Draft Programmatic Environmental Assessment

Hoh Indian Tribe Relocation Development

LPDM-PJ-10-WAIT001-2022

LPDM-PJ-10-WAIT001-2023

Hoh Indian Tribe, Jefferson County, Washington

November 2023

FEMA

Federal Emergency Management Agency
Region 10
Department of Homeland Security
130 – 228th Street SW
Bothell, WA 98021

Table of Contents

Appendices

Figures

Tables

Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ACM	asbestos-containing material
APE	Area of Potential Effect
BMP	best management practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibels
DBH	diameter at breast height
DHS	U.S. Department of Homeland Security
EA	environmental assessment
EFH	Essential Fish Habitat
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FFRMS	Federal Flood Risk Management Standard
FONSI	Finding of No Significant Impact
MAMU	marbled murrelet
MBTA	Migratory Bird Treaty Act
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NATA	National Scale Air Toxics Assessment
NEPA	National Environmental Policy Act

NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRCS	U.S. Natural Resources Conservation Service
NSO	Northern Spotted Owl
NWI	National Wetlands Inventory
PDM	Pre-Disaster Mitigation
PEA	Programmatic Environmental Assessment
PHS	Priority Habitat and Species
PM	Particulate Matter
THPO	Tribal Historic Preservation Officer
Tribe	Hoh Indian Tribe
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology
YBC	Yellow-billed Cuckoo

SECTION 1. Introduction

The Hoh Indian Tribe (Tribe) proposes to develop the south portion of the Hoh Highlands parcel (South Hoh Highlands) as part of its Relocation Development Project to provide housing and government services outside of the 100- and 500-year flood and tsunami inundation zones on tribal lands (**Figure 1-1** and **Figure 1-2**). The Proposed Action would be comprised of multiple stages supporting the Tribe's long-term vision for resilience to climate change effects. Development would occur incrementally as plans are finalized and funding is identified for housing, administrative services, community, emergency, and recreation facilities along with associated infrastructure in the South Hoh Highlands site. After completion of construction in the South Hoh Highlands, the existing Hoh Village on the Reservation would be abandoned and decommissioned. The overall development plan and broad parameters of each stage are described in Section 3.

The Tribe has applied to the Federal Emergency Management Agency (FEMA) for two grants under the Pre-Disaster Mitigation (PDM) Grant Program; LPDM-PJ-10-WAIT001-2022 to develop road and utility infrastructure and LPDM-PJ-10-WAIT001-2023 to develop a tsunami evacuation and emergency operations center, henceforth referred to as "the center." The PDM Program is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The PDM funds were made available through Congressionally directed spending in the 2022 Department of Homeland Security Appropriations Act (Public Law No. 117-103) and the 2023 Appropriations Act (Public Law No. 117-328), respectively. Much of the information used to prepare this document was derived from the two grant applications and supporting material.

The Hoh, Quileute, and Quinault signed the Quinault River Treaty on July 1, 1855. With this Treaty, the Native Americans ceded lands to the U.S. government in turn for tracts of land reserved for their exclusive use. On September 11, 1893, by Presidential Executive Order (EO), the Hoh Indian Reservation, which amounted to less than one square mile, was established at the mouth of the Hoh River. The Hoh Tribe was officially recognized by the federal government in 1960. Today, the Hoh Reservation consists of 443 acres with approximately one mile of beach front. The current village on the Reservation (Hoh Village) is comprised of approximately 40 structures including Tribal government facilities and housing and is home to an estimated 125 residents. There are approximately 20 people employed in various enterprises administered by the Tribe. Tribal members' livelihood is primarily based on fishing; although, some make traditional decorative baskets, carved canoes, and other decorative carvings (Hoh Indian Tribe 2022).

Figure 1-1. Project Vicinity

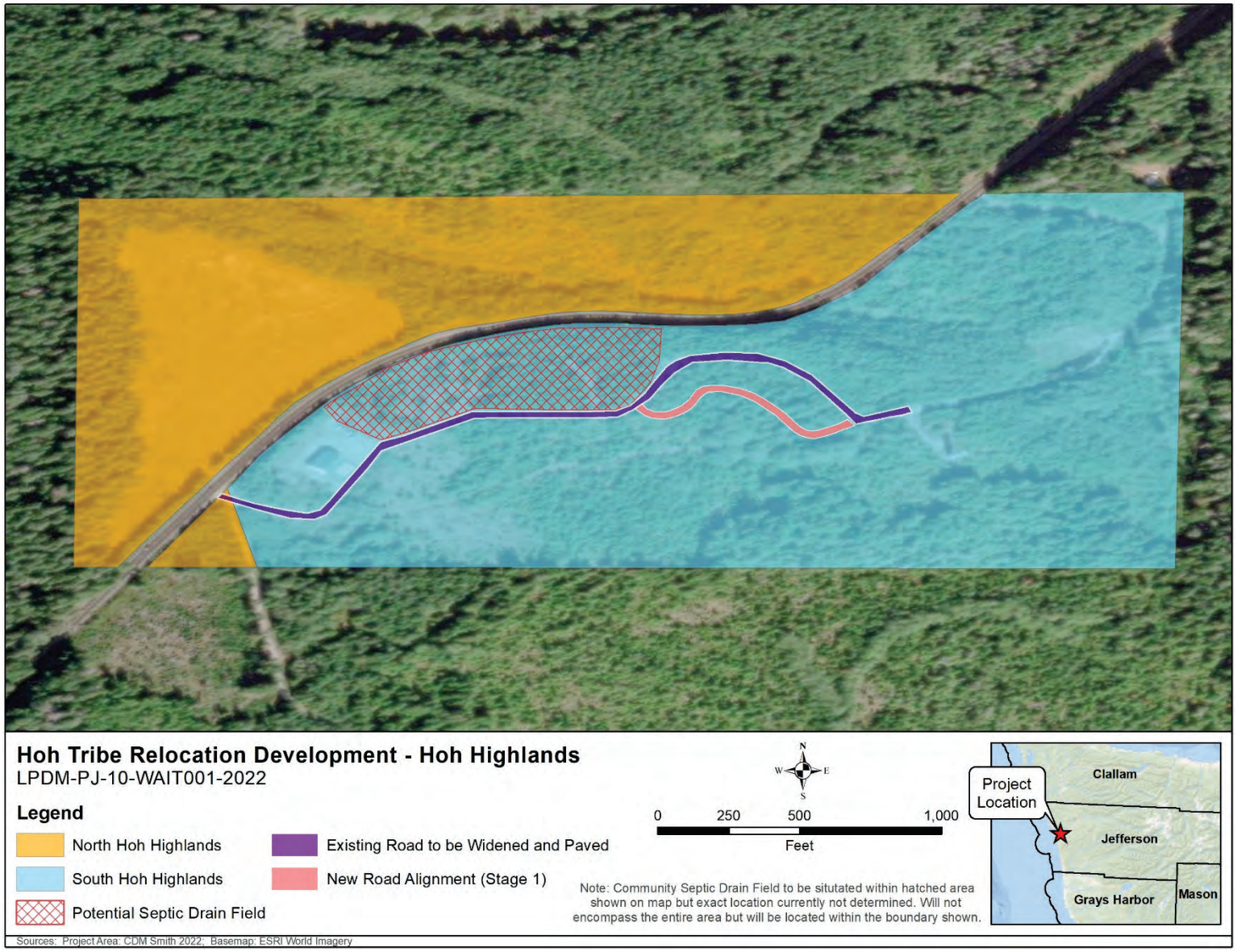

Figure 1-2. Hoh Highlands

In implementing the long-term vision for a transition to the South Hoh Highlands, the Tribe would stage the proposed development over multiple years, potentially with different sources of federal and nonfederal funding. Therefore, this Programmatic Environmental Assessment (PEA) addresses the anticipated impacts of the proposed and reasonably foreseeable potential development in the South Hoh Highlands and the decommissioning of the Hoh Village on the Reservation. Each stage would be designed and constructed as funding opportunities are identified and each stage has independent utility from the others. Stages may take place concurrently or separately and may not be implemented in the order presented in this PEA. In addition, this PEA covers all areas of potential future development within the project area including areas for future housing that have not yet reached a conceptual level of design and evaluates the cumulative impacts of all stages including the decommissioning and/or removal of structures in the existing Hoh Village on the Reservation.

