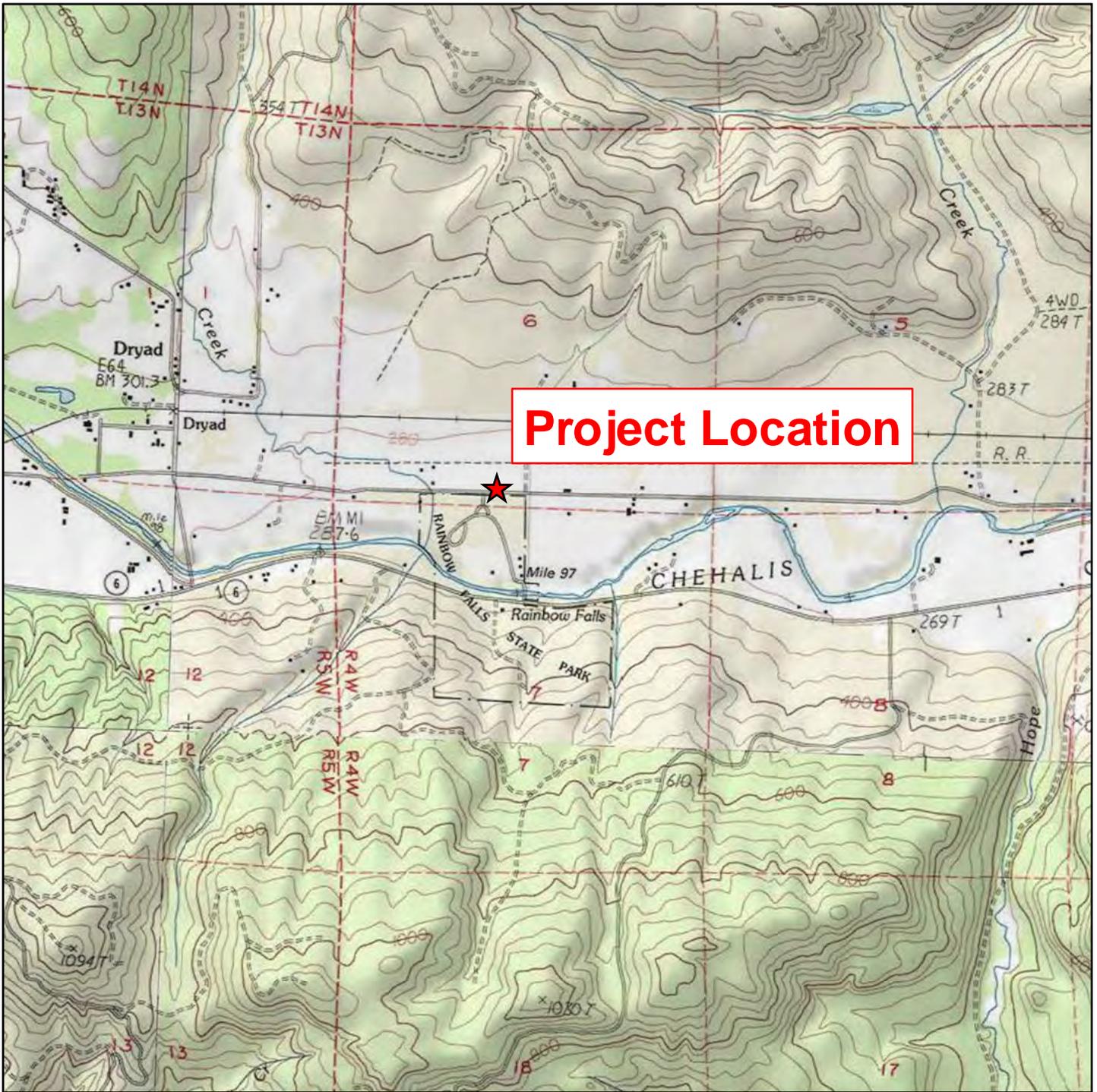
### 1.3 PURPOSE AND NEED

The purpose of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1973 (Stafford Act), as amended, is to provide a range of federal assistance to state and local governments to supplement efforts and resources in alleviating damage or loss from major disasters and/or emergencies. The objective of the FEMA Public Assistance (PA) Grant Program is to provide assistance to state, tribal, and local governments, and certain types of Private Non-Profit (PNP) organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the president. Through the PA Grant Program, FEMA provides supplemental federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, restoration, or relocation of disaster-damaged, publicly owned facilities and the facilities of certain PNP organizations. The need for the FEMA action is to provide funds to State Parks to replace the public vehicle access function to Rainbow Falls State Park that was lost when the December 2007 flooding of the Chehalis River destroyed the entrance bridge to the park.

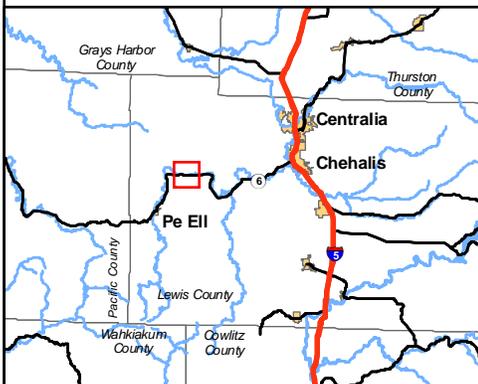
To meet the project need, State Parks identified the following objectives:

- Provide safe, secure, and reasonable public vehicle access to Rainbow Falls State Park.
- Minimize the potential for future flood damage to park infrastructure.
- Minimize impacts on the Chehalis River, riparian vegetation, fish habitat, and fish species.

- Avoid impacts on SR 6, park roadways, and other park features that would require realigning roadways or relocating structures (thus minimizing infrastructure and environmental impacts and project costs).
- Minimize traffic safety issues on connecting roadways.



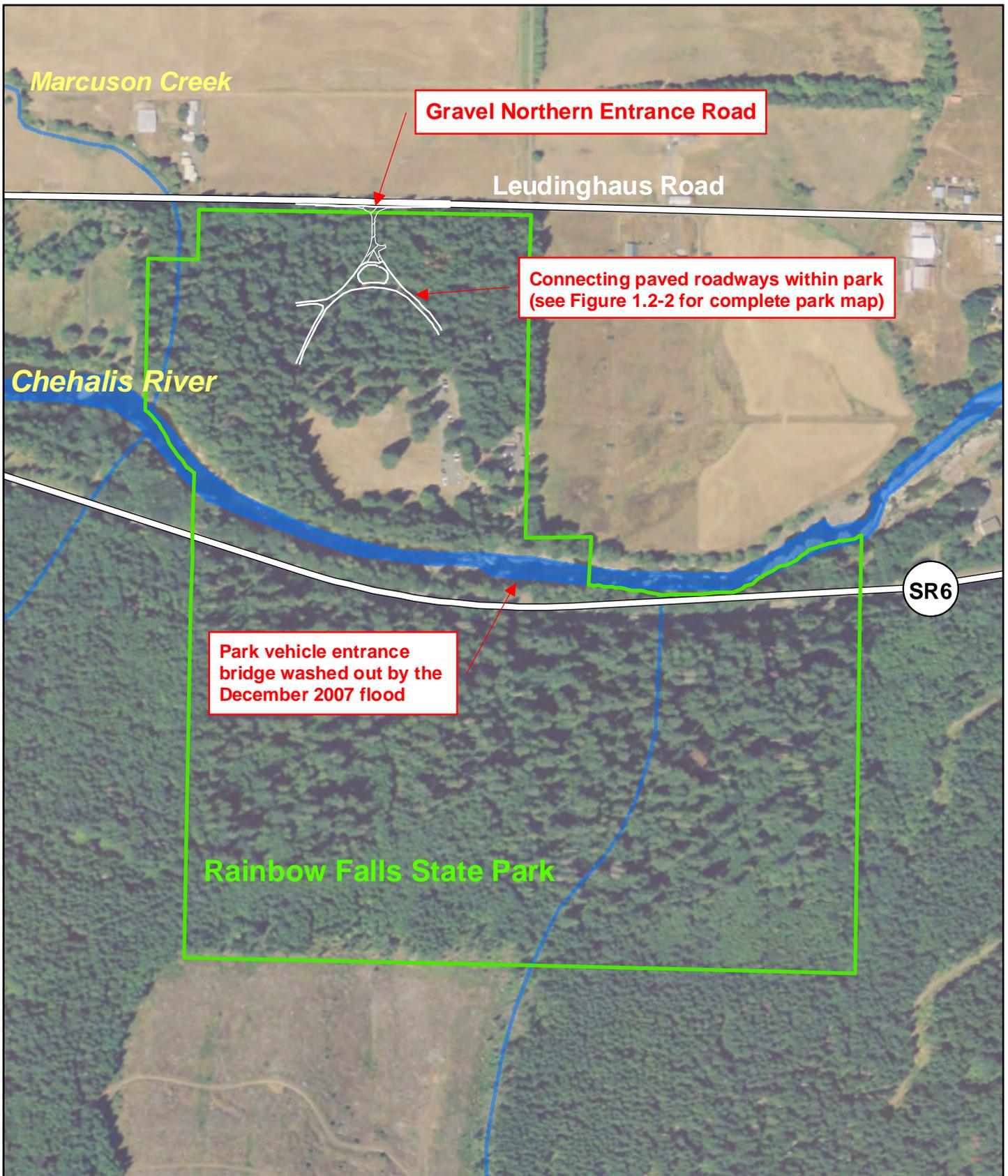
Map Location



**Figure 1.1-1 Project Location**

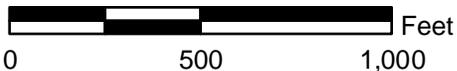
Rainbow Falls State Park Entrance Project  
Washington State Parks and Recreation





**Figure 1.2-1 Project Vicinity**

Rainbow Falls State Park Entrance Project  
Washington State Parks and Recreation



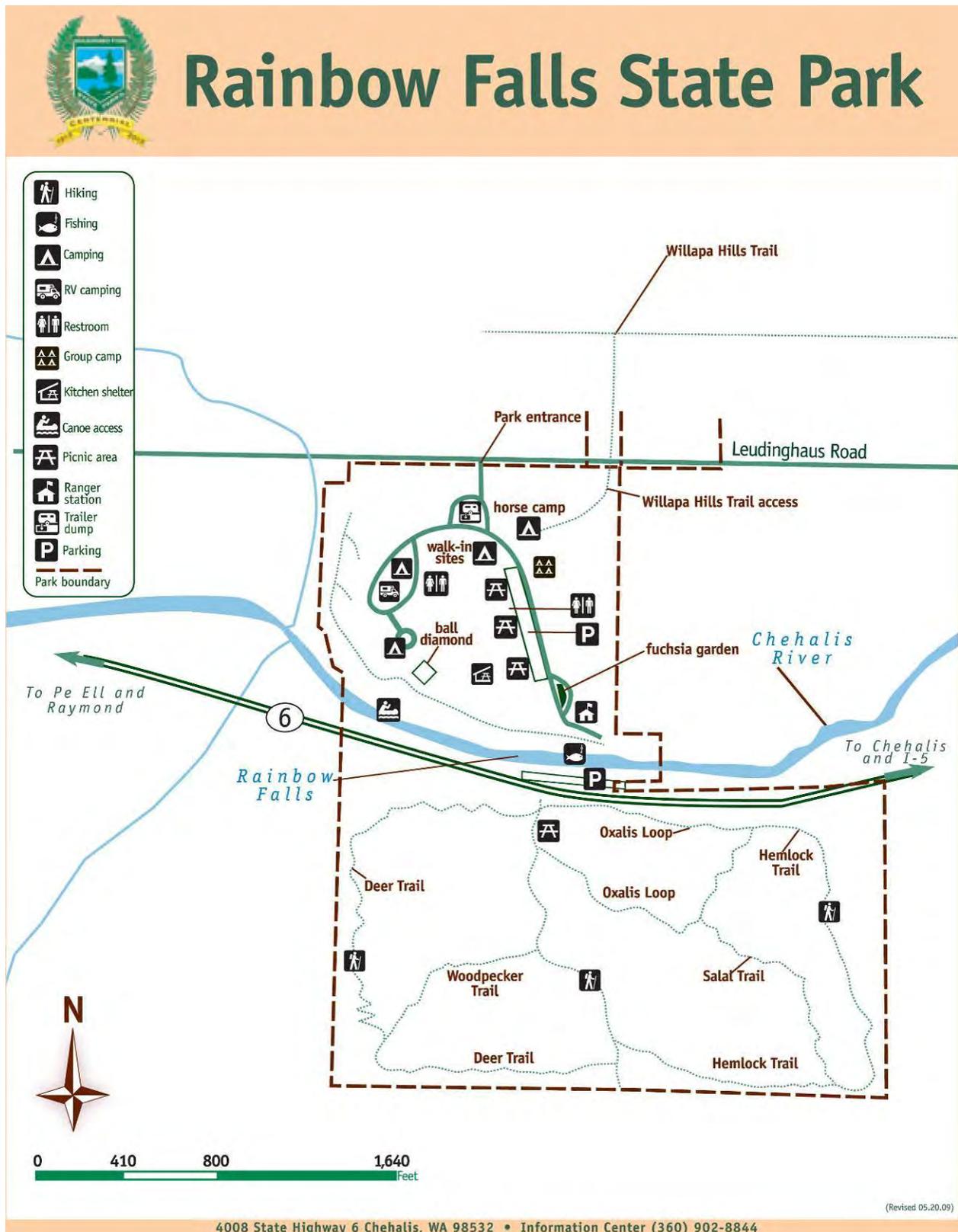


Figure 1.2-2. Rainbow Falls State Park Map.



**Figure 1.2-3. Photo of Washed Out Vehicle Entrance Bridge connecting SR 6 to Rainbow Falls State Park.**

## 2.0 Alternatives, Including the Proposed Action

The CEQ regulations require federal agencies to consider a reasonable range of alternatives that meet the purpose and need of a proposed action in their NEPA review. Reasonable alternatives are alternative ways of meeting project need, but with varying degrees of environmental impact. Alternatives that would clearly result in substantially greater environmental impact than the Proposed Action do not require detailed analysis.

The following sections describe the alternatives being considered for the Rainbow Falls State Park Entrance Project, and the process that was used to develop these alternatives. Although the December 2007 flooding of the Chehalis River also destroyed the park's pedestrian bridge that was located upstream of the original vehicle bridge that was destroyed, the Proposed Action evaluated in this EA does not include replacing the pedestrian bridge. State Park's has no plans in the foreseeable future to replace the pedestrian bridge due to a lack of funding sources.

This EA presents an analysis of two alternatives for the project: Alternative A (No Action Alternative) and Alternative B (Proposed Action). It also describes alternatives that were considered but not carried forward for further analysis.

### 2.1 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Early in their development of the project alternatives, State Parks staff consulted with FEMA, WSDOT, and WDFW regarding hazard mitigation, road and bridge design, and environmental issues and constraints associated with replacing the public vehicle entrance to Rainbow Falls State Park. State Parks considered two bridge structure options and two alternatives for replacing the public vehicle entrance that have been eliminated from further consideration because they do not have a reasonable engineering solution, do not meet the project purpose and need, and would result in greater environmental impacts than the Proposed Action.

**Dismissed Alternative 1 - Replace the Vehicle Entrance Bridge over the Chehalis River in its Original Location.** State Parks initially considered restoring the public entrance to Rainbow Falls State Park by replacing the entrance bridge over the Chehalis River in its original location. Two bridge structure options were considered for this alternative:

- **Bridge Structure Option A – Replace In-Kind (Three Span Bridge with In-Water Support Structures).** This bridge structure replacement option would replace the original 15-foot wide (single lane) by 140-foot long (2,100 square feet) three-span pre-stressed concrete girder (support beam) bridge to its pre-disaster condition using 15 girders, two concrete girder supports (15 feet wide by 3 feet thick by 22 feet high), 480 linear feet of guardrail, 280 linear feet of concrete curb, and two end abutments with wing walls. The 3-inch diameter insulated PVC water line attached to the underside of the bridge also would be replaced. This bridge structure replacement option also would require in-water support structures that would be susceptible to damage from river debris during similar future flood events. Construction activities would require in-water work that would have greater impacts on the Chehalis River, fish habitat, and fish species than Bridge Structure Option B (described below). Impacts on riparian vegetation

would be similar for the two options. FEMA requires that hazard mitigation be considered and that the least cost alternative be selected. This bridge structure option was dismissed because:

- It would not minimize the potential for future flood-related damage to infrastructure.
  - It would have greater environmental impacts on the Chehalis River, fish habitat, and fish species than Bridge Structure Option B.
  - It would cost more than Bridge Structure Option B.
- **Bridge Structure Option B – Replace with a Single Span Bridge with No In-Water Support Structures.** To reduce the potential for bridge damage similar to that which occurred during the 2007 flood event, State Parks developed a second bridge replacement option which incorporated flood hazard mitigation measures into the design of the bridge structure that would protect it from damage during future flood events. This option would replace the original entrance bridge over the Chehalis River with a single span bridge using five girders that span the entire length of the bridge from abutment to abutment. This bridge replacement option would not require support structures in the river, thus minimizing impacts on the Chehalis River, fish habitat, and fish species during and after construction, and reducing the potential for future flood damage. This bridge structure option would have impacts on riparian vegetation similar to Bridge Structure Option A. This bridge structure option is preferred over Bridge Structure Option A because:
    - It would cost less than Bridge Structure Option A, and FEMA funding is capped at the least cost alternative.
    - It would minimize the potential for future flood damage to infrastructure.
    - It would have less environmental impact on the Chehalis River, fish habitat, and fish species than Bridge Structure Option A.

WDFW would require that the elevation of the bridge deck be raised by at least 6 feet over the original elevation. In addition, WSDOT would require that the bridge be widened to two lanes. Raising the elevation of the bridge deck would require adjusting the grade and approach roadways to match the elevation of the bridge deck. To achieve the necessary elevation, the approach roadways would need to be longer. Widening the bridge to two lanes would increase the width of the road prism for the approach roadways and require additional modifications to SR 6 and the park's connecting roadways. This would increase impacts on the Chehalis River shorelines and riparian vegetation. Given the proximity of SR 6 to the south, and the alignment of the approach roadway and location of the park ranger's residence to the north within the park, State Parks determined that there was insufficient area available to design a replacement bridge in the same location that would meet these requirements without realigning or relocating these features, including realigning a portion of SR 6. Addressing such site and engineering constraints would substantially increase design and construction costs to restore the public entrance to the park in its original bridge location. Additionally, realigning SR 6 to the south would impact old-growth habitat located on the south side of the highway.

Given these considerations, State Parks did not proceed with designing a bridge structure at the original location, and this alternative has not been carried forward for further analysis in this EA because:

- The necessary modifications to the approach roadways, SR 6, and other park features would:
  - Substantially increase design and construction costs.
  - Increase impacts on the Chehalis River Shorelines and riparian vegetation.
  - Impact old-growth habitat located on the south side of the highway.
- There is not a reasonable engineering solution for replacing the bridge to current standards in the original location.

**Dismissed Alternative 2 - Replace and Relocate the Entrance Bridge over the Chehalis River at an Alternative Location using a Single Span Bridge.** State Parks briefly evaluated the potential for replacing and relocating the entrance bridge over the Chehalis River at an alternative location.

However, the river channel is narrowest at the original bridge location. Locating a bridge across the Chehalis River at another, wider location connecting SR 6 to the park would require a longer bridge, the construction of new approach roadways, and other modifications to SR 6 and to the park to connect to the new bridge. Constructing a bridge and approach roadways in a new location would also have greater impacts on the Chehalis River shorelines and riparian vegetation than Dismissed Alternative 1 and the Proposed Action. Given these considerations, State Parks did not develop engineering designs for this alternative, and this alternative has been dismissed from further consideration in this EA because it does not have a reasonable engineering solution, does not meet the project objectives, and would have greater environmental impacts than Dismissed Alternative 1 and the Proposed Action.

## 2.2 ALTERNATIVE A – NO ACTION

Under the No Action Alternative, FEMA would not provide funding to State Parks to improve the northern entrance to Rainbow Falls State Park. The northern entrance would continue to be the primary ingress/egress to the park in its current condition.

State Parks could choose to move forward with improving the northern entrance on its own or with additional financial assistance from other sources. However, the potential for this to occur is speculative; therefore, the No Action Alternative assumes that the northern entrance would remain in its current condition indefinitely for the purposes of the analysis in this EA.

## 2.3 ALTERNATIVE B – PROPOSED ACTION

Under the Proposed Action, FEMA would provide funding to State Parks to improve the northern entrance off of Leudinghaus Road for use as the primary public access to Rainbow Falls State Park. The Proposed Action includes the following elements (as illustrated in Figure 2.3-1, *Project Layout Plan*):

- *Visitor contact welcome center* – Construct a new welcome center at the entrance to provide park staff a prominent location to greet visitors as they enter/leave the park. The welcome center would be a single-story building with a manager’s office, shared office space, and restrooms. The building footprint would be 20 x 40 feet. The Proposed Action would fund construction of the building shell, while State Parks would use other funding sources to finish the interior.

- *Welcome center electric, sewer, and water* – Install a new electrical transformer and connect the welcome center to the existing electric system. Install a septic tank for the welcome center restrooms and install a sewer pipeline connecting it to the existing sewer system. Connect the welcome center to the existing water system.
- *Entrance road and parking improvements* – Widen the existing gravel entrance road to accommodate the visitor contact welcome center within a landscaped center island that would divide designated entrance and exit lanes. Approximately 210 linear feet of gravel road would be improved. Entrance and exit lanes would include one 12-foot wide exit lane and two 11-foot wide entrance lanes. The outer entrance lane would be designed as a pass-through lane, with additional width on the outside to accommodate a visitor parking area. Two Americans with Disabilities Act (ADA) compliant parking stalls would be located within the center island near the welcome center restrooms. Employee parking would be constructed near the welcome center to the south.
- *Leudinghaus Road intersection improvements* – Construct 250-foot tapers along the south side of Leudinghaus Road on both sides of the entrance road. The tapers are required by Lewis County to allow for deceleration into the park from Leudinghaus Road and acceleration from the park onto Leudinghaus Road.
- *Entrance road and parking area paving* – Pave the entrance road and parking area with asphalt concrete to improve durability and reduce maintenance. Implementation of this project element would depend upon final construction costs for the project. If project funding is not sufficient to include asphalt pavement, then the entrance road would be surfaced with gravel.
- *Metal service gate* – Install a metal service gate at the park entrance.

The total estimated cost of the project is approximately \$435,596. The estimate includes design, planning, permitting, and construction for the proposed project.

Construction activities would include the following general tasks:

- Mobilization of equipment
- Installation of temporary erosion control
- Clearing, grubbing, and grading of the site
- Construction of the access road, intersection, and parking area
- Construction of the welcome center
- Installation of the welcome center septic tank
- Connection of welcome center electrical, water, and sewer to existing park infrastructure
- Landscaping of the site
- De-mobilization of equipment

State Parks would adhere to federal, state, and county regulations, permit conditions, and best management practices (BMPs) for the design, construction, and long-term maintenance of the proposed project, including, but not limited to:

- **Road Design and Construction:** Road design and construction within Lewis County right-of-way will be in accordance with WSDOT and Lewis County road standards. Road design

and construction within State Parks right-of-way will be in accordance with State Parks standards.

- **Clearing and Grubbing:** These specifications direct contractor clearing operations, including removing, preserving, and trimming of trees and other vegetation. This specification section also addresses grubbing operations and limits the contractor's area of approved actions. These specifications protect vegetation both inside and outside approved work areas.
- **Water Quality, Erosion, and Sediment Control:** These specifications require the contractor to implement a Temporary Erosion and Sediment Control (TESC) Plan to comply with federal, state, and local laws and regulations. TESC BMPs will be implemented in accordance with the Washington State Department of Ecology (Ecology) 2005 Stormwater Management Manual for Western Washington (Ecology 2005). TESC BMPs for the project would include installing a silt fence on both sides of the roadway, 5 to 10 feet beyond the edges of the new pavement. Erosion and sediment control specifications typically focus on soil and slope protection and stabilization measures, followed by site restoration methods (including planting materials).
- **Environmental Protection:** These specifications direct the contractor to implement measures and comply with laws and regulations designed to protect sensitive environmental resources. To ensure that all construction-related pollutants are controlled and contained, a project-specific Spill Prevention, Control, and Countermeasures (SPCC) Plan would be developed and implemented. This specification section addresses hazardous waste and hazardous substances management, pollution control, protection of plant and animal species, protection of wetlands, and protection of cultural resources, as well as other applicable safety, health, and human resource issues.

## 2.4 RELATED ACTIONS

Prior to the destruction of the public entrance bridge over the Chehalis River, the park's water source was located on a hillside to the south of the SR 6/Chehalis River corridor, and conveyed to the park through the PVC water line (described earlier) attached to the underside of the bridge. This water line was destroyed along with the bridge during the 2007 flood event. State Parks has suspended a temporary water line across the river to provide water to the park while they develop a new water supply system on the north side of the river as a separate, but related project that is not receiving FEMA funding. They have drilled a new well on land they purchased to the north of Leudinghaus Road, across from the northern entrance road, to provide a new water source to the park. They are currently designing new water infrastructure to connect the new water source located north of Leudinghaus Road to the park's existing water infrastructure to the south of Leudinghaus Road.

## 2.5 SUMMARY OF EFFECTS

Table 2.5-1 provides a summary of the effects described and analyzed in Chapter 3 (*Affected Environment and Environmental Consequences*). Levels of potential effect are defined as follows:

- **None/Negligible:** The resource area would not be affected, or changes would be non-detectable, or if detected, effects would be slight and local. Impacts would be well below regulatory limits, as applicable.
- **Minor:** Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory limits, as applicable. Mitigation measures may be necessary to reduce potential effects.
- **Moderate:** Changes to the resource would be measurable and have localized and potentially regional scale impacts. Impacts would be within or below regulatory limits, but historical conditions would be altered. Mitigation measures may be necessary to reduce potential effects.
- **Major:** Changes would be readily measurable and would have substantial consequences on a local and regional level. Impacts would exceed regulatory limits. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

The criteria and thresholds of significance used in the analysis are defined by resource in Chapter 3.

**Table 2.5-1. Summary of Potential Impacts of the No Action and Proposed Action Alternatives.**

Resource Area	Alternative A – No Action Alternative	Alternative B – Proposed Action
Soils	Negligible accumulation of gravel road surface materials on adjacent soils through continued long-term use of gravel road as primary ingress/egress to park.	Negligible erosion of soil during construction.  Negligible long-term accumulation of gravel road surface materials on adjacent soils under gravel surface option for project.  No long-term effects on adjacent soils under the paved surface option for the project.
Hydrology, Water Quality, Floodplains (EO 11988) and Wetlands (EO 11990)	No effect on hydrology, water quality, floodplains, or wetlands.	No effect on hydrology, water quality, floodplains, or wetlands during construction or over the long term.
Vegetation	No effect on vegetation.	Minor direct long-term effect on vegetation through the clearing and removal of native understory vegetation and 24 trees.
Fish and Wildlife	No effect on fish or wildlife.	No effect on fish. Minor short-term effect on wildlife during construction. Minor long-term effect on wildlife from removal of 0.17 acre of forest habitat, including 24 trees.
Transportation and Access	Moderate, long-term adverse effect on turning and passing safety, traffic flow, and circulation on narrow gravel park entrance road.	Minor, temporary adverse effects on traffic flow on park entrance road and Leudinghaus Road in vicinity of intersection during construction.  Moderate, long-term improvement to turning and passing safety, traffic flow, and circulation on park entrance road and Leudinghaus Road in vicinity of intersection.

Resource Area	Alternative A – No Action Alternative	Alternative B – Proposed Action
Recreation	Moderate, long-term adverse effect on recreation associated with continued long-term use of narrow gravel road as primary ingress/egress to park, and lack of park information and staff presence at the park entrance.	<p>Negligible direct temporary adverse effect on recreation during construction from brief power disruption.</p> <p>Negligible indirect temporary adverse effect on tent camping during construction. Minor indirect temporary adverse effect on horse camping during construction.</p> <p>Moderate, long-term beneficial effect on recreation from improved turning and passing safety, traffic flow and circulation, park security, and visitor information at the park entrance.</p>
Cultural Resources	No effect.	High risk of encountering archaeological resources within the project area of potential effects (APE). Mitigation measures as defined by NEPA (having an archaeological monitor present during ground-disturbing activities and following inadvertent discovery protocols) would reduce potential impacts on cultural resources to a less-than-significant level.
Environmental Justice (EO 12898)	No effect.	No effect.
Climate Change	No effect.	<p>Negligible temporary increase in greenhouse gas emissions during construction and periodic negligible temporary increases in greenhouse gas emissions from maintenance activities over the long-term.</p> <p>Negligible increase in greenhouse gas emissions from longer access route to park entrance from SR 6 (1 mile) over the long term.</p> <p>Substantial reduction in potential flooding of park access that could result from increased frequency and/or intensity of storm events brought on by climate change.</p>
Cumulative Impacts	No cumulative effect.	<p>Negligible cumulative adverse effect on vegetation and wildlife from removal of native forest habitat in conjunction with other land clearing activities in the Upper Chehalis River Valley.</p> <p>Minor beneficial cumulative effect on recreation in conjunction with the Willapa Hills Trail project.</p> <p>Minor beneficial cumulative effect on transportation and access in conjunction with the Chandler Road Bridge Replacement project, completed in December 2010.</p>



## 3.0 Affected Environment and Environmental Consequences

The following sections describe the affected environment (including regulatory considerations) and environmental consequences of the project alternatives on physical, biological, cultural, and social resources in the project vicinity. The level of detail for each resource topic is commensurate with the scale of the project and potential impacts of the project alternatives on that resource. As described in Section 1.1, certain resource topics are not evaluated in detail. These include geology and shoreline stability, land use and socioeconomics, visual quality, air quality, and noise.

### 3.1 SOILS

This section describes the existing condition of the physical landscape in the project vicinity, specifically soils, with additional information on topography and landforms as applicable, and describes the potential effects of the project alternatives on these resources.

#### 3.1.1 AFFECTED ENVIRONMENT

The project is located in the Willapa Hills physiogeographic province, on the floor of the Upper Chehalis River valley. The Chehalis River valley is characterized by a broad, well-developed floodplain and low terraces surrounded by highly dissected uplands of low to moderate relief that have broad, rounded ridges (SCS 1987). Soils mapped in the project vicinity include Chehalis silt loam and Cloquato silt loam (NRCS 2011). The project site (the construction footprint of the project and immediately adjacent areas) is located on a relatively flat (0 to 3%) low terrace to the north of the Chehalis River and outside of the floodplain (FEMA 1981).

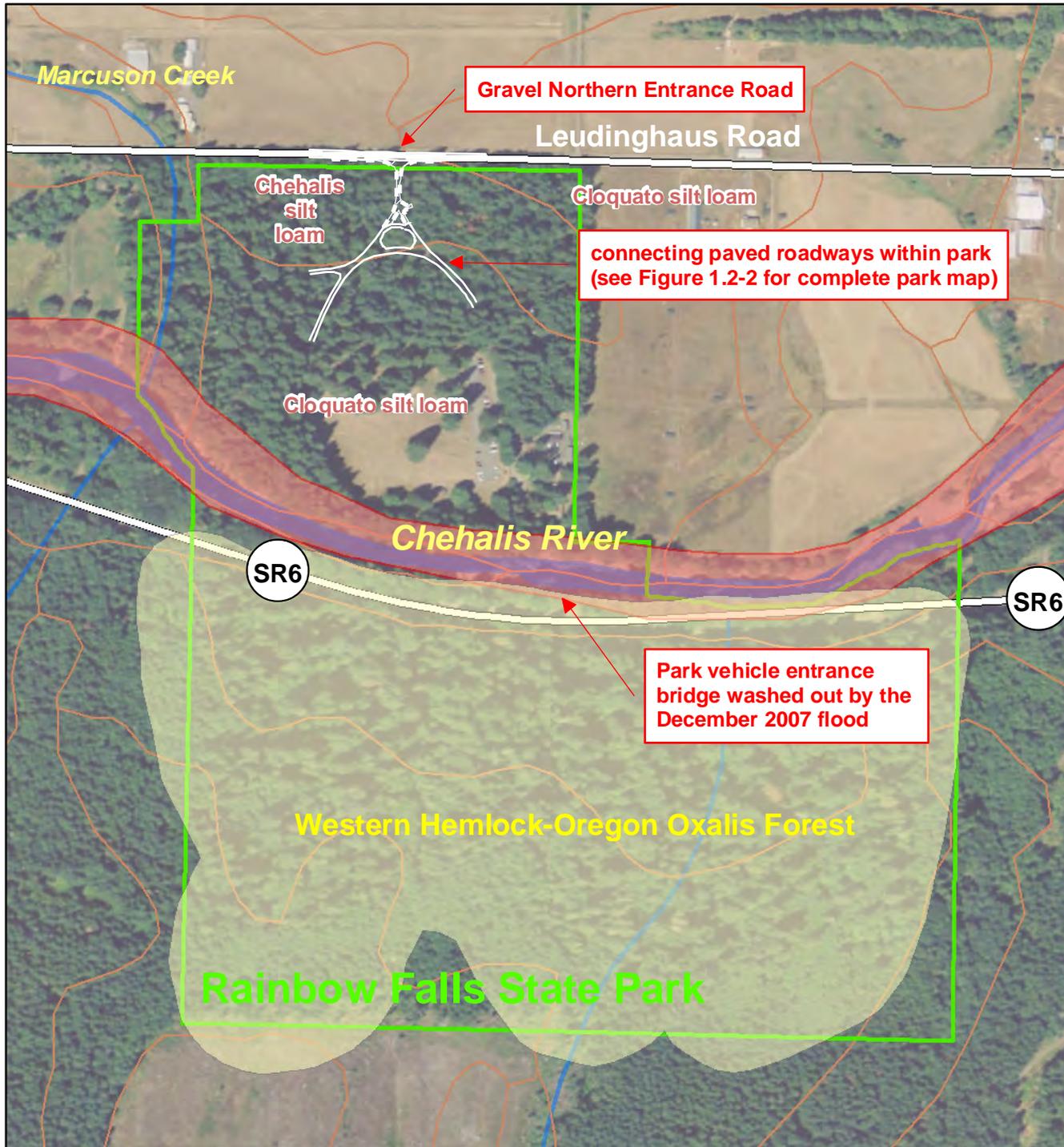
Elements of the physical landscape potentially affected by the project alternatives are limited to those soils present within or immediately adjacent to the construction footprint of the proposed project. The construction footprint of the project predominantly overlays Chehalis silt loam, while encroaching on areas of Cloquato silt loam to the east and south (Figure 3.1-1, *Physical and Biological Resources*). Both of these soil types are considered well drained (NRCS 2011); however, they may be hydric in areas that are frequently ponded for long or very long durations during the growing season (NRCS 2010).

##### 3.1.1.1 Regulatory Setting

There are no specific federal, state, or local regulations directly addressing soil resources within the affected environment.

#### 3.1.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE

Potential effects of the project alternatives on soils in the project vicinity were evaluated in terms of their ecological context and intensity. This was determined by gathering and reviewing information regarding the physical landscape in the project vicinity, and determining which resources are present in areas potentially affected by the project alternatives; and quantitatively and qualitatively evaluating how the project alternatives (including the No Action Alternative and construction, operation, and maintenance of the Proposed Action) could impact the resources present based on the known effects of similar projects from available literature sources and best professional judgment.



**Figure 3.1-1**  
**Physical and Biological Resources**  
 Rainbow Falls State Park Entrance Project  
 Washington State Parks and Recreation

**LEGEND**

- Park Boundary
- Soil Map Units
- 100-Year Floodplain
- WNHP Rare Plant Community

Sources:  
 NRCS Web Soil Survey  
 FEMA Q3 Flood Data for Lewis County  
 DNR Washington Natural Heritage Program



The affected environment for the Proposed Action is limited to soil resources; the project alternatives were determined to result in a significant effect on soils if they would:

- Cause substantial long-term erosion of soils; or
- Cause the accumulation of sedimentation in aquatic habitats.