1.1. Project Area

There are two separate project areas (South Hoh Highlands and Hoh Village on the Reservation) where project activities may occur and are hence forth collectively referred to as the overall project area. The Hoh Indian Reservation has a land area of 443 acres on the Pacific coast in Jefferson County, Washington. Between 2008 and 2010, the Hoh Indian Tribe brought more than 700 acres of new land into Tribal Trust status including the approximately 80-acre parcel that is referred to as the Hoh Highlands (**Figure 1-1**). The Hoh Highlands is bisected by Highway 101 and is approximately 1.7 miles southeast of the current Hoh Village on the Reservation and approximately 25 miles south of Forks, Washington, along Highway 101. The property lies in Section 28 of Township 26 North, Range 13 West, Willamette Meridian. The South Hoh Highlands site is approximately 45 acres and lies south of Highway 101 (**Figure 1-2**). The Hoh Highlands was clear-cut in 2006 and is vegetated with third-growth trees, shrubs, and other vegetation. Trees are regrowing in some areas and tree height in the forested areas ranges from 25 to 35 feet. The Hoh Highlands parcel is surrounded on all sides by forested lands. A portion of the Olympic National Park abuts the western border of the Hoh Highlands. The eastern border abuts commercial timberland and parcels to the north and south are owned by the Hoh Tribe and several other private property owners.

The South Hoh Highlands currently include a gravel access road, a water tower, an emergency services building, and electrical service, which were constructed in approximately 2016. A cell phone booster tower was installed at the site, adjacent to the emergency services building.

1.2. Process for the Use of This Programmatic Environmental Assessment

FEMA prepared this PEA in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and FEMA guidance for implementing NEPA (U.S. Department of Homeland Security [DHS] Instruction 023-01-001 and FEMA Instruction 108-01-1). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of the PEA is to analyze the potential environmental impacts of the Proposed Action. FEMA will use the findings in this PEA to determine whether to prepare an environmental

impact statement or to issue a finding of no significant impact (FONSI) for the 2022 and 2023 PDM grant applications for funding.

The CEQ regulations at 40 CFR 1500.4(k) and 1501.11 encourage the development of program-level NEPA environmental documents and tiering from those programmatic documents to eliminate repetitive discussions and allow for site-specific reviews that are focused on a narrower scope specific to the subsequent action. A PEA is used to address a group of projects that are similar in scope, scale, magnitude, and the nature of the impact. Consistent with the 2023 Fiscal Responsibility Act's revisions to NEPA, if actions that may fall within the scope of this PEA are considered beyond the five-year anniversary of the final PEA, the PEA's analysis and underlying assumptions must be re-evaluated to ensure they are still valid for the actions under review (Public Law 118-5).

This PEA includes six specific proposals (stages) and the decommissioning of the existing Hoh Village on the Reservation; any additional activities that may be covered by this PEA are limited to development activities proposed by the Hoh Indian Tribe within the project area. Any federal agency that may be involved with funding or permitting any of the development stages in the Hoh Highlands as described in this PEA may adopt this PEA or tier their NEPA compliance from this PEA. For an activity or development stage to qualify under this PEA, the scope of the activity and the nature of impacts must be evaluated in the PEA and a finding that the project or stage conforms to the PEA must be documented using the compliance checklist provided in **Appendix A**. Additional project-specific analyses may be required if the context and intensity of a stage, or the anticipated impacts, substantively differs from those described in this PEA.

In the development of this PEA, FEMA has reviewed the potential for effects on listed species and cultural resources and has consulted with the U.S. Fish and Wildlife Service (USFWS) and the Tribal Historic Preservation Officer (THPO), respectively. Subsequent development stages and activities using this PEA must confirm that there are no significant new circumstances or information relevant to environmental concerns related to the proposed activities or their impacts. For example, if a new species is listed under the Endangered Species Act (ESA) that has the potential to occur in the vicinity, then the consultation with USFWS may need to be reinitiated, and the PEA would be updated or a tiered EA developed.

Stages other than Stages 1 and 2, as described in the PEA, have not yet progressed past a very conceptual design level. There currently is no specific relocation/decommissioning plan for the Hoh Village on the Reservation. The checklist in **Appendix A** provides a structured process to document that subsequent stages, when designed, conform to the projects as described and evaluated in this PEA. A completed checklist may serve as an agency's internal documentation of NEPA compliance and use of this PEA.

SECTION 2. Purpose and Need

The objectives of FEMA's PDM grant program are to provide technical and financial assistance to tribal, state, and local governments to assist in the implementation of pre-disaster hazard mitigation measures that are cost effective and designed to reduce injuries, loss of life, and damage and destruction of property, including damage to critical services and facilities resulting from natural disasters. **The purpose of the proposed project is to reduce the impact of severe storms, floods, and tsunamis on Hoh Indian Reservation residents.**

Flood and tsunami events currently endanger individuals in the Hoh Village on the Reservation, damage property, and impact utilities and services. **The project is needed to provide tribal services and housing on Tribal lands that are safe from flood- and tsunami-related risks.** The Tribe has been impacted by 26 disaster events in recent decades, the majority of which were caused by severe weather or flooding. The Hoh Village on the Reservation and the western portions of the Tribal Trust lands lie at low elevations adjacent to the Hoh River and the Pacific Ocean and the area may flood up to five (or more) times annually, during all seasons (Hoh Indian Tribe 2022). Existing housing and tribal facilities in the village range in elevation from 20 to 55 feet above mean sea level (msl). At this elevation, housing, tribal government facilities, major thoroughfares, and all structures that provide services are within the floodplain of the Hoh River (**Figure 2-1**) and the Pacific Ocean Tsunami Zone (**Figure 2-2**).

Persistent flooding has destroyed or severely damaged many buildings, the wastewater treatment system, and other utility structures, causing critical environmental and safety hazards in the Reservation. Roadways are regularly blocked by floodwaters, causing people to be unable to engage in normal activities, and causing isolation of the area. The more significant events have caused flooding of residential structures, as well as the contamination of wells, which are the only source of water for the Reservation. Such an incident occurred in 2012, requiring the construction of a new, totally sealed well (Hoh Indian Tribe 2022).

Due to climate change, heavy rainfall events in the Pacific Northwest are projected to become more severe. Globally, sea levels will continue to rise, and local sea levels are projected to rise as well. More severe rainfall events and rising sea levels will greatly increase the flood hazard in the village.

Climate change refers to changes in the Earth’s climate caused by a general warming of the atmosphere. Its primary cause is emissions of greenhouse gases, including carbon dioxide and methane. Climate change affects species distribution, temperature fluctuations, and weather patterns. Estimates indicate that average annual temperatures in the Pacific Northwest region will increase by 2.0 degrees Fahrenheit by the end of the 2020s, 3.2 degrees Fahrenheit by the 2040s, and 5.3 degrees Fahrenheit by the 2080s. These warmer temperatures would increase evaporation as the atmosphere warms; thus, increasing humidity, average rainfall, and the frequency of heavy rainstorms that could increase flooding along the Hoh River (EPA 2016b). Warmer temperatures would also decrease mountain snowpack, resulting in higher winter and lower summer stream flows (USFWS 2011).

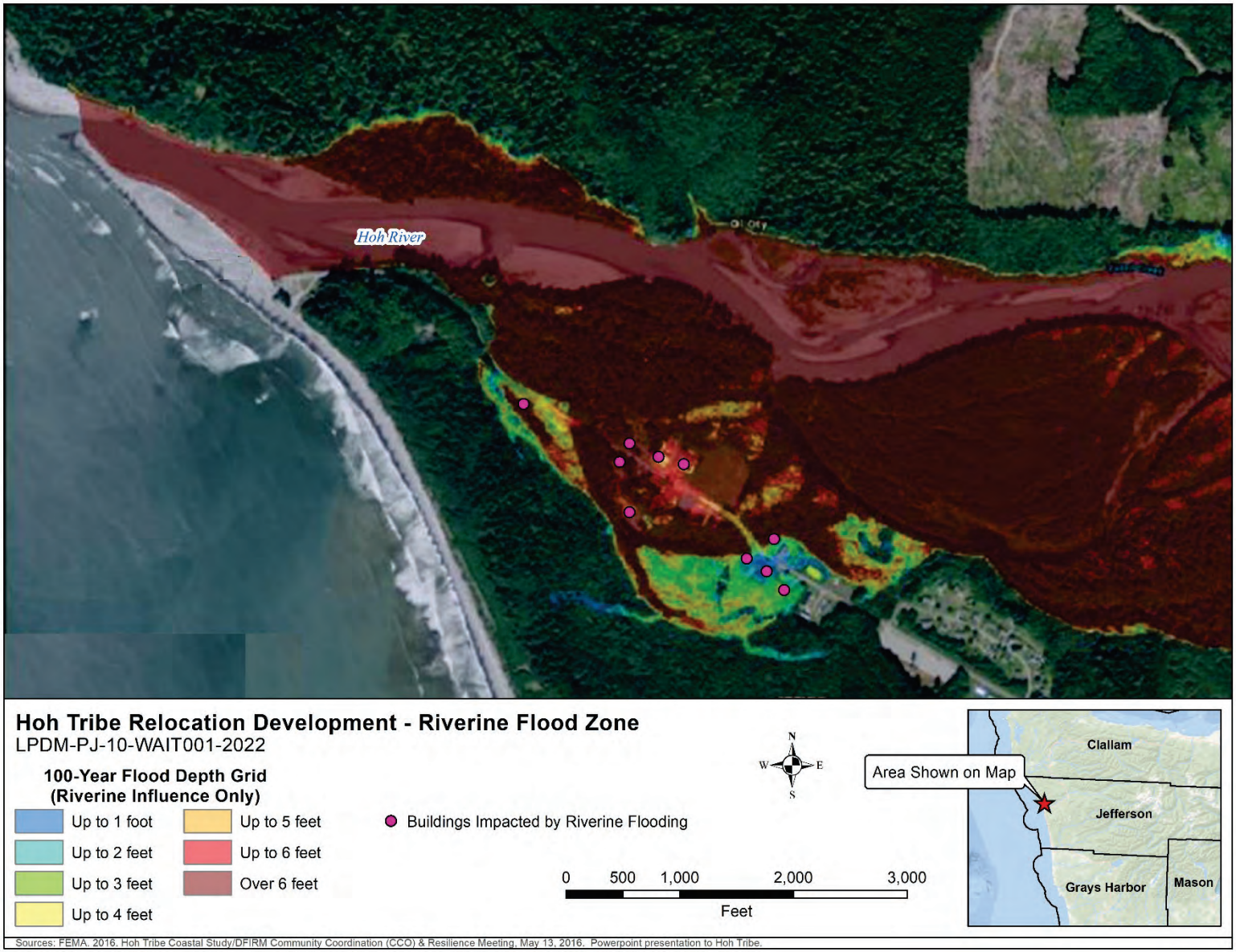

Figure 2-1. Riverine Flood Zone

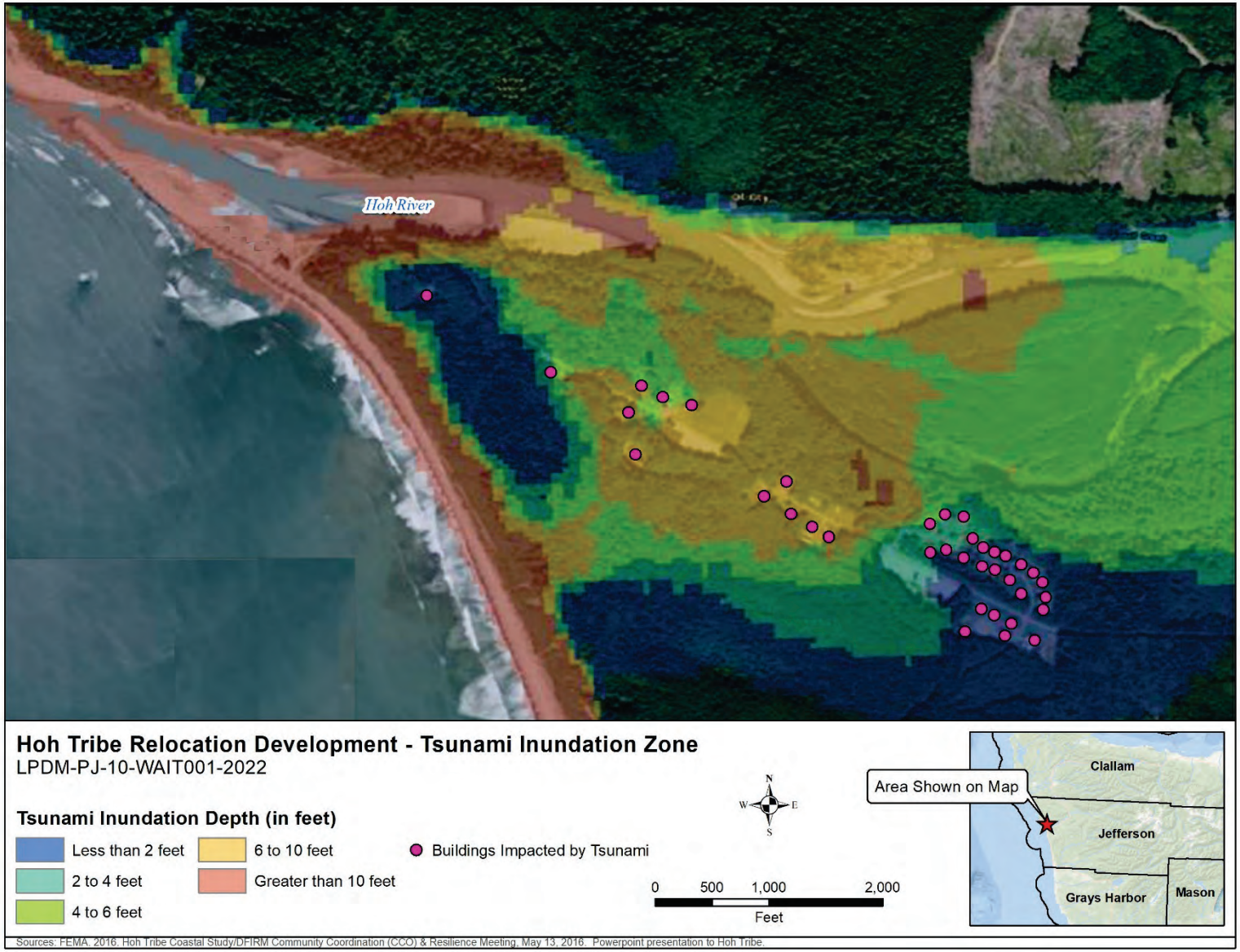

Figure 2-2. Tsunami Inundation Zone

The Reservation is also extremely vulnerable to seismically induced tsunami waves that would inundate the Hoh Village on the Reservation. The Reservation is directly east of and approximately 50 miles from the Cascadia Subduction Zone. This zone is capable of producing earthquakes of magnitude 9.0 or greater, with resulting ground subsidence of up to 6.6 feet and tsunami waves of 32.8 feet along the Washington coastline (Dolcimascolo et al. 2022). The Hoh River meets the Pacific Ocean at a relatively narrow and steeply sided valley entrance that would funnel tsunami waters into the river valley farther upstream and at much greater depths than along the open coastline. As shown in **Figure 2-2**, the tsunami wave could travel inland significant distances from the ocean and would inundate all structures in the village. The magnitude of tsunami inundation at the Hoh Village on the Reservation varies with the magnitude of the modeled earthquake and assumptions about the location of the quake and its depth and distance from the coastline. However, some models show that the lower Hoh Tribal Center could be inundated by 43 feet of water and that residences at Chalaat Loop in the Hoh Village on the Reservation could get up to 6 feet of water (Dolcimascolo et al. 2022). All 53 structures in the Hoh Village on the Reservation would be at risk of inundation during a tsunami (Hoh Indian Tribe 2022).