### **3.1.3 ENVIRONMENTAL CONSEQUENCES**

This section describes the potential effects of the project alternatives on soils in the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

#### **3.1.3.1 Alternative A: No Action**

Under the No Action Alternative, FEMA would not provide funds to improve the gravel northern entrance road. No construction activities would take place, so there would be no temporary, construction-related effects on soils.

The gravel-surfaced northern entrance road would continue to serve as the primary ingress/egress to the park indefinitely, or until State Parks is able to improve the road using other funding sources. Gravel roads deteriorate naturally with use and must be maintained regularly to keep them in satisfactory condition. Deterioration includes fine silt (which binds the larger material) being blown away by the wind during dry weather, exposed pebbles being kicked to the side of the road by traffic, and holes and ruts being formed where water ponds. Heavy precipitation and temporary flooding further erode and deteriorate the road surface. Additionally, gravel roads naturally spread out with increasing volume and weight of traffic. Side cast or eroded materials from the existing gravel northern entrance road would generally land in flat, well-drained, heavily vegetated upland forested areas immediately adjacent to the road. Long-term increased vehicle traffic on the northern access gravel road, including heavier RVs, would be anticipated to increase this effect. The road would likely deteriorate more quickly, and road maintenance would be required more frequently. However, with proper maintenance of the entrance road over the long term, the effect on soils adjacent to the road would be negligible.

#### **3.1.3.2 Alternative B: Proposed Action**

Under the Proposed Action, FEMA would provide funds to State Parks to improve the gravel northern entrance road. Construction activities would involve clearing, grubbing, brushing, and grading to accommodate the wider entrance road, parking areas, and visitor welcome center. These activities would disturb approximately 0.33 acre of soil within the construction footprint (0.16 acre of existing gravel road and 0.17 acre of native soils), and have the potential to mobilize soils that can then be carried to surface water features during storm events. The project site is relatively flat and heavily vegetated, and no aquatic resources are present, reducing erosion and sedimentation during construction to negligible levels. Additional strategies to minimize erosion and sedimentation during construction would include, but not be limited to: (1) limiting ground disturbance to that essential for construction of the project; (2) timing construction activities that expose large areas of soil to occur during the dry summer or early fall months when the threat of erosion from disturbed areas is minimal; and (3) incorporating temporary erosion control measures, such as installing silt fencing on both sides of the roadway 5 to 10 feet beyond the edges of the new pavement.

The Proposed Action includes two surfacing options for the redeveloped entrance road. If sufficient funds are available, the road would be paved. If not, the road would be gravel surfaced. State Parks has stated that the ultimate treatment would depend upon the construction bids received for the project. Their preferred option is to pave the road. If the road is paved, there would be no detectable long-term effect on soils from the project. If the road is gravel surfaced, long-term effects on soils would be slightly better than those described above for the No Action Alternative, due to the surface preparation and installation of a new gravel surface. With proper maintenance of the gravel road, long-term effects on soils would be negligible.

#### 3.1.3.3 Mitigation Measures

The installation and use of temporary construction BMPs, and the design, construction, and maintenance of the improved entrance road to the park in accordance with applicable standards will reduce potential temporary and long-term soil erosion and sedimentation in the project vicinity to negligible levels. No further mitigation measures are necessary.

#### 3.1.3.4 Significant Unavoidable Adverse Effects

The project would have no significant unavoidable adverse effects on soil resources.

## 3.2 HYDROLOGY, WATER QUALITY, FLOODPLAINS, AND WETLANDS

This section describes hydrology, water quality, floodplains, and wetlands in the project vicinity, and the potential effects of the project alternatives on these resources.

### 3.2.1 AFFECTED ENVIRONMENT

#### Hydrology

The project is located within Water Resource Inventory Area (WRIA) 23 (Upper Chehalis River). The Chehalis River is the main watercourse in the vicinity of the project. The project is located roughly 1,000 feet to the north of the Chehalis River and 600 feet to the east of Marcuson Creek, a tributary to the Chehalis River that flows south through the western edge of the Rainbow Falls State Park (see Figure 3.1-1, *Physical and Biological Resources*). The project is located away from these water bodies and their shorelines and outside of associated riparian areas; hydrology is not considered to be part of the affected environment and is not considered further in this EA.

#### Water Quality

Washington's Water Quality Assessment lists the status of water quality for a particular location in one of five categories recommended by the U.S. Environmental Protection Agency (EPA) and Section 303(d) of the Clean Water Act (CWA). The 303(d) list reports on Category 5 waters, which are impaired waters of the state. Waters placed on the 303(d) list (Category 5) require the preparation of a plan to improve water quality by limiting pollutant loads. No surface waters are present in areas potentially affected by the project alternatives.

#### Floodplains

The project is not located within a floodplain (FEMA 1981) (see Figure 3.1-1). FEMA regulations define a floodplain as “the lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a 1% or greater chance of flooding in any given year” (44 CFR 9.4). The project location is mapped on the FEMA Flood Insurance Rate Map (FIRM) for Lewis County, Washington (unincorporated areas) (Community Panel Numbers 530102 0210 B and 530102 0220 B) as “Zone C” and is unshaded (FEMA 1981). These are areas of minimal flood hazard and determined to be outside the 500-year flood and protected by levee from the 100-year flood.

#### Wetlands

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2010b) shows no wetlands mapped within Rainbow Falls State Park either north or south of the SR 6/Chehalis River corridor. The nearest mapped wetland is located approximately 0.44 mile to the west of the project, outside of the park boundary. AECOM ecologists and environmental planners conducted a field investigation of the project site on September 9, 2009 to collect information on site conditions, including assessing whether wetlands occur within or adjacent to the project construction footprint (see Section 3.2.2, *Methodology and Thresholds of Significance*, for methods used to evaluate wetlands). The project site is located entirely within upland forest described in detail in Section 3.3, *Vegetation*. No evidence of wetland attributes was observed, and it was determined that there are no wetlands present in the affected environment.

### 3.2.1.1 Regulatory Setting

Federal, state, and local regulations addressing water quality, floodplains, and wetlands in the affected environment are summarized below.

#### **Federal Requirements**

##### **Clean Water Act (Sections 401 and 404)**

Projects funded by FEMA must comply with permit requirements for the U.S. Army Corps of Engineers (Corps) under the CWA. Actions affecting waters of the United States (waters of the U.S.) and that involve the discharge of dredged or fill material into waters of the U.S., including wetlands, are regulated by Section 404 of the CWA. Section 401 of the CWA, administered by Ecology, requires that activities permitted under Section 404 meet state water quality standards. A CWA Section 401 water quality certification from Ecology would be part of that permitting process. The Proposed Action would not affect waters of the U.S. and would not require a Section 404 permit from the Corps or a Section 401 water quality certification from Ecology.

##### **Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands)**

EO 11988, Floodplain Management, requires federal agencies to reduce the risk of flood loss; minimize the impact on human health, safety, and welfare; and restore the natural and beneficial values served by floodplains. Under the executive order and FEMA's implementing regulations at 44 CFR Part 9, FEMA must evaluate the potential effects of actions it may take in a floodplain and consider alternatives to avoid adverse effects. FEMA's agency guidelines for evaluating floodplain effects include the preparation of an eight-step checklist (44 CFR Part 9). The eight-step checklist is applicable for actions with the potential to affect floodplains or their occupants, or that are subject to potential harm by location in floodplains. If neither of these situations is present, the floodplain management review is complete and no further analysis is required (44CFR Part 9). The project is not located in a floodplain and would have no potential to affect floodplains or their occupants; EO 11988 does not apply.

EO 11990, Protection of Wetlands, requires that federal agencies take action to minimize the destruction, loss, or degradation of wetlands (as defined in 44 CFR Part 9.4), and to preserve and enhance the natural and beneficial effects of wetlands. FEMA's responsibilities under this executive order are also found in 44 CFR Part 9. Because no wetlands are located on or adjacent to the project site, or in areas potentially affected by the project alternatives, EO 11990 does not apply.

### **3.2.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

The potential effects of the project alternatives on water quality, floodplains, and wetlands in the project vicinity were evaluated in terms of both regulatory considerations and ecological context and intensity. This was determined by gathering and reviewing information regarding rivers and streams, wetlands, floodplains, and water quality conditions in the project vicinity; determining which of these resources are present in areas potentially affected by the project alternatives; and evaluating how the project alternatives could impact resources present in the affected environment based on the known effects of similar projects from available literature sources and best professional judgment.

The presence or absence of wetlands was determined in accordance with CFR 44 Part 9.4, which defines wetlands as those areas inundated or saturated by surface water or groundwater with a frequency sufficient to support, or that under normal hydrologic conditions do or would support, a prevalence of vegetation or aquatic life typically adapted for life in saturated or seasonally saturated soil conditions. This definition is intended to be consistent with the definition of wetlands in Cowardin et al. (1979) (44 CFR 9.4). In Washington State, the Corps Wetland Delineation Manual (Environmental Laboratory 1987) and Regional Supplement (Environmental Laboratory 2010) are the field methods used to evaluate whether hydrologic, vegetation, and soils conditions meet the definition of a wetland as in 44 CFR 9.4.

It was determined that the potentially affected environment for the Proposed Action is limited to water quality as no rivers or streams, floodplains, or wetlands are present within or adjacent to the project site, or in areas potentially affected by the project alternatives. A project alternative was determined to have a significant effect on water quality if it would:

- Violate water quality standards or cause prolonged alterations to the historical baseline or desired water quality conditions.

### **3.2.3 ENVIRONMENTAL CONSEQUENCES**

This section describes the potential effects of the project alternatives on water quality within the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

#### **3.2.3.1 Alternative A: No Action**

Under the No Action Alternative, FEMA would not provide funds to improve the northern entrance road. Continued use of the northern entrance road as the primary ingress/egress to the park would have no effect on water quality.

#### **3.2.3.2 Alternative B: Proposed Action**

Under the Proposed Action, FEMA would provide funds to State Parks to improve the gravel northern entrance road. Depending on construction bids received by State Parks for the project, there may or may not be sufficient funds available to pave the entrance road with asphalt. Asphalt and compacted gravel are both impervious surfaces. The project would include approximately 0.17 acre of new impervious surface, regardless of the surface treatment. Stormwater runoff from impervious surfaces would be directed to the surrounding landscape and would infiltrate on site; it would not enter any surface waters. Four-foot wide filter strips would be constructed on both sides of the road. The surrounding landscape is composed of relatively flat, heavily vegetated upland forest with well-drained soils. There would be no detectable effect on water quality from stormwater runoff under either surface treatment option for the redeveloped entrance road.

The Proposed Action would also involve the installation of a new septic tank to serve the new visitor welcome center restrooms. The new septic tank would be connected to existing park septic infrastructure and would have no effect on water quality.

### 3.2.3.3 Mitigation Measures

The project would have no effect on water quality; therefore, no mitigation measures are necessary.

### 3.2.3.4 Significant Unavoidable Adverse Effects

The project would have no significant unavoidable adverse effects on water quality.

### 3.3 VEGETATION

This section describes vegetation communities and special status plant species in the project vicinity, and the potential effects of the project alternatives on these resources.

#### 3.3.1 AFFECTED ENVIRONMENT

##### Vegetation Communities

The project is located entirely within a closed-canopy mixed conifer-hardwood forest within Rainbow Falls State Park, north of the SR 6/Chehalis River Corridor and south of Leudinghaus Road. The mixed conifer-hardwood forest encompassing the project is dominated by mature Douglas-fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), western hemlock, (*Tsuga heterophylla*), big-leaf maple (*Acer macrophyllum*), and red alder (*Alnus rubra*). The understory in the vicinity of the existing northern entrance road varies from relatively dense in undeveloped areas to relatively open in developed areas (e.g., roadways, campsites and around other park facilities). The understory in undeveloped areas generally consists of small trees and tall shrubs such as vine maple (*Acer circinatum*), red elderberry (*Sambucus racemosa*), oceanspray (*Holodiscus discolor*), and red huckleberry (*vaccinium parvifolium*), and low shrubs such as salal (*Gaultheria shallon*) and swordfern (*Polystichum munitum*). Invasive species are not a major component of vegetation communities in the project vicinity (Figure 3.3-1, *Photos of Representative Vegetation*).

##### Special Status Plants and Rare Ecological Communities

In this EA, special status plant species are defined as plants that are federally listed as either threatened or endangered under the Endangered Species Act (ESA), or that are otherwise considered sensitive by state resource conservation agencies. The study area for special status plants consists of the mixed conifer-hardwood forest described above that encompasses the project site.

Two plants listed under the ESA occur in Lewis County: Kincaid's lupine (*Lupinus sulphureus* ssp. *Kincaidii*) and Nelson's checker-mallow (*Sidalcea nelsoniana*) (USFWS 2010a). The Washington Department of Natural Resources (DNR), Washington Natural Heritage Program (WNHP) is responsible for maintaining a database of current and historic locations of endangered, threatened, and sensitive plant species in Washington. Neither Kincaid's lupine nor Nelson's checker-mallow is documented in the project vicinity (DNR 2010). Kincaid's lupine is found in native upland prairies and open oak woodlands (DNR 1998); while Nelson's checker-mallow generally occurs along streams and in meadows and other relatively open areas, such as roadsides (DNR 1997). Neither of these habitats is present within or adjacent to the construction footprint of the project.

One high-quality rare plant community is documented by the WNHP in the project vicinity. This rare community consists of old-growth western hemlock-Oregon oxalis (*Oxalis oregona*) forest located within Rainbow Falls State Park, south of the SR 6/Chehalis River Corridor, and outside any areas potentially affected by the project alternatives. No special status plants or rare ecological communities are present within the park north of the SR 6/Chehalis River Corridor (DNR 2010).

	
<p>Northern entrance road</p>	<p>Mixed conifer-hardwood forest</p>
	
<p>Representative dense understory</p>	<p>Moderately dense understory</p>
	
<p>Moderately open understory</p>	<p>Representative understory around developed site</p>

Figure 3.3-1. Photos of Representative Vegetation.

### 3.3.1.1 Regulatory Setting

Federal, state, and local regulations addressing vegetation are summarized below. While no ESA-listed plants occur in the project vicinity, regulatory considerations pertaining to the ESA are summarized along with a brief explanation of why no further actions are needed to meet regulatory requirements.

#### Federal Requirements

##### Endangered Species Act

The ESA serves as the primary federal protection for species and habitat, by providing a formal designation and implementing programs through which the conservation of both populations and habitats may be achieved. Two agencies are responsible for the administration of the ESA: the USFWS and the National Marine Fisheries Service (NMFS). The USFWS is responsible for plants under the ESA. Because no ESA-listed plants or suitable habitat for ESA-listed plants that occur in Lewis County are present in the project vicinity (USFWS 2010a; DNR 2010; DNR 1997; DNR 1998), no further action is required by FEMA under the ESA for listed plants.

##### Executive Order 13112 – Invasive Species

EO 13112 requires federal agencies to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health effects that invasive species cause. The environmental protection standard specifications direct the contractor to implement measures to prevent the spread of invasive species.

### **3.3.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

The potential effects of the project alternatives on vegetation were evaluated in terms of both regulatory considerations and ecological context and intensity. AECOM ecologists gathered and reviewed available information regarding special status plants and rare ecological communities documented in Lewis County and the project vicinity, and conducted a site visit September 9, 2009 to collect information on general site conditions, vegetation communities, and special habitat features (e.g., wetlands, suitable habitat for special status plants) at the project site. The vegetation resources present in areas that could potentially be affected by the project alternatives were identified. Direct impacts of the project alternatives on vegetation resources were quantified, while potential indirect impacts of the project alternatives were qualitatively identified based on best professional judgment.

The affected environment for the Proposed Action is limited to the mixed conifer-hardwood forest encompassing the project site. A project alternative was determined to have a significant effect on vegetation if it would:

- Substantially disturb or degrade sensitive natural communities such old-growth, riparian, or wetland habitats.
- Conflict with applicable federal, state, or local regulations.

### 3.3.3 ENVIRONMENTAL CONSEQUENCES

This section describes the potential effects of the project alternatives on vegetation resources in the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

#### 3.3.3.1 Alternative A: No Action

Under the No Action Alternative, FEMA would not provide funds to State Parks to improve the northern entrance road. The project would not be constructed and no clearing of vegetation would take place. There would be no effect on vegetation.

#### 3.3.3.2 Alternative B: Proposed Action

The Proposed Action would have a direct long-term effect on vegetation in the project vicinity. Approximately 0.17 acre of native mixed conifer-hardwood forest (both trees and understory) would be cleared during construction to accommodate widening the entrance road and adding visitor parking and the visitor welcome center. According to State Parks, this would include the removal of 24 trees, as summarized in Table 3.3-1.

**Table 3.3-1. Trees Removed as Part of the Proposed Action.**

Number	Species	dbh	Height	Condition
2	Western red cedar	8–10 inches	35–40 feet	Good (2)
1	Red alder	18 inches	90 feet	Poor
4	Bigleaf maple	14–32 inches	90–120 feet	Good (2); Poor (1); and one with 3 trunks.
16	Douglas-fir	9–23 inches	110–160 feet	Good (5); Fair (5); Poor (6)
1	Western hemlock	13 inches	135 feet	Poor
Total = 24				

DBH = diameter at breast height.

Source = State Parks 2009b.

All vegetation debris would be disposed of on site, and tree logs would be used for the park as determined needed by State Parks (e.g., firewood, park structures).

While vegetation removal, including the removal of trees, would be measurable and permanent, it is unavoidable and the impact would be limited and localized, constituting a minor effect on vegetation from the project.

#### 3.3.3.3 Mitigation Measures

Impacts on vegetation would be minor. State Parks plans to landscape with native plants around the new visitor welcome center as a related (state) action with other (non-FEMA) funding, which would compensate for some of the understory vegetation cleared for the project. Therefore, no additional mitigation measures are proposed.