SECTION 3. Alternatives

This section describes the No Action alternative, the Proposed Action, and alternatives that were considered but dismissed.

3.1. No Action Alternative

The No Action alternative is included to describe potential future conditions if no action is taken to establish critical infrastructure and residential development in the South Hoh Highlands. Under this alternative, no new infrastructure or housing would be established, which would slow down or halt the ongoing effort to move Tribal housing and services to an area outside of the hazard zones, and Tribal members and property would still be at risk from flooding and tsunamis. Under this alternative, there would be no federal funding for the two stages currently proposed to be funded by PDM grants and construction of stages one through six would not occur. There is currently an emergency services structure at the South Hoh Highlands, and while it could provide some shelter in the event of an emergency, it is not yet fully functional. Under the No Action alternative, the Tribe's emergency services facilities would remain vulnerable to flooding and tsunamis. Additionally, under the No Action alternative, Tribal members would continue to face declining quality in housing because of the impacts of repetitive flooding on an aging housing stock and a lack of resources to make improvements. Repetitive flooding and tsunami hazards would continue to adversely affect community facilities and impact governmental operations (existing structures in the Hoh Village on the Reservation are shown in **Figure 2-1** and **Figure 2-2**).

Under the No Action alternative, Tribal members may have to move off the Reservation entirely, which would severely affect their ability to find traditional foods and materials that support cultural practices and livelihoods. Many tribal members rely heavily upon subsistence from Usual and Accustomed Hunting and Fishing areas for survival, and some residents make traditional baskets, canoes for ocean or river use, and other traditional carvings with materials harvested from tribal lands. In addition, dispersal to off-reservation areas would impact community members' ability to participate in cultural events and to maintain cultural ties and connections to each other and to the land.

3.2. Proposed Action

The Proposed Action is comprised of several stages that are components of a larger effort to relocate and decommission the Hoh Village on the Reservation. The Proposed Action would construct infrastructure, housing, administrative services, community and emergency buildings, and recreation facilities, improve roadways, and install support utilities such as water, sewer, power, and communications in an area outside of flood and tsunami hazard zones and decommission the existing Hoh Village on the Reservation. The Proposed Action supports the Tribe's long-term vision for resilience to climate change effects by relocating the Hoh Village on the Reservation to the South Hoh Highlands, which are outside of the 1-percent annual chance flood, the 0.2-percent annual

chance flood, and tsunami inundation zones. **Figure 3-1** shows the conceptual design of the relocated community on the approximately 45-acre South Hoh Highlands site.

The first two stages of the Proposed Action would include constructing utilities and road improvements in a portion of the South Hoh Highlands, preparing 14 homesites for future construction, and building a tsunami evacuation and emergency operations center. In Stage 1, the 14 homesites would be cleared and graded and have utility hookups extended into each site, while the homes would be constructed in Stage 3. Additional infrastructure, roads, residences, and other services and facilities would be designed and constructed in other stages. Stages would be designed and constructed as funding opportunities are identified and each stage has independent utility from the others. The stages may not be implemented in the order presented below.

All stages would include clearing and grubbing of work areas, trenching and excavation to install or decommission underground utilities and backfilling of excavations with appropriate material and compaction. As necessary during Stages 1 through 6, storm drains and cross culverts would be installed along roads in the South Hoh Highlands to manage stormwater runoff and prevent flooding or erosion. Material for pipe underlayment and roadbeds would be obtained from the existing gravel quarry in the northwest portion of the South Hoh Highlands. Grading of building pads may be phased separately from the construction of a structure. Service connections would be stubbed out to each of the residential or community building lots for water, sewer, and electrical.

All structures would be built commensurate with the size and scale of buildings in the current village. The Tribe has adopted and complies with all Uniform Building codes, including electrical and plumbing. The Tribe would complete code compliance inspections for all required elements. All structures would be built with fire resistant materials (e.g., sprinkler systems, metal siding or hardy board, metal roofs, covered eves).

Stage 1 – Initial Infrastructure (LPDM-PJ-10-WAIT001-2022)

Stage 1 would include the following elements that are proposed to be funded by PDM grant LPDM-PJ-10-WAIT001-2022.

- **Electrical**: Currently, there is a single 200-amp line along Highway 101 to the South Hoh Highlands parcel from the north. As part of the Proposed Action, Clallam County Public Utility District would run a three-phase power line down the existing poles 8 miles along Highway 101 to the Hoh Highlands (**Figure 3-2**) site to provide an adequate power source for the anticipated loads and uses. Power from the Clallam County Public Utility District pole on Highway 101 goes into an existing underground conduit along the existing main gravel road through the South Hoh Highlands site. The upgraded three-phase line would be run through the existing conduit and would replace the existing line in the South Hoh Highlands site. Power for future streetlights would be roughed in along the roads and utility stubs would be provided to 14 housing lots proposed for development in Stage 3.