#### 3.3.3.4 Significant Unavoidable Adverse Effects

The project would have no significant, unavoidable adverse impacts on vegetation.

## 3.4 FISH AND WILDLIFE

This section describes fish and wildlife resources in the project vicinity and the potential effects of project alternatives on these resources. No federally listed or proposed threatened or endangered species or habitats are documented at the project site.

### 3.4.1 AFFECTED ENVIRONMENT

The project is located entirely within upland mixed conifer-hardwood forest. No aquatic habitats (e.g., rivers, streams, lakes, wetlands) are present on or adjacent to the project site, or in areas potentially affected by the project alternatives. Therefore, entirely aquatic species and habitats (such as fish and fish habitat), including essential fish habitat (EFH) protected under the MSA, are not considered part of the affected environment and are excluded from detailed analysis in this EA.

#### Wildlife Habitats

The mixed conifer-hardwood forest surrounding the project site (and described in Section 3.2, *Vegetation*) is connected to riparian areas along Marcuson Creek and the Chehalis River, and to old-growth western hemlock–Oregon oxalis forest on the south side of the SR 6/Chehalis River corridor. Edge habitat occurs along the park perimeters to the north, east, and west where the forested park is surrounded by agricultural fields, and around open fields in the interior of the park.

#### General Wildlife Species

The mixed conifer-hardwood forest surrounding the project site provides breeding, nesting, foraging, and cover habitat for a variety of small mammals and birds. Given the use of the site as a year-round park with both camping and day uses, species most likely to occur in the project vicinity are those that are less sensitive to frequent human disturbance. Birds common to the area and likely to use this habitat include the American robin (*Turdus migratorius*), American crow (*Corvus brachyrhynchos*), Steller's jay (*Cyanocitta stelleri*), black-capped chickadee (*Poecile atricapillus*), dark-eyed junco (*Junco hyemalis*), woodpeckers, hawks, and owls. Small mammals may include chipmunks, squirrels, and raccoons.

#### Special-Status Species

Information on special-status species and priority habitats potentially occurring in the project vicinity was obtained from the USFWS (USFWS 2010a; 2010b) and the WDFW Priority Habitats and Species (PHS) Program (WDFW 2010). The USFWS maintains lists (by county) of listed and proposed threatened and endangered species, and provides geographic information system (GIS) data for designated critical habitat online via their Critical Habitat Portal. WDFW maintains information on the occurrence of endangered, threatened, and sensitive species and priority habitats in Washington.

The USFWS list of federally listed and proposed threatened and endangered species and designated critical habitat for Lewis County (USFWS 2010a) includes the Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), grizzly bear (*Ursus arctos horribilis*), marbled murrelet (*Brachyramphus marmoratus*), and northern spotted owl (*Strix occidentalis caurina*), and designated critical habitat for marbled murrelet and northern spotted owl. According to the WDFW PHS Program data

(WDFW 2010), none of these species occurs within Rainbow Falls State Park. The WDFW PHS Program data obtained for the project vicinity, including TRS 13N 04W, Sections 6 and 7 (WDFW 2010), show that two northern spotted owl management circles occur approximately 0.7 mile to the northwest and 1.4 miles to the southwest of Rainbow Falls State Park, and USFWS data show that designated critical habitat for marbled murrelet occurs in the vicinity, although the closest unit is more than 2 miles from the park boundary (USFWS 2010c). However, neither of these species, or their designated critical habitat or management areas, occurs within or adjacent to the project site.

According to WDFW PHS Program data obtained for the project, the project site is located in the winter range for the Willapa herd of Roosevelt elk (*Cervus elaphus roosevelti*), and cavity-nesting ducks breed in riparian habitat along the Chehalis River during the summer and fall (WDFW 2010). Elk are sensitive to human activity and unlikely to use the project site or nearby areas (the park campground, and day use areas south of SR 6). Ideal cavity-nesting duck habitat contains shallow, wooded wetlands with 50–75% canopy tree cover and abundant downed logs and large woody debris or low islands (Lewis and Kraege 2000); these habitat characteristics are not present on or adjacent to the project site. Cavity-nesting ducks would most likely occur in riparian areas farther from human disturbance, and are not likely to nest in the upland forest habitat near the project site, which is close to campsites.

#### 3.4.1.1 Regulatory Setting

Federal, state, and local regulations addressing wildlife in the project vicinity are described below.

#### **Federal Requirements**

##### **Endangered Species Act**

The ESA serves as the primary federal protection for species and habitat, by providing a formal designation and implementing programs through which the conservation of both populations and habitats may be achieved. Two agencies are responsible for the administration of the ESA: the USFWS and the NMFS. No federally listed or proposed threatened or endangered fish or wildlife species or habitats occur on the project site.

##### **Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) prohibits persons, unless by permit, “to pursue, take, or kill...any migratory bird, or any part, nest or egg of any such bird.” Direct and indirect acts are prohibited under this definition, although harassment and habitat modification are not included unless they result in the direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes all native birds, including many commonly found in western Washington forested habitats. State Parks would conduct preconstruction surveys for birds, nests, and eggs within the construction footprint of the project and any adjacent areas that could be impacted by construction activities. If any special-status and/or species covered under the MBTA are nesting in these areas, State Parks would coordinate with the USFWS and/or WDFW to determine appropriate avoidance or minimization measures and ensure compliance with the MBTA.

### Bald and Golden Eagle Protection Act

Administered by the USFWS, this law provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except by permit, the taking, possession, and commerce of such birds. Golden eagle sightings are relatively rare in western Washington. There are no documented occurrences of bald eagles within 1 mile of the project site (WDFW 2010).

### Magnuson Stevens Act – Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) mandates federal agencies that fund activities that may adversely affect the EFH of federally managed fish species to consult with NMFS regarding the potential adverse effects of their actions on EFH. No aquatic habitats (e.g., rivers, streams, lakes, wetlands) are present within or adjacent to the project site, or in areas potentially affected by the project alternatives.

## **3.4.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

The potential effects of the project alternatives on wildlife were evaluated in terms of both regulatory considerations and ecological context and intensity. As described in Section 3.4.1, fish were excluded from the analysis because no aquatic systems are present in areas potentially affected by the project. Potential effects were determined by gathering and reviewing information regarding wildlife and wildlife habitat in the project vicinity, including special status species, and qualitatively evaluating how the project alternatives could impact wildlife and habitat present based on available literature sources, project details, and best professional judgment. Data gathering included a site visit by project ecologists and environmental planners to evaluate habitat present in the project vicinity.

The project alternatives were determined to have a significant effect on wildlife if they would:

- Substantially interfere with the breeding, feeding, or necessary life-cycle movement of any native resident or migratory bird, amphibian, or mammal species.
- Substantially conflict with state or local regulations protecting wildlife or habitat.
- Substantially conflict with the provisions of an applicable species or habitat management plan.

## **3.4.3 ENVIRONMENTAL CONSEQUENCES**

This section describes the potential effects of the project alternatives on wildlife in the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

### 3.4.3.1 Alternative A: No Action

Under the No Action Alternative, FEMA would not provide funds to improve the northern entrance road. Continued use of the northern access road as the primary ingress/egress to the park in its current condition would have no effect on wildlife or habitat.

### 3.4.3.2 Alternative B: Proposed Action

Under the Proposed Action, FEMA would provide funds to State Parks to improve the gravel northern entrance road. The project would have both temporary (construction-related) and long-term effects on wildlife and habitat in the vicinity of the project.

Construction would result in the permanent removal of approximately 0.17 acre of wildlife habitat located within the construction footprint of the project, composed entirely of native second-growth mixed conifer-hardwood forest with an understory consisting of small trees and low shrubs. This impact is unavoidable. While actively used by birds and small mammals, it is not unique or in ecologically pristine condition, and similar habitat occurs in areas surrounding the project site. Vegetation removal would have a minor but long-term impact on wildlife in the area.

Vegetation removal, noise, and general construction activity associated with project development would cause wildlife within and near the project site to move away and temporarily avoid the area during construction. Birds, squirrels, and chipmunks are likely the most common wildlife using the forested habitat within and adjacent to the project footprint. These wildlife would likely disperse to forested habitat contiguous with but farther from the project site during construction, and would return to the undisturbed areas adjacent to the project site once construction is completed. Noise and general construction activity would have a negligible, temporary effect on wildlife.

### 3.4.3.3 Mitigation Measures

The analysis of construction impacts relies on the stated commitment of State Parks to conduct preconstruction surveys for migratory bird nests within the construction footprint of the project and any adjacent areas that could be impacted by construction activities and, should a nest site be found, coordinate with the USFWS and/or WDFW to determine appropriate avoidance or minimization measures and ensure compliance with the MBTA. With this project commitment, no additional mitigation measures are proposed.

### 3.4.3.4 Significant Unavoidable Adverse Effects

The project would have no significant unavoidable adverse effects on fish or wildlife.

## 3.5 RECREATION

This section describes the existing recreational resources in the project vicinity, and the potential effects of the project alternatives on these resources.

### 3.5.1 AFFECTED ENVIRONMENT

Recreational resources in the project vicinity include Rainbow Falls State Park and the Willapa Hills Trail, located approximately 1,000 feet north of the park (north of Leudinghaus Road). Rainbow Falls State Park is a 139-acre park that includes camping, hiking trails, fishing, ball fields, picnic areas, and canoe access to the Chehalis River. The park has 45 tent spaces and eight power hook-up sites (for RVs). Three of the campsites are for hikers and cyclists (no vehicles), three are for horse campers, and one is a group camp that accommodates 14 camping units and up to 60 people (State Parks 2011). The Willapa Hills Trail is easily accessible from the park via a park trail leading from the horse camping area and across Leudinghaus Road (see Figure 1.2-2, *Rainbow Falls State Park Map*).

Rainbow Falls State Park is a popular local recreation destination; it attracted approximately 69,780 day visitors and 5,983 campers from July 2009 to May 2010 (State Parks 2010). The park and campground are open throughout the year but are more heavily visited during the summer months.

As described in Chapter 1 (Purpose and Need for Action), the vehicle entrance bridge to the park was destroyed during flooding of the Chehalis River in December 2007, and the gravel northern entrance road off of Leudinghaus Road, used solely for administrative and maintenance access prior to the flood, is now also the primary public ingress/egress to the park. In addition, the flood destroyed the footbridge that connected the campground portion of the state park on the north side of the river to the trail system on the south side of the river (see Figure 1.2-2).

#### 3.5.1.1 Regulatory Setting

There are no regulatory considerations directly addressing recreation in the project vicinity.

### 3.5.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE

The potential effects of the project alternatives on recreational resources in the project vicinity were evaluated in terms of context and level and intensity of recreation use. This was determined by gathering and reviewing information regarding recreational resources in the project vicinity from State Parks and publicly available information, and qualitatively assessing how the project alternatives could impact the resources present based on site visits, project information, and best professional judgment.

It was determined that a project alternative would have a significant effect on recreation if it would:

- Substantially interfere with access to recreational resources in the project vicinity over the long term.
- Substantially alter the quantity or quality of recreational resources and activities in the project vicinity over the long term.

### 3.5.3 ENVIRONMENTAL CONSEQUENCES

This section describes the potential effects of the project alternatives on recreation within the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

#### 3.5.3.1 Alternative A: No Action

Under the No Action Alternative, FEMA would not provide funding to State Parks to improve the gravel northern entrance road. The existing gravel northern entrance road would be the de facto permanent public entrance to the park.

The northern entrance road is only 24 feet wide and is not designed to accommodate larger vehicles such as RVs and trucks with trailers. This width is too narrow to safely and reasonably accommodate large RVs and trucks with trailers passing each other in opposite directions, and could potentially inhibit some types of recreation visitors from using or continuing to use the park. This would most likely include potential visitors with large RVs or those pulling large camping or horse trailers.

The absence of park staff presence and visitor information (e.g., park fees, map, location of campsites, restrooms, and other facilities, etc.) at the park entrance reduces park security and the overall recreation visitors' perception of the quality of this recreational resource.

The lack of safe and reasonable park access, adequate park security, and visitor information at the park entrance are estimated to have a moderate effect on the quality of the visitor experience.

#### 3.5.3.2 Alternative B: Proposed Action

Under the Proposed Action, FEMA would provide funds to State Parks to improve the existing gravel northern entrance road. The Proposed Action would affect recreation both during and after construction.

State Parks plans to begin construction of the project as soon as the NEPA process is completed, and anticipates that construction would take approximately 4 months (Ho 2011). The park is currently open year round for camping and day use, and this would continue throughout construction (Ho 2011). State Parks anticipates that all park amenities, including campsites in the vicinity of the project footprint, would be available for use during construction (Ho 2011). The only direct effect on recreation during construction would be a brief interruption to electrical power when the newly installed transformer is connected to the park's existing power system. The power disruption would temporarily interrupt power to eight hook-up campsites in the park, the existing restroom facility which includes two showers, and a reservable kitchen shelter that has electricity. The brief power disruption would have a negligible temporary effect on recreation as long as potential users are notified in advance of the disruption.

Although all campsites would be available for use throughout construction, it is probable that one horse camp (Horse Camp 3) and two tent sites (Campsites 1 and 2) in the immediate vicinity of the project footprint (see Figure 2.3-1) would be less desirable. Indirect effects on tent camping in the park would be negligible as numerous other sites farther from the project construction footprint would be available. Horse Camp 3 would probably be more adversely affected than the tent sites

since some horses may be sensitive to the noise and movement associated with nearby construction activity. Two other horse camps are available in the park; however, if construction takes place during the busier summer months, it could have a minor, temporary indirect effect on horse camping at the park.

The project would not alter the quantity of recreational resources within the park or in the project vicinity over the long term. However, the project would substantially improve the overall visitor experience. The wider entrance road with an incoming pass-through lane, visitor parking, and the visitor welcome center with restrooms and ADA parking, would: (1) improve access for RVs and trucks with trailers, improving visitor safety; (2) improve park security; and (3) improve visitor access to park information. These improvements are estimated to have a moderate, long-term beneficial effect on recreation.

The Proposed Action does not include reconstructing the footbridge over the river that was destroyed during the 2007 flood, which formerly connected the north and south portions of the State Park. Visitors will continue to need to drive from the campground across the Chandler Road bridge to access the trail system on the south side of the river and park along SR 6 (see Figure 1.2-2).

#### 3.5.3.3 Mitigation Measures

The analysis of construction impacts assumes that State Parks or the construction contractor would notify park users that a brief power disruption would occur when the new transformer is connected to the existing electrical power system. RV campers and visitors planning to reserve the kitchen with power should be notified of the date, time, and approximate duration of power disruption in advance to plan accordingly. No additional mitigation measures are proposed.

#### 3.5.3.4 Significant Unavoidable Adverse Effects

The project would have no significant unavoidable adverse effects on recreation. The project would have a moderate, long-term beneficial effect on recreation.

## 3.6 TRANSPORTATION AND ACCESS

This section describes transportation and access in the project vicinity, and describes the potential effects of the project alternatives on these resources.

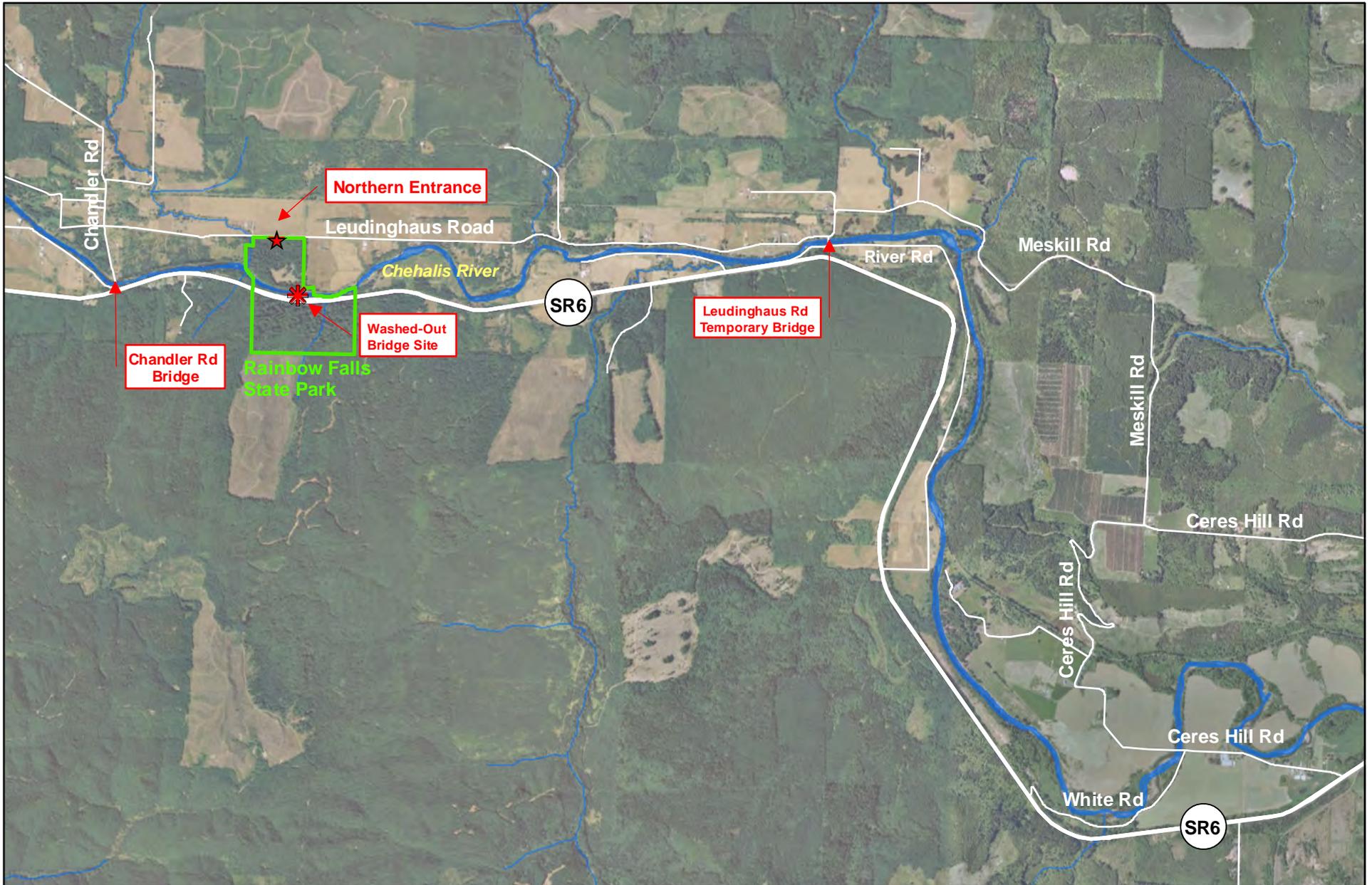
### 3.6.1 AFFECTED ENVIRONMENT

The project site encompasses the northern entrance road to Rainbow Falls State Park, located on the north side of the Chehalis River, near Dryad, in western Lewis County. SR 6 is the primary east-west connection between Interstate 5 (I-5) and the Pacific Coast serving western Lewis County from Chehalis to Pe Ell and intervening rural areas, including Dryad and Rainbow Falls State Park. For much of its length, SR 6 closely follows the Chehalis River on the south side. Bridge crossings along the SR 6/Chehalis River corridor provide access to areas on the north side of the river.

The project site is located off of Leudinghaus Road, a paved two-lane county road that runs east-west on the north side of the Chehalis River. The shortest access route to Leudinghaus Road from SR 6 is from the west via the Chandler Road Bridge (a.k.a. Dryad Bridge) (Figure 3.6-1, *Transportation and Access*). The Chandler Road Bridge was washed out during flooding of the Chehalis River in December of 2007 and recently replaced with funding support provided to Lewis County from the FEMA PA program.

Since October 3, 2011, the shortest access route between SR 6 and Leudinghaus Road from east of the project site has been via Meskill Road and Ceres Hill Road. Prior to that, Leudinghaus Road could be accessed from the east via a bridge connecting River Road on the south side of the Chehalis River to Leudinghaus Road on the north side of the river, a much shorter distance than the Meskill-Ceres Hill Road route (Figure 3.6-1). The Leudinghaus Road Bridge (a.k.a. Mays Bridge) crossing at this location consisted of a two-lane steel truss bridge up until December 2007 when it was destroyed in the same Chehalis River flood event that destroyed the Rainbow Falls State Park bridge entrance. A temporary, one-lane modular bridge (called a Bailey bridge), on loan from WSDOT, was installed just upstream shortly after the original bridge was destroyed; however, due to weight limitations only one vehicle could cross at a time. Additionally, the turn radius onto the Bailey bridge from River Road (from the south) was considered to be rather severe. These conditions slowed traffic using this route to cross the river to Leudinghaus Road and may have prohibited some vehicles from using this route. The WSDOT Bailey bridge was not intended to provide a permanent river crossing between River Road and Leudinghaus Road at this location, and on October 3, 2011 the bridge was closed to allow for it to be dismantled and returned to WSDOT for use in another location.

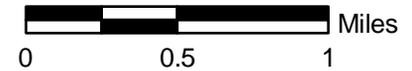
The long-term viability of a bridge crossing at or near the site of the original Leudinghaus Road Bridge is in question. FEMA has not completed the NEPA process or determined the need to provide funds to Lewis County to replace this bridge in addition to replacing the Chandler Road Bridge. Should FEMA decide not to provide funding to support Lewis County in replacing the Leudinghaus Road Bridge, it is unlikely that the project would be implemented in the foreseeable future due to a lack of sufficient alternative funding sources. No river crossing is currently present at the site of the original Leudinghaus Road Bridge, and drivers must use either the Chandler Road Bridge or the longer Meskill-Ceres Hill Road route to reach the project site off of Leudinghaus Road from SR 6.



### Figure 3.6-1

#### Transportation and Access

Rainbow Falls State Park Entrance Project  
 Washington State Parks and Recreation



Transportation facilities potentially affected by the project are limited to Leudinghaus Road and the project site itself, the northern entrance, and their intersection. Leudinghaus Road is functionally classified as a “rural local access” road in the Lewis County Comprehensive Plan (Lewis County 2002). This classification refers to roads that provide access to adjacent lands and serve travel of relatively short distances (Lewis County 2002). The project site (the northern entrance) provides public, administrative, and maintenance access to Rainbow Falls State Park. The nearest property access aside from the northern entrance itself is a private driveway approximately 600 feet to the west of the northern entrance.

### 3.6.1.1 Regulatory Setting

The Lewis County Transportation Plan, contained in the Transportation Element of the Lewis County Comprehensive Plan (Lewis County 2002), contains goals, policies, and objectives for addressing transportation issues throughout the county, including establishing Level of Service (LOS) standards for all arterials and transit routes in the county’s transportation network. LOS is a qualitative term describing the operating conditions a driver would experience while driving on a particular street or highway during a specific time interval, ranging from LOS A (very little delay) to LOS F (long delays, congestion) (Lewis County 2002).

### **3.6.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

The potential effects of the project alternatives on transportation and access were evaluated within the context of the transportation network in the project vicinity and level of use. This was determined by gathering and reviewing information from State Parks and publicly available information regarding roads, traffic volumes, park visitor attendance levels, and public and private access (e.g., driveways) in the project vicinity, and both quantitatively and qualitatively assessing how the project alternatives could impact the resources present based on information about the project, a traffic study conducted for the project (Skillings and Connolly 2010), and best professional judgment.

It was determined that a project alternative would have a significant effect on transportation and access if it would:

- Result in physical constraints or congestion that would impede travel.
- Result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion.
- Exceed, either individually or cumulatively, an LOS standard established for designated roads.
- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., recreation and forestry vehicles).

### **3.6.3 ENVIRONMENTAL CONSEQUENCES**

This section describes the potential effects of the project alternatives on transportation and access in the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

### 3.6.3.1 Alternative A: No Action

Under the No Action Alternative, FEMA would not provide funds to improve the northern entrance road. The northern gravel entrance road would continue to serve as the primary ingress/egress to the park indefinitely or until State Parks is able to improve the road using other funding sources.

Gravel roads deteriorate naturally with use and must be maintained regularly to keep them in satisfactory condition. Over the long term, increased vehicle traffic on the gravel road would likely require more frequent road maintenance. With proper road maintenance, adverse effects on park access due to poor road conditions would be negligible.

The existing northern entrance road is not designed for large vehicles such as RVs and trucks with trailers. The road is narrow (24 feet wide), which may make it difficult for some large vehicles going in opposite directions to pass each other safely. This likely causes some traffic congestion of vehicles entering and exiting the park while large vehicles slow and maneuver for passing safely. The lack of tapers onto Leudinghaus Road may exacerbate this effect and cause some minor slowing of traffic on Leudinghaus Road in the project vicinity.

### 3.6.3.2 Alternative B: Proposed Action

Under the Proposed Action, FEMA would provide funds to improve the existing gravel northern entrance road. The Proposed Action would affect transportation and access both during and after construction.

As described in Section 3.5 (*Recreation*), State Parks anticipates that construction of the project would take approximately 4 months. The park would remain open for camping and day use throughout construction. However, during construction, the entrance road would be restricted to one lane. This would result in a minor, temporary effect on traffic entering and exiting the park, and traveling along Leudinghaus Road past the project site. Construction of the Leudinghaus Road tapers would take 2 or 3 days (Ho 2011). Restricting travel to one lane on Leudinghaus Road through the project site may be necessary, and would have a minor, temporary effect on Leudinghaus Road and park traffic.

In accordance with the Lewis County Code (LCC) 12.60.410-420 (level of analysis), State Parks commissioned a Traffic Impact Analysis (TIA) to determine what impacts traffic associated with the park's northern entrance would have on the street network, and what impacts traffic on the street network would have on the proposed project (Skillings and Connolly 2010). The TIA was specifically concerned with project trip generation, project trip distribution, traffic to and from the project site, and delay and LOS at the project's intersection with Leudinghaus Road (Skillings and Connolly 2010). Results of the TIA are summarized here.

Trip generation is a general term describing the analysis and application of the relationships between trip makers, the traffic study area, and the trip making. It relates to the number of trip ends in any part of the traffic study area. The TIA estimated that Rainbow Falls State Park would generate no more than 28 PM peak hour trips based on 67 occupied campsites. In accordance with LCC 12.60.500 (Peak traffic hours), the PM peak hour used in the TIA was the average of the 60-minute period between 4:00 PM and 6:00 PM with the greatest sum of traffic volumes on a roadway

segment or passing through the area of the project and the next highest hour adjacent to the peak commute hour. The TIA used an average rate of 0.41 PM trips per unit based on the Institute of Transportation Engineers' *Trip Generation* (ITE 2008) (as cited in Skillings and Connolly 2010).

Existing (2010) PM peak hour traffic volumes for Leudinghaus Road were calculated from summer 2007 average daily trip (ADT) count data provided by Lewis County Public Works. The PM peak hour traffic volumes were calculated as 15% of the average daily volume, and an average annual growth rate of 2% was applied to bring the traffic volumes to 2010 values. Figure 3 of the TIA shows the calculated 2010 PM peak hour volumes, including turning counts, for the northern entrance road/Leudinghaus Road intersection. Total PM peak hour volume for the project intersection is 38 vehicle trips. Twenty-eight of those trips, or 73%, can be attributed to park traffic. The highest PM peak hour volume within the study area is 14 trips heading west on Leudinghaus Road, with 11 of those trips turning left into the park via the northern entrance and 3 continuing through the intersection (Skillings and Connolly 2010).

The existing delay and LOS within the TIA study area for the calculated 2010 PM peak hour volumes were analyzed using Highway Capacity Software for unsignalized intersection (the intersection is controlled with a stop sign for drivers exiting the park) (Skillings and Connolly 2010). The intersection analysis shows that the intersection operates within its design capacity at an LOS A, and that the existing northern entrance is capable of providing safe and efficient traffic control for the site and adjacent traffic flow (Skillings and Connolly 2010).

The TIA also evaluated trip distribution to and from the site based on area traffic flow trends provided by State Parks and Lewis County Public Works traffic count data. Figure 4 of the TIA shows the predicted PM peak hour traffic distribution for the study area, with 67% of the PM peak hour traffic traveling to and from the park using Leudinghaus Road to the east of the northern entrance, and 33% using Leudinghaus Road to the west of the northern entrance (Skillings and Connolly 2010).

Given the December 2010 reopening of the Chandler Road bridge located less than 1 mile to the west of the park's northern entrance (Figure 3.6-1, *Transportation and Access*), after the TIA for the project was conducted, the percentage of PM peak hour trips along Leudinghaus Road to the west of the project northern entrance is likely to increase.

The redeveloped northern entrance road would not increase capacity at the park and is likely to only negligibly increase traffic in the study area. The TIA concluded that the project intersection is currently operating at an LOS A with little delay. The addition of the proposed tapers along the south side of Leudinghaus Road on both sides of the entrance would likely improve the intersection LOS.

Overall, the project is anticipated to moderately improve access, traffic circulation, and traffic safety at the park's entrance and on Leudinghaus Road over the long term.

#### 3.6.3.4 Mitigation Measures

Impacts on transportation and access during construction are unavoidable but are anticipated to be minor and temporary. State Parks will ensure that all necessary traffic control measures are implemented during construction, and no additional mitigation measures are proposed.

### 3.6.3.5 Significant Unavoidable Adverse Effects

The Proposed Action would have no significant, unavoidable adverse effects on transportation and access. The Proposed Action would have an overall beneficial effect on transportation and access in the project vicinity.

## 3.7 ENVIRONMENTAL JUSTICE

Environmental justice is the fair and meaningful involvement in the development and implementation of environmental laws, regulations, and policies, of all people regardless of race, color, national origin, or income.

### 3.7.1 AFFECTED ENVIRONMENT

The project is located in rural Lewis County on State Park land. The area immediately around the park is characterized by few residences and low population density. The majority of project-related effects would occur within the construction footprint of the project (e.g., effects on soils, vegetation, wildlife, access) or be limited to the immediate vicinity (e.g., effects on transportation). However, the park is visited by recreationists throughout Lewis County and the state; therefore, project-related effects on recreation would extend beyond the project site itself and immediate vicinity (see Section 3.5, *Recreation*).

For the purpose of evaluating environmental justice in this EA, Lewis County is considered the affected environment. Table 3.7-1 presents the race and ethnicity of Lewis County and Washington State residents as reported by the 2000 U.S. Census of Population and Housing (U.S. Census Bureau 2004).

**Table 3.7-1. Race/Ethnicity in Lewis County and Washington State, 2000.**

Race/Ethnicity	Lewis County (%)	Washington State (%)
White	96.0	86.2
Black	0.4	3.4
American Indian and Alaska Native	1.3	1.6
Asian	0.7	5.6
Pacific Islander and Native Hawaiian	0.2	0.4
Two or more races	1.4	2.7
Hispanic or Latino (of any race)	5.4	7.5

Source: U.S. Census Bureau 2004.

Low-income households are defined by the U.S. Census Bureau as those households with incomes at or below 80% of area median household income. For 2007 (the most recent year for which data are available), the median household income in Lewis County was estimated at \$43,223; for Washington as a whole, it was \$55,628 (U.S. Census Bureau 2008). Approximately 14.2% of the Lewis County population is defined as low-income, compared to 11.4% of the population of Washington as a whole.

#### 3.7.1.1 Regulatory Setting

Executive Order 12898 (Environmental Justice, 59 Federal Register [FR] 7629 [1994]) requires federal agencies to achieve environmental justice by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Potential effects are evaluated by examining the demographics of the area affected by the Proposed Action(s) and the potential of those actions to have disproportionately high adverse effects on minority and low-income populations.

### **3.7.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

Environmental justice effects were determined using the EPA's guidance for federal agencies to identify disproportionately high and adverse human health or environmental effects on minority populations and low-income populations (EPA 1998). According to these guidelines, a minority population refers to a minority group that has a population of greater than 50% of the affected area's general population. Although not specifically stated in the text, the same rule is used for low-income populations; a low-income population exists if there is a community whose general population comprises 50% or more living under the threshold for low income.

A project alternative would have a significant for environmental justice effect if it would:

- Have disproportionately high and adverse human health or environmental impacts on low-income or minority populations.

### **3.7.3 ENVIRONMENTAL CONSEQUENCES**

#### **3.7.3.1 Alternative A: No Action**

The general population of the affected area (Lewis County) does not include minority populations or low-income populations as defined under EPA's environmental justice guidance (EPA 1998). Therefore, the No Action Alternative would have no environmental justice effects.

#### **3.7.3.2 Alternative B: Proposed Action**

The general population of the affected area (Lewis County) does not include minority populations or low-income populations as defined under EPA's environmental justice guidance (EPA 1998). Therefore the Proposed Action Alternative would have no environmental justice effects.

#### **3.7.3.3 Mitigation Measures**

The project would have no environmental justice effects and no mitigation measures are necessary.

#### **3.7.3.4 Significant Unavoidable Adverse Effects**

The project would have no significant or unavoidable adverse environmental justice effects.

## 3.8 CULTURAL RESOURCES

Cultural resources include properties of historical, cultural, and/or archaeological significance. This section describes cultural resources in the project vicinity, and the potential effects of the project alternatives on these resources, along with proposed mitigation measures as applicable.

### 3.8.1 AFFECTED ENVIRONMENT

The project is situated within a region traditionally occupied by three Southwestern Coast Salish groups (Hajda 1990). At the time of Euro-American contact, the Upper Chehalis and Cowlitz most likely occupied the project region and to a certain extent shared their territories in this area. Seasonal salmon runs, such as those on the Chehalis River, were especially critical to their subsistence patterns, and to some degree tribal territories were centered on this and other major waterways (Hajda 1990). Other Chehalis River resources were important seasonally to these and other cultural groups, including the Yakama, who traveled across the Cascades to fish for lamprey eels at the base of Rainbow Falls (Meatte 2011).

The earliest documented Euro-American contact with Native peoples in the Lewis County region occurred when Lewis and Clark led their expedition into the Northwest and camped along the Cowlitz River in March of 1806 on their return trip east. Lewis County was soon established as the first county in the Oregon Territory (including present-day Washington State). The county was formed in 1845, at a time when England was ceding lands north of the Columbia River to the United States, which eventually culminated with the Oregon Treaty of 1846 that recognized the 49th parallel as the border between British lands (Canada) and the U.S. (Coffman 1926; Tenlen 2006). With its rich farmlands, numerous rivers, timber stands, and transportation routes, Lewis County and the project vicinity became important economic drivers of the region. Although agricultural pursuits were key elements in the local economy, nothing had as great an impact on the social, economic, and cultural foundations of the region as did logging. Improved logging and milling technology and the arrival of the railroad spurred the development of major lumber mills and entire towns in Lewis County.

Initial development of Rainbow Falls State Park was undertaken by the Civilian Conservation Corps (CCC), which established a camp in nearby Doty in November of 1933. CCC work in the park included the grading and leveling of park areas, trail and firebreak construction, and more traditional park developments such as circulation systems, buildings, structures, and other infrastructure (McMurry 2009a). The northern entrance (project area) was constructed by the CCC in 1935 to provide access to the park (McMurry 2009b).

Intact features developed by the CCC in the park include the trail system south of the river and the more formally developed area north of the river. Buildings remaining include the Caretaker's House, the associated garage and tool house, the campground latrine, and a community kitchen. The timber suspension bridge spanning the river just south of the Caretaker's House was destroyed by the December 2007 flood event and is outside the immediate project area. Other site features associated with development by the CCC include stone drinking fountains, the remains of the cedar split rail boundary fence, and remnants of the north entry structure (McMurry 2009a). None of these buildings or features is within the project area, with the exception of the remnants of the north entry structure.

### 3.8.1.1 Regulatory Setting

Applicable federal, state, and local regulations addressing cultural resources in the project vicinity are described below.