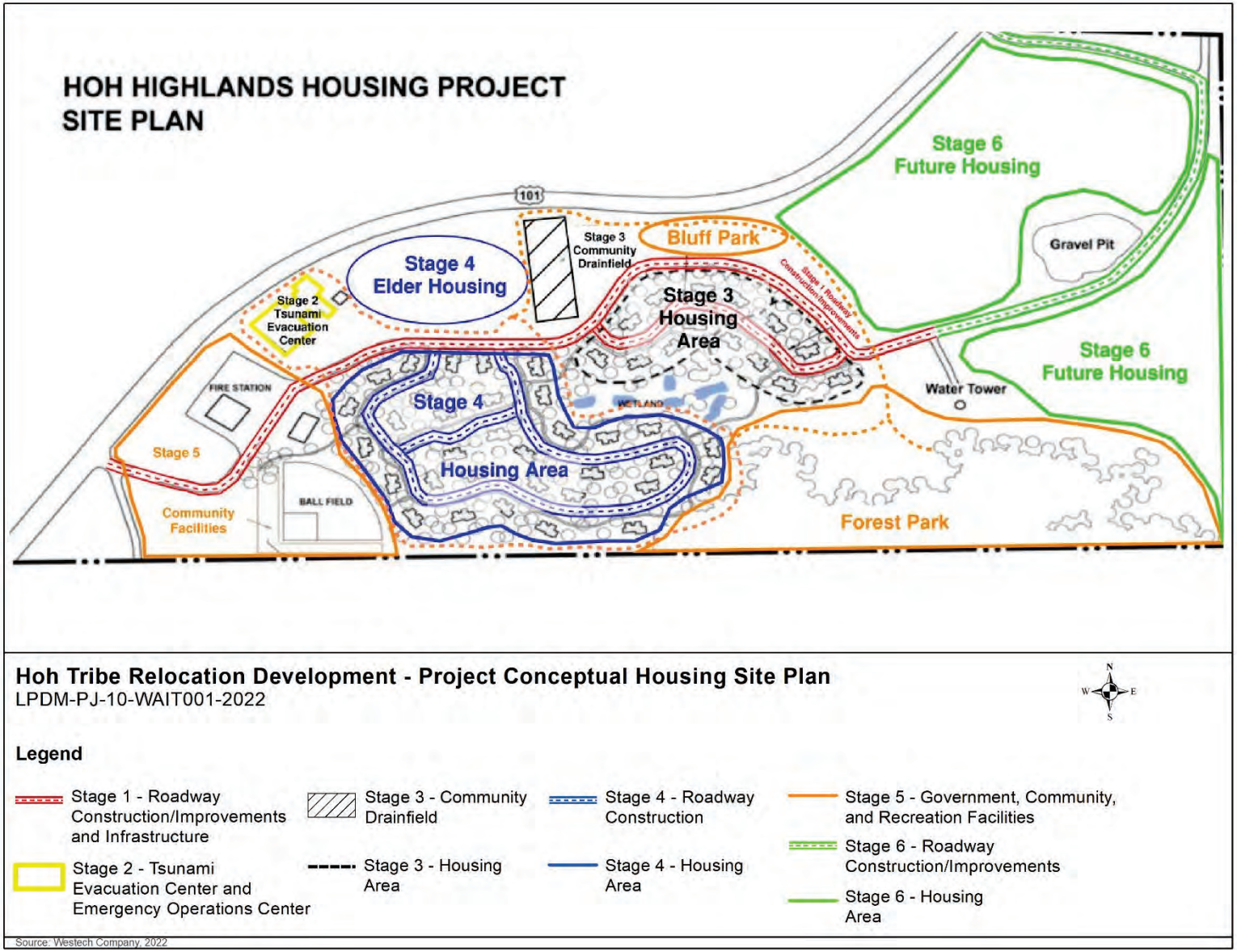

Figure 3-1. South Hoh Highlands Housing Project Proposed Site Plan

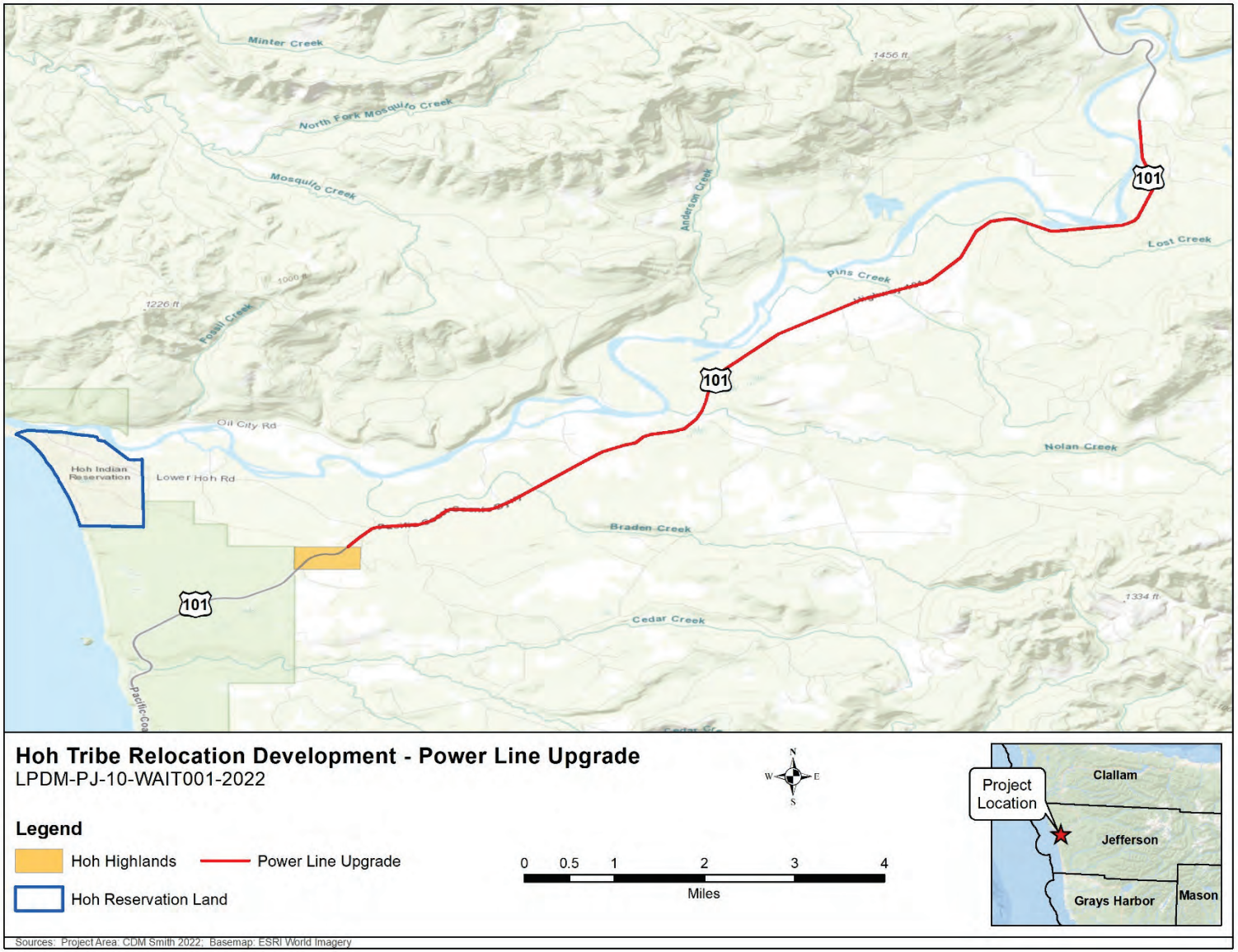

Figure 3-2. Hoh Highlands Proposed Power Line Upgrade

- Road Improvements: Approximately 2,000 feet of the existing gravel road at the site would be widened to a two-lane roadway and paved from the southern terminus at Highway 101 to the turn off to the water tower. An approximately 630-foot-long paved secondary loop road would be constructed interior to the site to provide access to 14 proposed housing lots. The roads would have two 11-foot travel lanes. There would be sidewalk improvements on one side of the road. All roads would be designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) standards for local roads and streets (AASHTO 2018).

- Water: There is an existing water tower at the highest point of the South Hoh Highlands parcel and an existing water main along the existing gravel road. The water tower was installed when the water wells in the Hoh Village on the Reservation were relocated in 2012. The Proposed Action would include service stubs to 14 residential lots, necessary upgrades to provide fire flows, and installation of fire hydrants along the roads that would be constructed in Stage 1. Water would be piped to the housing areas from the existing water tank, which currently draws from wells along Lower Hoh Road. New wells may be considered as the development nears completion; however, the existing wells are expected to have an adequate water supply for the planned housing units, with necessary storage at the existing water tank.

- Sewer/Sanitation: Stage 1 would include the installation of sewer lines in the road alignments to convey sewage from each lot to a centralized drain field area. Small pump stations would be installed under the road alignments to pump sewage from each lot to the community drain field area. Each lot would have a small septic tank that would be installed when the structures are constructed. The anticipated capacity of the community drain field after Stage 1 is 300 to 500 gallons per day per structure. It is anticipated that after full buildout, the system capacity would be in the range of 25,000 to 35,000 gallons per day for the entire community. The Tribe has adopted the most recent edition of the International Building Code (International Code Council 2018), and all sewer and sanitation infrastructure would meet these standards.

- Communications: There is an existing Star Touch repeater on-site to provide internet services to Tribal housing and facilities. This service would not require any changes under the Proposed Action.

Stage 2 – Tsunami Evacuation Center and Emergency Operations Center (LPDM-PJ-10-WAIT001-2023)

Under Stage 2, a tsunami evacuation and emergency operations center would be constructed with funds from PDM grant LPDM-PJ-10-WAIT001-2023. The proposed 2-story, 10,000 square foot center, would be constructed east of the existing fire station on the South Hoh Highlands at latitude/longitude 47.727646, -124.384728. The center would be expected to provide an emergency operations center/conference space, community kitchen, multi-purpose rooms (meeting, triage, storage), evacuation center (refugee shelter, gym, and community gathering space), administration offices, restrooms (including showers), outdoor emergency pet shelter, and an outdoor concrete slab for barbeques with adjacent picnic tables for community gatherings.

Stage 3 – Initial Housing Development

Components of Stage 3 would include:

- 3a. Housing: Construction of 14 single-family or duplex housing units. Housing units would be single-story, range from 1,000 to 2,500 square feet, and include carports. Housing constructed during this stage would be considered an expansion of the existing Hoh Village housing stock and would not result in the relocation of existing Hoh Village housing units to the South Hoh Highland parcel and residents in the village would continue to be vulnerable to flood and tsunami hazards. Houses would be constructed on the building pads created in Stage 1 and connected to the utilities installed in Stage 1. Houses would be oriented toward the new access loop road constructed in Stage 1.

- 3b. Community Drain Field: A community drain field would be developed to manage sewage from the potential development of Stages 3 through 5. The drain field would be connected to the primary sewer mains installed under the main access road during Stage 1. The proposed drain field area soils have been tested and are suitable for use as a drain field.

Stage 4 – Secondary Housing and Infrastructure

Stage 4 would include:

- Additional Housing: Thirty-three single, multi-family, and/or elderly housing units would be constructed including single-story single-family homes, duplexes, and accessible homes ranging from 1,000 to 2,500 square feet with 1 to 5 bedrooms and carports. Residents of Hoh Village would be able to relocate to housing constructed during this stage allowing people to leave the flood and tsunami hazard zones while staying on Tribal lands.

- Additional Infrastructure: Secondary access roads off the primary access road would be constructed and utilities, including water, sewer, and electrical, would be installed under the access road. Utilities would be stubbed out to each building lot and connected as the houses are constructed. Roads would be similar to those described in Stage 1 with streetlights, fire hydrants, stormwater management structures, and a sidewalk on one side.

Stage 5 – Government Services and Facilities

Components of Stage 5 would include:

- 5a. Fire Station Upgrades: The existing emergency services building would be upgraded to a shared First Responder facility that also includes both police and fire services.

- 5b. Medical and Child Welfare Building: Single story building, less than 10,000 square feet, includes administrative functions.

- 5c. Library/Foodbank: Single story, less than 5,000 square feet.

- **5d. Administration Office**: Building would include council chambers, council administrative office, records retention/court and may be 1–2 stories, less than 10,000 square feet, with records or administrative offices on the second story.
- **5e. Education Facility**: Single story, less than 10,000 square feet.
- **5f. Recreational Facilities**: Unpaved recreational trails, bluff, and forest park with benches and other trail amenities.
- **5g. Sports Facilities**: Fenced baseball field, restroom facilities, and bleachers.

Stage 6 – Future Housing

- The eastern portion of the Hoh Highlands is designated for additional potential future housing. This area could potentially accommodate a similar number of housing units as those proposed in Stages 3 and 4. The infrastructure and housing stock is currently envisioned to be similar to that described in Stages 1 through 4 and a roadway would connect the Stage 1 roadway to Highway 101 creating a "loop" through the highlands parcel. Because the eastern portion of the parcel is lower in elevation than the rest of the parcel, sewage would need to be pumped up to the community drain field or a second drain field area would need to be developed to accommodate this future housing.

Decommissioning of Hoh Village on the Reservation

The existing Hoh Village on the Reservation is comprised of approximately 53 structures including 25 single family homes, two duplex units and one triplex unit, administration facilities, and Tribal government facilities, as well as the infrastructure to support these homes and facilities. A list of structures in the existing Hoh Village is shown in **Table 3.1.**

Table 3.1. Existing Structures in the Hoh Village

Structure	Count
Commercial	8
Government/Administration	8
Hazmat (Tribal Owned gas station fuel tank empty)	1
Medical	1
Protective	4
Residential	25
Schools (Daycare, Head Start)	1
Shelters (Gym)	1
Water (Two underground wells; no structure)	3
Wastewater Facilities	1

Source: Hoh Indian Tribe 2022

Tribal government and administration functions would begin to gradually relocate to the Hoh Highlands after the completion of the tsunami evacuation center and emergency operations center constructed during Stage 2. The housing units constructed during Stage 3 would be considered an expansion of the existing tribal housing stock and would not necessarily result in the relocation of existing Hoh Village residents. However, secondary housing units and infrastructure constructed during Stages 4, 5, and 6 would allow all Tribal government and administration functions and all residents of the Hoh Village on the Reservation to relocate to the Hoh Highlands. It is anticipated that all residential housing in the Hoh Village on the Reservation would be dismantled and removed, and residential utilities would either be removed, decommissioned, or abandoned in place. Government facilities would likewise be removed as they are replaced at the Highlands. It is anticipated the debris from structure and infrastructure demolition, removal, and decommissioning work would be disposed of at an appropriately licensed and approved landfill in the area, with some material recycled. Areas where structures are removed would be converted into open space and would either be replanted or would be allowed to naturally revegetate. The Lower Hoh Road would remain open to allow access to the river and ocean. It is assumed that some community structures with the required utilities would remain to provide a place for community activities in close proximity to the water.

Until relocation occurs, the Tribe is restricting development within the existing lower Reservation boundary to only replacement of immediately critical infrastructure (Hoh Indian Tribe 2022).

Project Duration and Timing

Stage 1 would require approximately 18 to 24 months to complete from the start of design. This time frame includes expected delays during the rainy season (November through April). Generally, construction in this area of the Olympic Peninsula is timed to avoid the wettest months and this would apply to construction of all stages.

Stage 2 is estimated to require 36 months to complete from the start of design.

Stages 3, 4, 5, 6, and the decommissioning of the existing Hoh Village on the Reservation have not yet reached a conceptual level of design and do not have an estimated timeline. If project timelines extend more than five years past the date of this PEA, a NEPA re-evaluation review may be warranted to confirm that existing conditions described in this PEA have not substantively changed.

Construction activities for all stages would generally occur between 7 a.m. and 10 p.m. in compliance with state guidelines (WAC 173-60-050).

3.3. Additional Action Alternatives Considered and Dismissed

Alternatives considered included providing protection to the existing village location from flooding and alternative sites for relocation.

The existing Hoh Village on the Reservation is impacted by high tides, winter flooding, and subsequent erosion almost every year. Approximately 30 to 40 years ago, the United States Army Corps of Engineers (USACE) installed a barrier between the village and the river to help reduce flooding, but that effort was ineffective. With increased storm frequency and severity due to climate change and a greater understanding of the potential impact a significant earthquake resulting in a tsunami, the potential for impacts on all of the existing Reservation lands is severe. Flood management methods are unable to provide protection against frequent small-scale floods and would be ineffective against tsunami or larger floods (i.e., 100-year flood levels). Providing structural protection to the existing village location is infeasible. Therefore, this alternative was dismissed from further consideration.

Several alternative sites were considered for relocation of the community. Relocation within the existing Reservation boundary would not mitigate potential impacts from flooding or a tsunami because over 90 percent of the Reservation is in the floodplain and 100 percent of the Reservation is in the tsunami hazard zone. The Tribe evaluated several potential locations within Tribal Trust lands for suitability for relocating Tribal housing and governmental services. Two of these locations were determined to be unsuitable due to low elevations and the fact that the parcels are still subject to flooding and tsunami hazards. These parcels would not meet the purpose and need to move people and services out of the hazard zones. Another location was determined to be unsuitable because it is entirely undeveloped, contains Chalaat Creek and extensive wetland areas, and has no existing access; therefore, it would require significant investment and environmental disturbance to develop. This location was determined to not be feasible or cost effective (Westech Company 2022). The final location evaluated, the northwest portion of the Hoh Highlands, north of Highway 101, was also determined to not be feasible or cost effective because of its proximity to the highway and lack of existing infrastructure.