#### **Federal Requirements**

##### **National Historic Preservation Act (NHPA)**

Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on properties in or eligible for the National Register of Historic Places (NRHP) (historic properties), and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations (36 CFR 800) issued by ACHP. With few exceptions, historic properties must be at least 50 years old and embody significance in American history, architecture, archeology, engineering, or culture. Consultation with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), as well as tribes with religious or cultural affiliations with the project area, is required by the Section 106 review process and has been conducted.

FEMA Region X has in place a Programmatic Agreement with the Washington State Department of Archaeology and Historic Preservation (DAHP) and the Washington State EMD to streamline Section 106 review for FEMA-assisted actions within the state (FEMA et al. 2007, 2011). FEMA is consulting with the SHPO within the DAHP and tribes (Cowlitz Indian Tribe, the Chehalis Confederated Tribes, and the Yakama Nation) in accordance with the process and timeline in the Programmatic Agreement as described below.

Section 106 regulations require federal agencies to define an area of potential effects (APE) in consultation with the SHPO within which the undertaking has the potential to affect historic properties, if present. FEMA defined the APE as the project footprint and requested concurrence from the SHPO with this determination on May 17, 2011 (FEMA 2011) (see Appendix A). SHPO concurred with the APE on May 24, 2011 (DAHP 2011) (see Appendix A). FEMA funded a cultural resources study by Historical Research Associates (Compas and DeJoseph 2011), which enabled them to make a determination of No Historic Properties Affected. FEMA provided that determination to the SHPO in a letter dated July 29, 2011, enclosing the cultural resources study, indicating that an archaeological monitor will be present during site work. FEMA consulted with the Cowlitz Indian Tribe, the Chehalis Confederated Tribes, and the Yakama Nation, requesting information regarding potential effects on cultural or religious properties in the project area and providing the report and indicating that the project will have an archaeological monitor. FEMA received concurrence from the DAHP (on behalf of the SHPO) with its finding in a letter dated August 8, 2011 (Appendix A).

#### **State Requirements**

##### **Indian Graves and Records (RCW 27.44)**

RCW 27.44 protects Native American graves, cairns, and glyptic markings by imposing criminal and civil fines and penalties for disturbing these sites, as well as the possession and sale of artifacts.

### Abandoned and Historic Cemeteries and Historic Graves Act (RCW 68.60)

This act protects cemeteries and historic graves from mutilation, injury, destruction, or removal. Deliberate desecration of these cultural resources is a Class C felony.

#### **3.8.2 METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE**

In accordance with the 36 CFR 800 regulations implementing Section 106, impacts on cultural resources were identified and evaluated by:

- Determining the APE.
- Identifying cultural resources present in the APE that were either listed on or eligible for listing on the NRHP.
- Applying the criteria of adverse effect (described below) to affected cultural resources listed on or eligible for listing in the NRHP.
- Considering ways to avoid, minimize, or mitigate adverse effects.

A determination of either *adverse effect* or *no adverse effect* must also be made for affected NRHP eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource, which qualifies it for inclusion on the NRHP, by diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur at a later time or that would be cumulative over the course of time. A determination of *no adverse effect* means that there is an effect, but the effect would not diminish in any way characteristics of a cultural resource that would qualify it for inclusion on the NRHP. When there are no historic properties present, or the action will have no impact on historic properties, the action is considered to have *no effect*.

A project alternative would reach the significance threshold for impacts to cultural resources if it would:

- Cause adverse effects on an historic property that could not be avoided, minimized, or mitigated pursuant to Section 106 regulations.

#### **3.8.3 ENVIRONMENTAL CONSEQUENCES**

This section describes the potential effects of the project alternatives on cultural resources in the project vicinity. Measures to avoid, reduce, or mitigate identified impacts on these resources are also identified.

##### 3.8.3.1 Alternative A: No Action

Under the No Action Alternative, FEMA would not fund the project, and no ground disturbance or modifications to the northern park entrance would occur. No cultural resources have been documented in the project area that would be impacted by its continued use as an alternative park entrance.

### 3.8.3.2 Alternative B: Proposed Action

The Proposed Action would establish the northern park entrance as the main visitor portal, with proposed entrance road improvements and the installation of a 20 x 40 foot welcome center and staff/visitor facilities, each with associated electrical and sewer/septic infrastructure and ADA-compliant parking.

A search of DAHP records indicated that no studies have been conducted within the APE and that nine archaeological sites have been recorded within 1 mile of the APE. The majority of the sites are on the floodplain adjacent to the Chehalis River. However, one site is located on the floodplain within 1/4 mile from the Chehalis River in an environment similar to that of the project (Compas and DeJoseph 2011).

The records search also indicated that the northern park entrance, recorded and evaluated by State Parks in 2009, has been substantially modified from the original CCC design (likely in the 1960s to accommodate RVs) and has been determined not eligible for the NRHP. Park features in the APE included the two modified vertical park entrance posts documented in 2010, two horse campsites with hitching posts in poor condition, and a wooden directional sign. Under the Proposed Action, the horse campsites would be removed to accommodate the proposed visitor facilities, and the directional sign would be removed to accommodate the new welcome center. Other park features observed in the immediate vicinity included basic campsites and a bathroom facility south of the RV pump-out station; these features may date to the 1960s, when the park entrance was modified. No other historical buildings or structures were identified within the project area.

The statewide predictive model (the Washington Information System for Architectural and Archaeological Records Data [WISAARD], developed by the DAHP) was also reviewed. The model is based on statewide information, using large-scale factors. Information on geology, soils, site types, landforms, and General Land Office (GLO) maps was used to establish or predict probabilities for prehistoric cultural resources throughout the state. The model establishes five predictive categories: Low Risk, Moderately Low Risk, Moderate Risk, High Risk, and Very High Risk. The predictive model map indicates a High Risk of encountering archaeological resources within the APE of the Rainbow Falls State Park Entrance Project area. HRA used the information obtained from the predictive model and archival research to establish a field strategy and implement field investigations.

An archaeological reconnaissance survey of the project area in March 2011 indicated that most of the APE is paved or covered with dense vegetation. Exposed ground was examined, and a single shovel probe was excavated in the area where the proposed septic/sewer/electrical infrastructure would be installed near the welcome center. Observed soils were a uniform brown loam to a depth of 50 centimeters (20 inches) and were characteristic of forest soils in southwestern Washington. No cultural materials or soil changes that indicate the presence of an archaeological site were observed; however, this does not preclude the possibility of encountering archaeological resources.

In summary, based on the statewide predictive model and the presence of nine recorded archaeological sites within 1 mile of the project location, there is a high risk of encountering archaeological resources within the project APE. The implementation of mitigation measures described below would reduce potential impacts on cultural resources to a less-than-significant level.

### 3.8.3.3 Mitigation Measures

No mitigation measures (as defined by NEPA) are proposed for the No Action Alternative (Alternative A). Most of the APE for activities associated with the Proposed Action (Alternative B) was paved or obscured by dense vegetation, and subsurface probes were limited. Since there is a high probability of cultural resources in the area, State Parks will prepare an archaeological monitoring plan and submit it to FEMA for review and approval and submittal to the SHPO and the Tribes. Monitoring will be conducted in accordance with the approved monitoring plan. A qualified archaeologist will be present during all ground-disturbing activities to monitor for the presence of historic or archaeological materials. State Parks will also prepare a report documenting the results of the monitoring and submit it to FEMA and SHPO for review and approval. FEMA will provide the monitoring report to the Tribes.

State Parks will notify the cultural resources directors at the Confederated Tribes of the Chehalis, the Cowlitz Indian Tribe, and the Yakama Nation 10 working days in advance of ground disturbance in the event that they would like to be present during ground-disturbance monitoring.

In the event that historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of this project, the project shall be halted and all reasonable measures taken to avoid or minimize harm to the property until such time as FEMA, in consultation with the SHPO, has determined appropriate measures have been taken to ensure that the project is in compliance with the NHPA.

### 3.8.3.4 Significant Unavoidable Adverse Effects

No significant, unavoidable adverse effects on cultural resources are anticipated from either of the project alternatives.

### 3.9 CLIMATE CHANGE

The CEQ has issued a draft NEPA guidance document encouraging federal agencies to improve their consideration of the effects on greenhouse gas emissions and climate change in their evaluations of proposals subject to NEPA documentation (CEQ 2010). Governor Gregoire committed Washington State to prepare for and adapt to the impacts of climate change as part of Executive Order 07-02. A new focus sheet entitled “*Preparing for Impacts*” is available from Ecology’s website (Ecology 2008).

Although the cause of the December 2007 disaster cannot be attributed to climate change, changes in precipitation patterns and volatility in precipitation-driven systems, such as the Upper Chehalis River, cannot be ruled out for potential damage in the future due to events associated with climate change. This alternate project (the Proposed Action), which would relocate the primary public entrance to Rainbow Falls State Park to a location away from the Chehalis River and outside of the floodplain rather than replacing the bridge damaged in the December 2007 flood, would substantially reduce any potential future threat of damage to the park entrance brought on by climate change, relative to pre-disaster conditions.

Construction and maintenance of the project (the improved northern entrance) would result in emissions from equipment operation and worker transportation that would negligibly increase short-term greenhouse gas emissions.

Relocating the park entrance to the existing northern entrance road off of Leudinghaus Road would not increase total vehicle trips on project-related roads; however, travel distance from SR 6 to the new park entrance would be approximately 1 mile longer by the shortest route (via Chandler Road), and would negligibly increase long-term greenhouse gas emissions.

No mitigation measures are proposed for the project alternatives.

### 3.10 CUMULATIVE EFFECTS

Cumulative effects are those that result from the incremental effect of a Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other action (40 CFR 1508.7). Potential cumulative effects from the project alternatives include: (1) a negligible cumulative adverse effect on vegetation and wildlife in the project vicinity due to the removal of approximately 0.17 acre of native vegetation, including 24 trees; (2) a moderate beneficial cumulative effect on recreation in the project vicinity and surrounding areas in conjunction with the Willapa Hills Trail Project, which would restore a connecting portion of the trail also destroyed during the December 2007 storms; and (3) a moderate beneficial effect on transportation in the project vicinity and surrounding areas in conjunction with the Chandler Road Bridge Replacement Project, re-opened in December 2010, which restored access from SR 6 across the Chehalis River to Leudinghaus Road.

## 4.0 Consultation & Coordination

### 4.1 PUBLIC INVOLVEMENT

FEMA sent a scoping letter to agencies, Tribes, and local interested parties on December 27, 2010. The letter provided a description of the proposed project and requested comments on issues and concerns, the range of alternatives, and potential effects regarding the project. The scoping letter and the comments received are included in Appendix A. These comments were considered and addressed in the preparation of this EA.

#### 4.1.1 COMMENTS ON THE DRAFT EA

The Draft EA was released for public review on December 9, 2011. Copies were sent directly to those agencies, Tribes, and stakeholders that participated in scoping and are listed in Chapter 6, *Distribution*. A public notice announcing its availability to the general public for comment was published in the local newspaper (*the Chronicle*) and posted at the Rainbow Falls State Park northern entrance, and the Draft EA was available for viewing at the Vernetta Smith Chehalis Timberland library. The Public Notice and Draft EA were posted to both the FEMA and State Parks websites, the web addresses of which were included in the Public Notice.

During the public comment period (December 9 to January 20, 2012), comments were received from two entities (the Chehalis Basin Education Consortium and Ecology). These comments addressed three issues: (1) the lack of connection between the campground portion of the park with the trail system on the south side of the Chehalis River, (2) requirements for fill material used during construction, and (3) Water Right withdrawal. Based on the analysis presented in the Draft EA and the nature of the comments received, minor clarifications have been added to the EA, but no substantive changes have been made to the analysis or its conclusions. In addition, a revision was made to Section 3.2 (*Hydrology, Water Quality, Floodplains, and Wetlands*) to correct an error regarding the state Coastal Zone Management Program.

FEMA has determined that preparation of an Environmental Impact Statement (EIS) is not necessary. The Final EA and FONSI are available on the FEMA and State Parks websites.

### 4.2 AGENCIES AND TRIBES

FEMA has consulted with federal agencies, Tribes, and local agencies and stakeholders throughout the EA process to gather valuable input and to meet regulatory requirements. This coordination was integrated with the analysis of project effects and the public involvement process.

Because no species are present that are listed as federally threatened or endangered species under ESA, no consultation with USFWS or NMFS is required. Because there is no EFH present under the MSA, no consultation with NMFS is required for that purpose either.

FEMA is consulting with the SHPO and with the Yakama Nation and Chehalis and Cowlitz Tribes, requesting help in identifying cultural or religious properties that may be affected by the project. FEMA will continue to consult with these entities regarding archaeological monitoring of the construction and subsequent reporting.

## 5.0 Preparers

### **FEDERAL EMERGENCY MANAGEMENT AGENCY**

Mark Eberlein, Regional Environmental Officer, Region X  
Susan King, Environmental Specialist, Region X

### **AECOM**

Jan Mulder, Project Oversight and Senior Review  
Linda Howard, Project Manager, Environmental Planner  
Sergio Capozzi, Recreation Planner  
Richard Dwerlkotte, Botanist  
Peter Carr, Technical Editor

### **HISTORICAL RESEARCH ASSOCIATES**

Lynn Compas, Senior Project Archaeologist

## 6.0 Distribution

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Federal Emergency Management Agency (FEMA)  
Dennis Burton, Public Assistance Program  
Anna Daggett, Public Assistance Program

U.S. Fish and Wildlife Service (USFWS)  
Rowan Baker, Region 1 NEPA Coordinator  
Martha Jensen, Washington Fish and Wildlife Office

National Marine Fisheries Service (NMFS)  
Kathe Hawe, NW NEPA Coordinator  
Jeff Fisher, Branch Chief

U.S. Army Corps of Engineers (Corps)  
Jerry J. Gregory, Regulatory Branch

### TRIBES/TRIBAL ORGANIZATIONS

Chehalis Confederated Tribes  
David Burnett, Chair  
Richard Bellon, Cultural Resources

Cowlitz Indian Tribe  
William Iyall, Chair  
Dave Burlingame, Cultural Resources  
James Gordon, Cultural Resources

Yakama Nation  
Harry Smiskin, Chair  
Johnson Meninick, Cultural Resources

### STATE AGENCIES

Washington State Department of Archaeology and Historic Preservation (DAHP)  
Allyson Brooks, SHPO  
Rob Whitlam, State Archaeologist

Washington Department of Ecology (Ecology)  
Peg Plummer, SEPA Register Coordinator

Washington Department of Fish and Wildlife (WDFW)  
Scott Brummer, Area Habitat Biologist  
Teresa Eturaspe, SEPA/NEPA

Washington State Emergency Management Division (EMD)  
Gary Urbas, Public Assistance  
Jon Holmes, Public Assistance

Washington Department of Transportation  
Chris Regan, SEPA/NEPA Specialist

Washington Department of Natural Resources  
SEPA Center

Washington Parks and Recreation Commission  
Jessica Logan  
Rainbow Falls State Park

**LOCAL AGENCIES**

Bob Amrine, Lewis County Conservation District, District Manager  
Keith Muggoch, Lewis County Public Works  
Kernan Lien, Lewis County, Senior Planner

**LIBRARIES**

Vernetta Smith Chehalis Timberland Library

**VOLUNTEER AND NONPROFIT ORGANIZATIONS**

Kathy Jacobson, Chehalis Basin Education Consortium  
Chehalis Basin Fisheries Task Force  
Lee Napier, Chehalis Basin Partnership  
Janet Strong, Chehalis River Basin Land Trust  
Chehalis River Council  
Ryan Ojerio, Washington Trails Association  
Lewis County Community Trails  
Darrel Wallace, Backcountry Horsemen  
Friends of the Earth  
Washington State Parks Foundation  
Washington Environmental Council  
The Nature Conservancy

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**Appendix A**

**Correspondence and Consultation**



**FEMA**

December 27, 2010

RE: FEMA Proposal to Fund Rainbow Falls State Park Restoration and Improvements  
FEMA-1734-DR-WA, PW 286-2  
Lewis County, Washington  
NEPA Scoping for Environmental Assessment

Dear Interested Party:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) is proposing to support the Washington State Parks and Recreation Commission by providing partial funding to restore and improve public access to Rainbow Falls State Park near Dryad in Lewis County, Washington. The original entrance bridge and pedestrian trail bridge were washed out during a severe winter storm and flooding on December 3, 2007 (see below). The President declared the flooding event a major disaster (FEMA 1734-DR-WA), making funds available for public infrastructure repairs.

The purpose of this notice is to invite you to participate in a National Environmental Policy Act (NEPA) scoping process by reviewing the initial proposal as outlined in this letter and providing comments to help FEMA prepare an Environmental Assessment (EA) under NEPA. The EA will evaluate the impacts of this proposed action on the natural and cultural environment. We are asking your assistance in identifying the scope of issues and concerns to be addressed in the analysis, developing viable alternatives to the proposed action, and identifying potential impacts of implementing the project.

During the storm, the Chehalis River overflowed its banks, carrying large debris downstream. This debris hit and destroyed the vehicular bridge that connected the public entrance of Rainbow Falls State Park to State Route 6, which runs through the middle of the park, along the south side of the Chehalis River. The flood also destroyed the pedestrian bridge connecting the campground, picnic area and other amenities in the northern end of the park to the trail system in the southern end of the park. The bridges fully connected the recreation amenities at Rainbow Falls State Park, and provided access to the state park from the highway.

The original public entrance, prior to the bridge being built over the Chehalis River, was located off of a county road (Leudinghaus Road) along the northern boundary of the park. More recently, this northern entrance has been used by State Parks for operations and maintenance purposes. The proposal is to restore safe and reasonable public access to Rainbow Falls State Park by improving the original northern entrance. The proposal includes widening and paving (with asphalt) the northern entrance road, and adding a visitor welcome center with restrooms and parking. These are intended to improve vehicle circulation, improve park presence and security, and enhance the overall visitor experience.

Interested Party  
December 27, 2010  
Page 2

**Submittal of Comments**

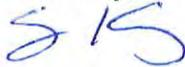
Please submit your written comments on this proposal (or, if you represent an agency, a written confirmation of receipt of this notice stating that your agency has no comments to contribute) to FEMA via a reply to the email forwarding this notice. Or you may submit written comments via regular mail to:

Susan King  
Environmental Specialist  
FEMA Region X  
130 228<sup>th</sup> St. SW  
Bothell, WA 98021  
[susan.king@dhs.gov](mailto:susan.king@dhs.gov)

Please submit your comments by February 3, 2011.

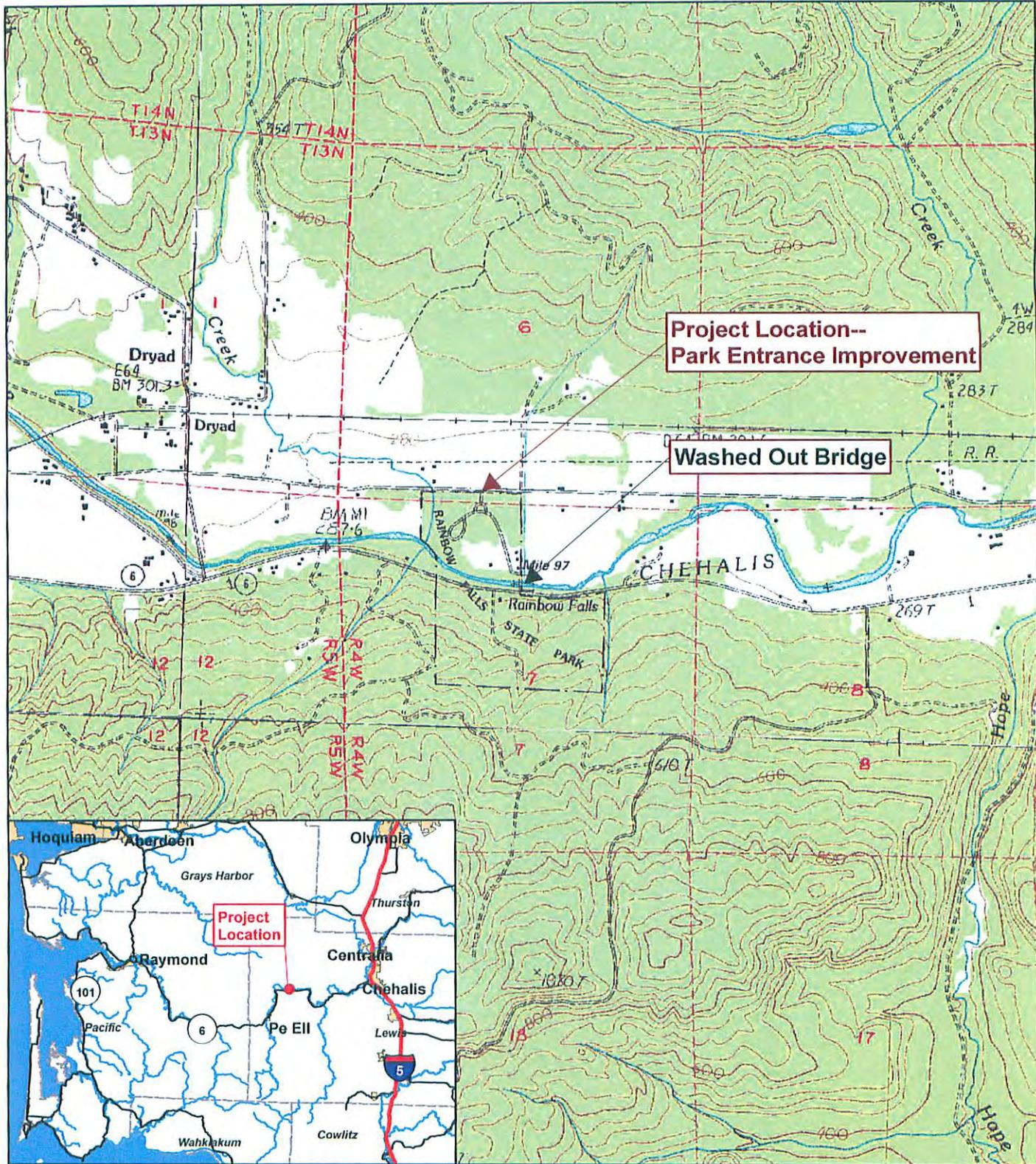
If you have questions about this letter, the project, or if you want to receive a copy of the Draft EA document for review and comment when it is released later during the public involvement process, please feel free to contact Susan via email ([susan.king@dhs.gov](mailto:susan.king@dhs.gov)) or phone (425-482-3729) or me via email ([mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov)) or phone (425-487-4735).

Sincerely,

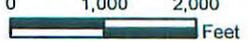


Regional Environmental Officer  
FEMA Region X

Enclosure: Project Vicinity Map  
Distribution List



**Project Vicinity**  
 Rainbow Falls State Park  
 Entrance Improvements


 Basemap: 1 inch = 2,000 feet  
 USGS Quad  
 09100406 04 7/10  
 0 1,000 2,000  
 Feet

## **Distribution List**

### **FEDERAL AGENCIES**

U.S. Environmental Protection Agency (EPA)  
Christine Reichgott, NEPA Review Unit Mgr  
Federal Emergency Management Agency (FEMA)  
Dennis Burton, Public Assistance Program  
Anna Daggett, Public Assistance Program  
U.S. Fish and Wildlife Service (USFWS)  
Martha Jensen, Washington Fish & Wildlife Office  
National Marine Fisheries Service (NMFS)  
Dan Guy, Washington State Habitat Office  
U.S. Army Corps of Engineers (Corps)  
Jerry J. Gregory, Regulatory Branch

### **TRIBES**

Chehalis Confederated Tribes  
David Burnett, Chair  
Richard Bellon, Cultural Resources  
Cowlitz Indian Tribe  
William Iyall, Chair  
Dave Burlingame, Cultural Resources

### **STATE AGENCIES**

Washington State Historic Preservation Office (SHPO)  
Allyson Brooks, DAHP, SHPO  
Rob Whitlam, SHPO, Archaeologist  
Washington Department of Ecology (Ecology)  
Peg Plummer, WA Dept of Ecology, SEPA Register Coordinator  
Washington Department of Fish and Wildlife (WDFW)  
Scott Brummer, Area Habitat Biologist  
Teresa Eturaspe, SEPA/NEPA  
Washington State Emergency Management Division (EMD)  
Gary Urbas, Public Assistance  
Jon Holmes, Public Assistance  
Washington Department of Transportation  
Chris Regan, SEPA/NEPA Specialist  
Washington Department of Natural Resources  
SEPA Center

Washington Parks and Recreation Commission  
Randy Kline  
Jessica Logan

#### **LOCAL AGENCIES**

Bob Amrine, Lewis County Conservation District, District Manager  
Keith Muggoch, Lewis County Public Works  
Kernen Lien, Lewis County, Senior Planner  
Lynn Deitrick, Lewis County

#### **OTHER STAKEHOLDERS**

Kathy Jacobson, Chehalis Basin Education Consortium  
Chehalis Basin Fisheries Task Force  
Lee Napier, Chehalis Basin Partnership  
Janet Strong, Chehalis River Basin Land Trust  
Chehalis River Council  
Washington Trails Association  
Lewis County Community Trails  
Backcountry Horsemen  
Rick & Suzanne Nelson, Neighbor  
Billy Laymon, Neighbor  
Tricia Lusk, Neighbor  
Ben Kiser, Neighbor  
Kevin and Yu Wang Watson, Neighbor  
Leo & Georgia Giroski, Neighbor  
Gary Petersen, Neighbor  
Reta Petersen, Neighbor  
Walter Petersen, Neighbor  
Green Diamond Resource, Neighbor  
RES REO I LLC, Neighbor

**From:** Ryan Ojerio [<mailto:ryan@wta.org>]

**Sent:** Wednesday, December 29, 2010 10:30 AM

**To:** King, Susan

**Subject:** Re: NEPA Environmental Assessment Scoping for Rainbow Falls State Park restoration and improvements

Dear Ms. King,

can you clarify if the proposal will address the lack of connectivity between the campground and the trail system? From my read of the documents, it appears that the project will only serve to improve the northern entrance, but not restore pedestrian access between the campground and the trail network.

-Ryan

On Tue, Dec 28, 2010 at 3:00 PM, King, Susan <[Susan.King@dhs.gov](mailto:Susan.King@dhs.gov)> wrote:

Interested Parties:

The Federal Emergency Management Agency (FEMA) is proposing to provide partial funding to the Washington Parks and Recreation Commission (Washington State Parks) to restore and improve public access to Rainbow Falls State Park near Dryad in Lewis County. The main entrance bridge (south) and pedestrian trail bridge were washed out during a severe winter storm and flooding on December 3, 2007, a flood event that was subsequently a Presidentially declared major disaster, making federal funds available for public infrastructure work. With the loss of the bridge, the original park entrance (north) has become the only park entrance. Washington State Parks proposes to widen and pave the northern entrance road, and add a visitor welcome center with restrooms and parking.

As part of its compliance responsibilities under the National Environmental Policy Act (NEPA), FEMA is inviting you to participate in the scoping process for preparation of an environmental assessment (EA). Your assistance will help to identify the scope of issues and concerns to be addressed in the analysis, develop viable alternatives to the proposed action, and identify potential impacts of implementing the project.

The attachment to this email provides additional information regarding the project. It also provides direction for submitting your written comments, which we are requested by February 3, 2010. You may do so by responding to this email, which is being sent by Susan King of my staff; or by sending them via regular mail at the address provided in the attachment.

Mark Eberlein

Regional Environmental Officer

FEMA Region X

--

Ryan Ojerio  
SW Washington Regional Coordinator  
Washington Trails Association  
(360) 722-2657  
[www.wta.org](http://www.wta.org)

The National Forest Foundation is matching donations dollar-for-dollar for WTA work on the Cape Horn Trail. To contribute go to: [Cape Horn Campaign Donation Page](#).

From: James Gordon [mailto:jgordon@cowlitz.org]  
Sent: Wednesday, February 02, 2011 10:46 AM  
To: King, Susan; Rob.Whitlam@dahp.wa.gov  
Subject: Question regarding FEMA-1734-DR-WA, PW 286-2 - Cowlitz Indian Tribe.

Ms. King,

I was wondering what types of restroom units would be installed for the Rainbow Falls State Park project? Are these vault toilets or another type? Could you tell me the proposed depth and width regarding proposed ground disturbance pertaining to these?

In addition, could you send me a copy of the Draft EA, if it is available at this time?

Thank you.

James Gordon

--

James Gordon

Cultural Resources Department  
Cowlitz Indian Tribe

360.577.5680  
360.957.3004 cell  
360.577.6207 fax

This message is confidential and protected by Tribal Code and Federal law.

**From:** dAVe burlingame [<mailto:culture@cowlitz.org>]  
**Sent:** Tuesday, December 28, 2010 4:23 PM  
**To:** 'King, Susan'; Eberlein, Mark  
**Cc:** [wiyall@cowlitz.org](mailto:wiyall@cowlitz.org); [earthur@cowlitz.org](mailto:earthur@cowlitz.org); 'James Gordon'  
**Subject:** RE: NEPA Environmental Assessment Scoping for Rainbow Falls State Park restoration and improvements

Susan and Mark,

I would like to request the Tribes receive the draft EA document when it completed, rather than as part of the public involvement process, as there are archaeological concerns associated with this project.

Thanks for your time and attention.

AMR,

dAVe burlingame

Director, Cultural Resources  
Cowlitz Indian Tribe  
360.577.6962  
508.1677 cell  
577.6207 fax

This message is confidential and protected by  
Federal law, Tribal Code and other stuff.

U'q'd.

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The attachment to this email provides additional information regarding the project. It also provides direction for submitting your written comments, which we are requested by February 3, 2010. You may do so by responding to this email, which is being sent by Susan King of my staff; or by sending them via regular mail at the address provided in the attachment.

Mark Eberlein  
Regional Environmental Officer  
FEMA Region X



**FEMA**

May 17, 2011

Allyson Brooks, Ph.D.  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
P.O. Box 48343  
Olympia, Washington 98504-8343

Re: Section 106 consultation for Rainbow Falls State Park Entrance Project

Dear Dr. Brooks:

Washington State Parks and Recreation Commission (State Parks) has applied to the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) for funding assistance, through the Washington State Emergency Management Division, to modify the north entrance of Rainbow Falls State Park as the new public visitor entrance (Rainbow Falls State Park Entrance Project, Lewis County, Washington, U.S. Department of Homeland Security [FEMA-1734-DR-WA] FEMA Grant Applicant: Washington State Parks and Recreation Commission Project Location: Sections 6 and 7 of Township 13 North, Range 4 West). The project will replace the former park entrance bridge that was destroyed by flooding of the Chehalis River in December 2007. FEMA is preparing an Environmental Assessment (EA) and the project is being reviewed as the Proposed Action.

The purpose of this letter is to initiate consultation with you pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR 800.4(a) regarding the Rainbow Falls State Park Entrance Project. FEMA identified a proposed Area of Potential Effect (APE) based on the scope of the project, a map of which is enclosed. The proposed APE is equal to the area of construction activities.

Historical Research Associates (HRA) of Portland, Oregon, is assisting FEMA with their Section 106 responsibilities. As part of this assistance, HRA will conduct a site visit of the project area to assess the need for fieldwork (survey, shovel testing) to identify historic properties, including archaeological properties that may be part of a traditional cultural property or other resources of concern. FEMA is consulting with the Chehalis, Cowlitz, and Yakama Tribes to identify properties of cultural or religious significance that may be affected by the project. HRA has notified the Tribes of the site visit and invited them to participate and/or provide comment.

We request your comment and/or concurrence on the proposed APE for the project, and any other concerns you may have about the project. If you have any questions or comments please feel free to contact me at the above address, by telephone at (425) 287-4735, or by e-mail at [mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov).

Sincerely,

A handwritten signature in black ink that reads "Barry Gall for". The signature is written in a cursive style.

Mark G. Eberlein  
Regional Environmental Officer

Enclosures

cc: Janet Curran, FEMA Region 10

## Rainbow Falls State Park Entrance Project Description

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Under the Proposed Action, FEMA would provide funding to State Parks to improve the northern entrance off of Leudinghaus Road for use as the primary public access to Rainbow Falls State Park. The Proposed Action includes the following elements:

- *Visitor contact welcome center* – Construct a new welcome center at the entrance to provide park staff a prominent location to greet visitors as they enter/leave the park. The welcome center would be a single-story building with a manager's office, shared office space, and restrooms. The building footprint would be 20 x 40 feet. The Proposed Action would fund construction of the building shell, while State Parks would use other funding sources to finish the interior.
- *Welcome center electric, sewer, and water* – Install a new electrical transformer and connect the welcome center to the existing electric system. Install a septic tank for the welcome center restrooms and install a sewer pipeline connecting it to the existing sewer system. Connect the welcome center to the existing water system.
- *Entrance road and parking improvements* – Widen the existing gravel entrance road to accommodate the visitor contact welcome center within a landscaped center island that would divide designated entrance and exit lanes. Approximately 210 linear feet of gravel road would be improved. Entrance and exit lanes would include one 12-foot-wide exit lane and two 11-foot-wide entrance lanes. The outer entrance lane would be designed as a passthrough lane, with additional width on the outside to accommodate a visitor parking area. Two Americans with Disabilities Act (ADA)-compliant parking stalls would be located within the center island near the welcome center restrooms. Employee parking would be constructed near the welcome center to the south.
- *Leudinghaus Road intersection improvements* – Construct 250-foot tapers along the south side of Leudinghaus Road on both sides of the entrance road. The tapers are required by Lewis County to allow for deceleration into the park from Leudinghaus Road and acceleration from the park onto Leudinghaus Road.
- *Entrance road and parking area paving* – Pave the entrance road and parking area with asphalt concrete to improve durability and reduce maintenance. Implementation of this project element would depend upon final construction costs for the project. If project funding is not sufficient to include asphalt pavement, then the entrance road would be surfaced with gravel.
- *Metal service gate* – Install a metal service gate at the park entrance.

**Area of Potential Effect (APE)** – The proposed APE is equal to the limits of the above activities, to a depth equal to the specific construction disturbances (see Figure 1-2.1 below). The APE considers potential effects to archaeological properties only; there are no historical or CCC buildings or structures in the project vicinity that would be impacted by the proposed park entrance modifications.



**Figure 1.2-1 Project Vicinity**

Rainbow Falls State Park Entrance Project  
Washington State Parks and Recreation



Proposed APE.



View of Rainbow Falls State Park Northern Entrance.



STATE OF WASHINGTON

**DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION**

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501  
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343  
(360) 586-3065 • Fax Number (360) 586-3067 • Website: [www.dahp.wa.gov](http://www.dahp.wa.gov)

May 24, 2011

Mr. Mark Eberlein  
FEMA- Region X  
130 228<sup>th</sup> Street SW  
Bothell, Washington 98021

Re: Rainbow Falls State Park Entrance Project  
FEMA# 1734-DR-WA  
Log No.: 052411-09-FEMA

Dear Mr. Eberlein:

Thank your for contacting our department. We have reviewed the materials you provided for the proposed WSPRC Rainbow Falls State Park Entrance Project, Lewis County, Washington.

Thank you for your description of the Area of Potential Effect (APE). We concur with the proposed APE. We look forward to receiving the results of your consultation efforts, professional archaeological survey report and your Determination of Effect.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with the Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800.4.