Sites outside of Tribal Trust lands or the Reservation were not considered because they would not be cost effective and would have unacceptable adverse effects on Tribal culture and community. Therefore, alternative locations were eliminated from further consideration.

SECTION 4. Affected Environment, Potential Impacts, and Mitigation

This section describes the environment potentially affected by the alternatives, evaluates potential environmental impacts, and recommends measures to avoid or reduce those impacts. When possible, quantitative information is provided to establish potential impacts; the significance of potential impacts is based on the criteria listed in **Table 4.1**. The study area generally includes the South Hoh Highlands and existing Village on the Reservation. If the study area for a particular resource category is different from the project area, the differences will be described in the appropriate subsection.

Table 4.1. Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
None/Negligible	The resource area would not be affected, or changes or benefits would be either nondetectable or, if detected, would have effects that would be slight and local.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable.
Moderate	Changes to the resource would be measurable and have adverse or beneficial impacts. Adverse impacts would be within or below applicable regulatory standards. Mitigation measures may reduce any potential adverse impacts.
Major	Changes would be readily measurable and would have substantial consequences on a local or regional level. Adverse impacts that exceed regulatory standards could be significant if mitigation measures do not offset the adverse effects.

4.1. Resources Not Affected and Not Considered Further

The following resources (**Table 4-2**) would not be affected by either the No Action alternative or the Proposed Action because they do not exist within the project area or the alternatives would have no effect on the resource. These resources have been removed from further consideration in this PEA.

Table 4.2. Resources Eliminated from Further Consideration

Resource Topic	Reason for Elimination
Wild and Scenic Rivers Act	According to the National Wild and Scenic River System database, the closest National Wild and Scenic River is the Skagit River, is approximately 114 miles northeast of the proposed project area. Thus, the alternatives would have no effect on wild and scenic rivers.
Sole Source Aquifers	According to the U.S. Environmental Protection Agency's (EPA) sole source aquifer map (EPA 2022a), there are no sole source aquifers designated in Jefferson County; therefore, the alternatives would have no effect on sole source aquifers.
Coastal Resources	In Washington, the Coastal Zone Management program applies to all areas of the 15 coastal counties and extends 3 nautical miles into the Pacific Ocean. However, tribal lands are excluded from the Washington Coastal Zone.

4.2. Geology, Topography, Soils, Farmland Soils

The geology of the proposed project area is characterized by deposits from the Olympic alpine glaciers. This includes moraines and stratified deposits that comprise sand, gravel, silt, and clay (Tabor and Cady 1978). Generally, seismic activity in the project area originates from the Cascadia subduction zone that lies mostly offshore of the Washington coastline. Portions of the existing Hoh Village on the Reservation lie within the tsunami hazard zone and the channel migration zone of the Hoh River and are susceptible to geologic hazards, including earthquakes, tsunamis, liquification, and channel migration.

Earthquake activity within the region is generally moderate because it is mostly comprised of deep, relatively low-magnitude earthquakes; however, the seismic hazard for a larger earthquake is relatively high along the Washington Coast. Tsunamis that could potentially impact the Hoh Reservation are generated locally by earthquakes within the Cascadia subduction zone or they may originate from distant earthquakes on the Pacific Rim (WMDEMD 2013). These massive earthquakes appear to occur approximately every 200 to 1,000 years. The last recorded megaquake (i.e., larger than magnitude 8.0) occurred in January 1700 (Washington Department of Natural Resources no date). The potential for liquification from seismic activity in the South Hoh Highlands is considered to be low because the site is well above the water table and the silt/loam soil proportions and particle size of the soils keep the site well drained.

Channel migration can occur from flood and high-water events caused by earthquakes and tsunamis. Portions of the existing housing on the Hoh Reservation are within the channel migration zone (**Figure 4-1**). The channel migration zone is an area within a floodplain where a stream or river channel could be expected to move. When the river channel moves to a new area, land and structures may be washed away. The South Hoh Highlands is not within either a tsunami or channel migration zone (Washington Department of Ecology [WDOE] 2023, Westech Company 2022).

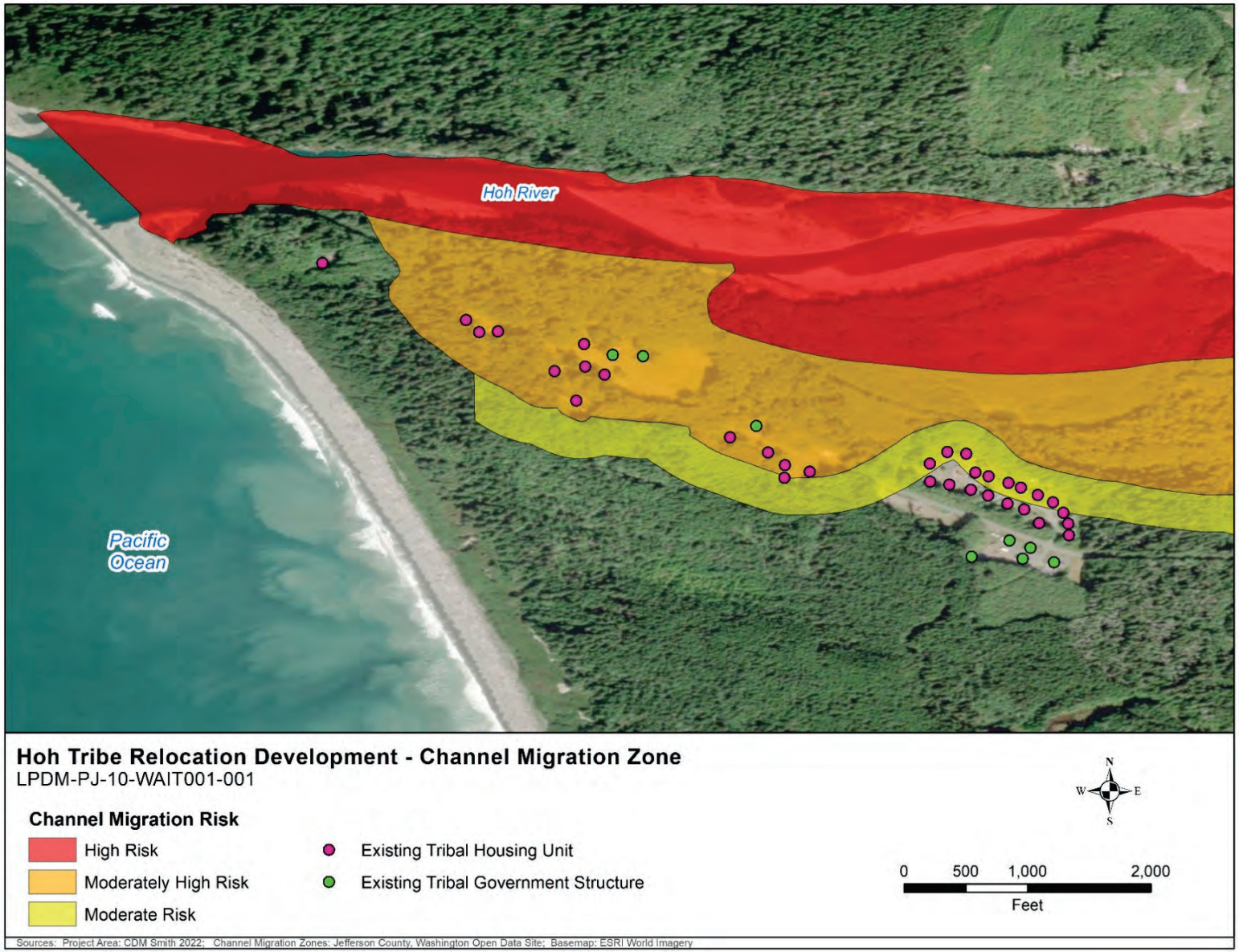

Figure 4-1. Channel Migration Zone

The topography in the South Hoh Highlands is generally flat with a gradual downhill slope to the north, ranging in elevation from 140 feet above msl around the gravel pit to 190 feet msl around the water tower, which is at the highest point.