Should additional information become available, our assessment may be revised, including information regarding historic properties that have not yet been identified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.  
State Archaeologist  
(360)586-3080  
email: [rob.whitlam@dahp.wa.gov](mailto:rob.whitlam@dahp.wa.gov)





**FEMA**

July 29, 2011

Allyson Brooks, Ph.D.  
State Historic Preservation Officer  
Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, Washington 98504-8343

Re: Section 106 consultation, Rainbow Falls State Park, FEMA-1734-DR-WA, PW-286-2

Dear Dr. Brooks:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has taken steps necessary pursuant to 36 CFR 800.4(b) to identify historic properties or other cultural resources within the Area of Potential Effect (APE) for the following project:

*DAHP Log #:* 052411-09-FEMA  
*Undertaking:* Modification of North Entrance to Rainbow Falls State Park  
*Location:* Lewis County, Washington  
Sections 6 and 7 of Township 13 North, Range 4 West, Willamette Meridian  
46.63443 N, -123.23362 W  
*Applicant:* Washington State Parks and Recreation Commission  
*Determination:* No Historic Properties Affected

The purpose of this letter is to continue to consult with you regarding the Washington State Parks and Recreation Commission's proposed action (the Undertaking); we requested concurrence with our Area of Potential Effect (APE) for this project in a letter dated May 17, 2011, and received the concurrence in a letter dated May 24, 2011. Since that time we contracted with Historical Research Associates (HRA) to complete a cultural resources study (enclosed). Based on that study, we have made a determination of No Historic Properties Affected, and will be requiring a monitor during ground-disturbing activities.

Washington State Parks and Recreation Commission (State Parks) has applied to FEMA through the Washington State Emergency Management Division for funding assistance to modify the north entrance of Rainbow Falls State Park as a public visitor entrance. The project will replace the former park entrance that was accessed by a bridge that was destroyed by flooding of the Chehalis River in December 2007.

Dr. Brooks  
July 29, 2011  
Page 2

The results of the field work were negative; however, most of the APE is paved or obscured by heavy vegetation and is in an area considered to be of high sensitivity for identifying archaeological sites. FEMA has made a determination of "No Historic Properties Affected" for this Undertaking, as outlined in 36 CFR 800.4(d)(1), and is requiring that a qualified archaeologist be present as monitor during ground-disturbing activities.

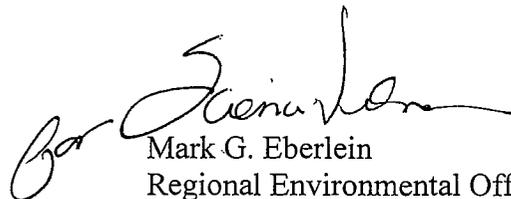
FEMA will include the following as a condition of funding: In the event historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of this project, the project shall be halted and all reasonable measures taken to avoid or minimize harm to the property until such time as FEMA, in consultation with the State Historic Preservation Office (SHPO), determines appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act (NHPA).

I request your concurrence with our determination of effect. Per our Programmatic Agreement, should you not object to these findings within 14 days of receipt of this letter, FEMA will assume concurrence and FEMA's responsibilities under Section 106 of the NHPA will be fulfilled.

In addition to consulting with your office, FEMA is soliciting input from the Chehalis, Cowlitz, and Yakama Tribes to identify any information on cultural or religious properties that may be affected by the project. Should they provide any information that changes our present determination, we will reenter consultation with you.

Thank you for your review of this project. We will provide you with the monitoring results when work is concluded. If you have any questions or comments please feel free to contact Susan King of my staff by telephone at (425) 482-3729 or at [susan.king@dhs.gov](mailto:susan.king@dhs.gov), or myself at the above address, by telephone at (425) 487-4735 or by e-mail at [mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov).

Sincerely,



Mark G. Eberlein  
Regional Environmental Officer

Enclosures: Cultural Resources Report

SK:bb



STATE OF WASHINGTON

**DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION**

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501  
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343  
(360) 586-3065 • Fax Number (360) 586-3067 • Website: [www.dahp.wa.gov](http://www.dahp.wa.gov)

August 8, 2011

Mr. Mark G. Eberlein  
FEMA – Region X  
130 – 228<sup>th</sup> Street SW  
Bothell, Washington 98021-9796

RE: Rainbow Falls State Park Project  
FEMA# :1734- DR-WA/ PW 286-2  
Log No: 052411-09-FEMA

Dear Mr. Eberlein:

Thank you for contacting our Department. We have reviewed the professional archaeological survey report you provided for the proposed WSPRC's Rainbow Falls State Park Project, Lewis County, Washington.

We concur with your Determination of No Historic Properties Affected. We concur with the proposed monitoring, please provide the monitoring report when available.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribes and this department notified.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.  
State Archaeologist  
(360) 586-3080  
email: [rob.whitlam@dahp.wa.gov](mailto:rob.whitlam@dahp.wa.gov)





**FEMA**

July 29, 2011

David Burnett, Chair  
Confederated Tribes of the Chehalis  
420 Howanut Road  
Oakville, Washington 98568

Re: Section 106 consultation, Rainbow Falls State Park, FEMA-1734-DR-WA, PW-286-2

Dear Chair Burnett:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has taken steps necessary pursuant to 36 CFR 800.4(b) to identify historic properties or other cultural resources within the Area of Potential Effect (APE) for the following project:

*Undertaking:* Modification of North Entrance to Rainbow Falls State Park  
*Location:* Lewis County, Washington  
Sections 6 and 7 of Township 13 North, Range 4 West, Willamette Meridian  
46.63443 N, -123.23362 W  
*Applicant:* Washington State Parks and Recreation Commission

The purpose of this letter is to continue consultation with the Confederated Tribes of the Chehalis regarding the proposed project to modify the North Entrance of Rainbow Falls State Park. The project is also the subject of an Environmental Assessment (EA) being prepared by FEMA under the National Environmental Policy Act (NEPA). Your office received a Scoping Notice for the project in December 2010 and Richard Bellon notified FEMA that the Chehalis had an interest in the area.

FEMA contracted with Historical Research Associates, Inc. (HRA) to conduct background research and an investigation of the Area of Potential Effects (APE) in May 2011. Before Denise DeJoseph, Historical Research Associates (HRA) archaeologist, conducted the site visit on May 6, 2011, she contacted Richard Bellon to invite him or a member of his staff to attend the visit but he declined to attend.

The HRA study is enclosed with this letter. The results of the field work were negative; however, most of the APE is paved or obscured by heavy vegetation and it is in an area considered to be of high sensitivity for identifying archaeological sites. As a result, FEMA is requiring that a qualified archaeologist be present as monitor during ground disturbing activities. Please let us know if you have any concerns with our findings.

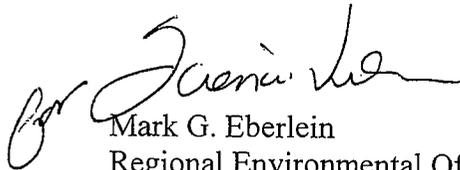
Chair Burnett  
July 29, 2011  
Page 2

FEMA will include the following as a condition of funding: In the event historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of this project, the project shall be halted and all reasonable measures taken to avoid or minimize harm to the property until such time as FEMA, in consultation with the State Historic Preservation Office (SHPO), determines appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act (NHPA).

In addition to consulting with your Tribe, FEMA is consulting with the Cowlitz and Yakama Tribes, as well as the Washington Department of Archaeology and Historic Preservation.

Thank you for your review of this project. If you have any questions or comments please feel free to contact Susan King of my staff by telephone at (425) 482-3729 or at [susan.king@dhs.gov](mailto:susan.king@dhs.gov), or myself at the above address, by telephone at (425) 487-4735 or by e-mail at [mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov).

Sincerely,



Mark G. Eberlein  
Regional Environmental Officer

Enclosures: Cultural Resources Report

cc: Susan King, FEMA  
Richard Bellon, General Manager, Chehalis Confederated Tribes

SK:bb



**FEMA**

July 29, 2011

Harry Smiskin, Chair  
Yakama Nation  
PO Box 151  
Toppenish, Washington 98948

Re: Section 106 consultation, Rainbow Falls State Park, FEMA-1734-DR-WA, PW-286-2

Dear Chair Smiskin:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has taken steps necessary pursuant to 36 CFR 800.4(b) to identify historic properties or other cultural resources within the Area of Potential Effect (APE) for the following project:

*Undertaking:* Modification of North Entrance to Rainbow Falls State Park  
*Location:* Lewis County, Washington  
Sections 6 and 7 of Township 13 North, Range 4 West, Willamette Meridian  
46.63443 N, -123.23362 W  
*Applicant:* Washington State Parks and Recreation Commission (State Parks)

The purpose of this letter is to continue consultation with the Yakama Nation regarding the proposed project to modify the North Entrance to Rainbow Falls State Park. The project is also the subject of a draft Environmental Assessment (EA) that FEMA is preparing under the National Environmental Policy Act. The Yakama Nation will be provided a copy of the draft EA for review and comment.

FEMA contracted with Historical Research Associates, Inc. (HRA) to conduct background research and an investigation of the Area of Potential Effects (APE) in May 2011. Denise DeJoseph of HRA invited Mr. Meninick to a site visit on May 6 but he declined to attend.

The HRA cultural resources study is enclosed with this letter. The results of the field work were negative; however, most of the APE is paved or obscured by heavy vegetation and it is in an area considered to be of high sensitivity for identifying archaeological sites. As a result, FEMA is requiring that a qualified archaeologist be present as monitor during ground-disturbing activities. Please let us know if you have any concerns with our findings.

FEMA will include the following as a condition of funding: In the event historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of this project, the project shall be halted and all reasonable measures taken to avoid

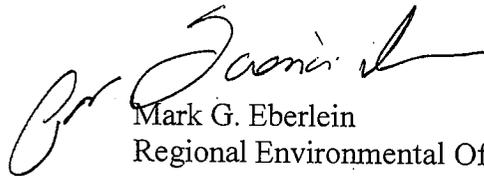
Chair Smiskin  
July 29, 2011  
Page 2

or minimize harm to the property until such time as FEMA, in consultation with the State Historic Preservation Office (SHPO), determines appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act (NHPA).

In addition to consulting with your office, FEMA is soliciting input from the Cowlitz and Chehalis Tribes and from the Washington Department of Archaeology and Historic Preservation.

Thank you for your review of this project. If you have any questions or comments please feel free to contact Susan King of my staff by telephone at (425) 482-3729 or at [susan.king@dhs.gov](mailto:susan.king@dhs.gov), or myself at the above address, by telephone at (425) 487-4735 or by e-mail at [mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Mark G. Eberlein", written over a printed name and title.

Mark G. Eberlein  
Regional Environmental Officer

Enclosure: Cultural Resources Report

cc: Susan King, FEMA  
Johnson Meninick, Cultural Resources, Yakama Nation

SK:bb



**FEMA**

July 29, 2011

Bill Iyall, Chair  
Cowlitz Indian Tribe  
P.O. Box 2547  
Longview, Washington 98632-8594

Re: Section 106 consultation, Rainbow Falls State Park, FEMA-1734-DR-WA, PW-286-2

Dear Chair Iyall:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has taken steps necessary pursuant to 36 CFR 800.4(b) to identify historic properties or other cultural resources within the Area of Potential Effect (APE) for the following project:

*Undertaking:* Modification of North Entrance to Rainbow Falls State Park  
*Location:* Lewis County, Washington  
Sections 6 and 7 of Township 13 North, Range 4 West, Willamette Meridian  
46.63443 N, -123.23362 W  
*Applicant:* Washington State Parks and Recreation Commission (State Parks)

The purpose of this letter is to continue consultation with the Cowlitz Tribe regarding the proposed project to modify the North Entrance of Rainbow Falls State Park. This project is also the subject of a draft Environmental Assessment (EA) being prepared by FEMA under the National Environmental Policy Act (NEPA). We provided the Tribe with a NEPA Scoping Notice for the project, and had a request from Dave Burlingame of your staff on December 28, 2011, to review the draft EA before it goes out for public comment. Susan King of my staff indicated that we do so, and you will receive a copy under separate cover soon.

We also received a request February 2, 2011, from James Gordon of your staff for information regarding the dimensions of ground disturbance for the restrooms and vault toilets being installed at the park. We have included those details in an attachment to this letter.

FEMA contracted with Historical Research Associates (HRA) to conduct an archaeological study of the proposed project area. Ms. King called Mr. Burlingame on March 31, 2011, letting him know about a site visit. HRA archaeologist Denise DeJoseph followed up with Ed Arthur of your staff to invite him to the May 6 site visit but he did not attend.

The HRA report on this project is enclosed with this letter. The results of the field work were negative; however, most of the APE is paved or obscured by heavy vegetation and it is in an area considered to be of high sensitivity for identifying archaeological sites. As a result, FEMA is requiring that a qualified archaeologist be present to monitor during ground disturbing activities. Please let us know if you have any concerns with our findings.

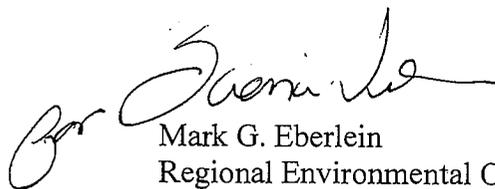
Chair Iyall  
July 29, 2011  
Page 2

FEMA will include the following as a condition of funding: In the event historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of this project, the project shall be halted and all reasonable measures taken to avoid or minimize harm to the property until such time as FEMA, in consultation with the State Historic Preservation Office (SHPO), determines appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act (NHPA).

In addition to consulting with your office, FEMA is consulting with the Chehalis and Yakama Tribes, and with the Washington Department of Archaeology and Historic Preservation.

Thank you for your review of this project. If you have any questions or comments please feel free to contact Susan King of my staff by telephone at (425) 482-3729 or at [susan.king@dhs.gov](mailto:susan.king@dhs.gov), or myself at the above address, by telephone at (425) 487-4735 or by e-mail at [mark.eberlein@dhs.gov](mailto:mark.eberlein@dhs.gov).

Sincerely,



Mark G. Eberlein  
Regional Environmental Officer

Enclosures: APE Map  
Attachment: Ground Disturbance Information

cc: Susan King, FEMA  
Dave Burlingame, Cultural Resources, Cowlitz Indian Tribe

SK:bb

**Information regarding Construction of the  
Welcome Center, Restroom, and Septic System**

The proposed project includes the construction of a complete outer structure for a new 20x40 foot welcome center which will be located within an island in the center of the improved northern entrance to the park, between the incoming and outgoing traffic lanes. The welcome center will be a single-story building with a manager's office, shared office space, and restrooms with one flush toilet and one sink. With regards to the welcome center and restrooms, the FEMA funding obtained for the project will only fund construction of the welcome center outer structure and septic system for the restrooms. State Parks will finish the interior of the welcome center, including the restrooms using other funding sources.

The septic system for the welcome center restrooms will consist of a new 1,500 gallon, 2-compartment septic pump tank, pump equipment, and sewer pipelines to connect it to the existing park sewer system.

- The depth of ground disturbance associated with construction of the welcome center outer structure will be to approximately 44-feet long by 23-feet wide by 2-feet deep and will be within existing fill area of the existing entrance road.
- The 1,500 gallon septic tank will 12'7" Long x 5'5" Wide x 7'4" High in dimension, and will require excavation to approx. 20-feet long by 10-feet wide by 10-feet deep, and will be in native soils adjacent to the existing fill areas of the existing entrance road.

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**From:** Kathy Jacobson [mailto:kjacobson@esd113.org]  
**Sent:** Tuesday, December 13, 2011 10:07 AM  
**To:** mark.eberlein@dhs.gov  
**Cc:** King, Susan  
**Subject:** Draft Environmental Assessment (EA) for Rainbow Falls State Park Entrance Project

Hello,

Thanks very much for the opportunity to review the draft EA for the Rainbow Falls State Park Entrance Project.

The draft EA appears to be very thorough, and as the coordinator of the Chehalis Basin Education Consortium, I am in support of the Alternative B – Proposed Action.

I do have a question, that I may have missed in the draft EA. What is the plan to connect day use and overnight campers to the Western Hemlock and Oxalis Forests and its trails ?

The Draft EA is a valuable resource, and one that I will share with our local teachers who use Rainbow Falls for special programming, field studies and water quality testing.

Thanks again,

Sincerely,

*Kathy Jacobson*  
Chehalis Basin Education Consortium/Highly Capable Program  
Educational Service District 113  
6005 Tyee Dr SW  
Tumwater, Washington 98512  
[kjacobson@esd113.org](mailto:kjacobson@esd113.org); 360-464-6722; Fax: 360-464-6900  
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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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January 23, 2012

Mr. Mark Eberlein  
U.S. Department of Homeland Security  
FEMA Region X  
130 228<sup>th</sup> Street Southwest  
Bothell, WA 98021

Dear Mr. Eberlein:

Thank you for the opportunity to comment on the draft environmental assessment for the Rainbow Falls State Park Entrance project (FEMA-1734-DR-WA) located in Lewis County. The Department of Ecology (Ecology) reviewed the information provided and has the following comment(s):

**WASTE 2 RESOURCES: Mike Drumright (360) 407-6397**

If greater than 250 cubic yards of inert, demolition, and/or wood waste is used as fill material, a solid waste handling permit is required from the local jurisdictional health department (WAC) 173-350-990.

All grading and filling of land must utilize only clean fill, i.e., dirt or gravel. All other materials, including waste concrete and asphalt, are considered to be solid waste and permit approval must be obtained through the local jurisdictional health department prior to filling (WAC 173-350-990).

**Replanting:** We recommend planting as many drought-resistant native species as possible.

**WATER RESOURCES: Vicki Cline (360) 407-0278**

Washington State Department of Parks & Recreation has filed an application for change (No. CG2-GWC7474) on October 18, 2011, to add a point of withdrawal to the existing Water Right. Existing Groundwater Right Certificate No. 7474 authorizes withdrawal of 30 gallons per minute and 4 acre-feet per year for the purpose of domestic supply for Rainbow Falls State Park.

All water wells that may be drilled must be a minimum of 100 feet from any known, suspected, or potential source of contamination. Wells shall not be located within 1,000 feet of a solid waste landfill. WAC 173-160-171(1) The proposed water well shall be located where it is not subject to ponding and is not in the floodway, except as provided in Chapter 86.16 RCW. (2) It shall be protected from a one hundred year flood and from any surface or subsurface drainage capable of impairing the quality of the ground water supply.

January 23, 2012

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The Growth Management Act (Section 63) requires an applicant to submit evidence of an adequate water supply before a building permit can be issued for any building requiring potable water.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology  
Southwest Regional Office

(SM:11-5883)

cc: Vicki Cline, WR  
Mike Drumright, W2R