Soils in the South Hoh Highlands are mapped by the U.S. Natural Resources Conservation Service (NRCS) as 51.1 percent Calawah silt loam with 0 to 8 percent slopes (prime farmland), 21.5 percent Klone gravelly silt loam with 0 to 30 percent slopes (farmland of statewide importance), and 27.4 percent Kone-Hoko association, moderately steep (farmland of statewide importance). On the whole, these soils are moderately well drained (NRCS 2022).

The Farmland Protection Policy Act requires federal agencies to minimize the unnecessary conversion of farmland into nonagricultural uses. According to the NRCS (2022), all soils within the South Hoh Highlands are farmland of statewide importance or prime farmland. The South Hoh Highlands has not previously been used for farming; however, the area has been used for timber production. There are no other agricultural activities in the vicinity and because of the thin soils and the wet climate, the area is not well suited to growing crops or raising livestock.

No Action Alternative

Under the No Action alternative, no construction activity or change in land-use would occur that could disturb geology, topography, or soils, including farmland soils; therefore, there would be no impacts to these resources in the short term. Because tribal facilities, infrastructure, and residents would still be in the existing Hoh Village on the Reservation, risks from seismic events, tsunamis, and Hoh River channel migration would persist. Because infrastructure and housing would not be outside of the tsunami zone, there would be no reduction in seismic event risks under the No Action alternative. As previously experienced, damage and losses to existing tribal facilities and infrastructure and housing from a seismic event or river channel migration would range from minor to major depending on the severity of the event.

Proposed Action

Stages 1 through 6

Adverse impacts on topography and soils from grubbing and minor grading of surface soils to construct housing and infrastructure would be negligible in the short and long term across all stages. The new road segments would generally follow the existing topography, and grading for the housing units and other buildings would be minimal. Excavation for the sewer and septic systems, including the community drain field, would be minimal because they would be designed to work with the existing topography. Farmland soils in the South Hoh Highlands would be permanently converted to other non-farm uses. However, because the area is not generally suitable for agriculture and there is no other agricultural infrastructure in the vicinity, the conversion of approximately 45 acres would be a negligible impact on farmland soils.

There would be no adverse impact on geology from implementation of the Proposed Action because proposed improvements and facility abandonment and decommissioning are surficial. However, all stages of the Proposed Action would have long-term benefits and resiliency related to geology by

mitigating some of the hazards associated with seismic activity at the existing Hoh Reservation. The Proposed Action would create housing and infrastructure so that residents can move from the existing Hoh Village to the South Hoh Highlands, outside of the tsunami and channel migration zones (**Figure 4-1** and **Figure 4-2**). Additionally, South Hoh Highlands has a lower probability of liquification than areas in the Hoh Village (Hoh Indian Tribe 2022).

A Farmland Conversion Impact Rating form was submitted by FEMA to the NRCS on June 21, 2023. NRCS received, completed, and returned the Farmland Conversion Impact Rating form on June 21, 2023.

Decommissioning of the Hoh Village on the Reservation

The decommissioning of the Hoh Village on the Reservation would have no effects on topography, soils, or farmland soils and there would be no short-term effects on geology. Demolition activities would take place in previously disturbed areas and impacts of structure removal and minor grading to smooth sites would be negligible. In the long-term, the Tribe would no longer reside within the tsunami and channel migration zones. This would mitigate some of the hazards associated with seismic activity on the Reservation and result in long-term benefits and resiliency related to geology.

4.3. Visual Quality and Aesthetics

Because the proposed construction activities include the removal of vegetation and installation of infrastructure, the proposed project has the potential to affect visual quality. Visual quality is determined by a qualitative analysis that considers the visual context of the project area, the potential for changes in character and contrast, an assessment of whether the project areas include any places or features designated for protection, the number of people who can view the site and their activities, and the extent to which those activities are related to the aesthetic qualities of the area.

The viewshed within the project corridor is almost exclusively forested, with areas of old growth forests and early successional forests, as well as clearcut areas. The South Hoh Highlands was clear-cut in approximately 2006 and consists of approximately 45 acres of young second-growth forest, shrub, and herbaceous communities as well as some existing infrastructure (e.g., the emergency services building, gravel road, water tower, and gravel pit).

The South Hoh Highlands is partially visible to residents and highway users who travel along Highway 101. Although the terrain gently slopes down toward the highway, microtopography within the South Hoh Highlands includes gentle slopes and dips that face away from the highway. Dense, young vegetation effectively screens the South Hoh Highlands from viewers traveling along the highway. In addition, the highway is only adjacent to the South Hoh Highlands for approximately 0.4 miles. Therefore, most viewers, traveling at approximately 55 miles per hour on Highway 101, would only be within the viewshed of the South Hoh Highlands for approximately 26 seconds.

Figure 4-2. Tsunami Hazard Area

No Action Alternative

Under the No Action alternative, there would be negligible, short-term benefits on visual quality and aesthetics because there would be no construction or vegetation removal and the previously clear-cut area would be allowed to continue growing toward maturity. Over the long term, this would result in the forest views from the highway blending into the adjacent mature forest stands on the Olympic National Park lands to the south and other older stands on private lands to the north. Even if the South Hoh Highlands were harvested again, which would create a distinct visual change with adjacent park lands, it would be visually consistent with the patchwork of forest stand ages experienced by travelers on Highway 101 as they travel through managed forest lands on the Olympic Peninsula. Therefore, the No Action alternative would have no impact on visual quality and aesthetics over the long term.

Proposed Action

Project-Specific Consequences

Stages 1, 2, and 3

Stages 1, 2, and 3 would have no adverse impact on visual quality and aesthetics in either the short or long term. There are currently no residents or viewers of the South Hoh Highlands that would be affected by vegetation removal and/or the installation of utilities and construction of housing/buildings. Additionally, construction-related activities, including vegetation removal and the use of heavy equipment, would not be visible from the highway because these activities would not take place near the highway, and highway users would only be within the viewshed of the South Hoh Highlands for a very short amount of time. The screen of trees along the highway would not be affected by the proposed work under any of these three stages and because of the vegetation screen and the microtopography of the site, none of the proposed 14 housing units would be visible from the highway. A portion of the center (Stage 2) might be glimpsed by travelers along the highway, but it would be adjacent to the existing emergency services building and consistent in character and form with that structure.

Stages 4 and 5

In the short term, construction of Stages 4 and 5 would have a minor adverse impact on visual quality if individuals are living in the homes constructed under the previous stages. Construction activities and vegetation removal for components of Stages 4 and 5 would diminish the natural ambience of the South Hoh Highlands due to vegetation removal.

In the long term, Stages 4 and 5 would be consistent in density and housing style to the other housing proposed for the Highlands, and there would not be a long-term effect. Therefore, these stages would have a negligible adverse impact on visual quality and aesthetics, in the long term, because the residents will be accustomed to living within a village.

Stage 6

Because the topography of the eastern portion of the South Hoh Highlands slopes down toward the highway, new housing built in Stage 6 is likely to be more visible to travelers on the highway, but it

would not be visible to residents of the previous stages. Because this stage would occur further in the future, the vegetation screen along the highway would have had more time to mature and increase in height and density, which may reduce the visual impact of clearing and construction as seen from the highway. The duration of travelers' exposure to views of development would still be very short and would be consistent with the patchwork of land uses found along Highway 101 on the Olympic Peninsula that include forest stands at different ages interspersed with pockets of development. Therefore, there would be a minor long-term adverse impact on visual quality and aesthetics from Stage 6.

Decommissioning of the Hoh Village on the Reservation

When the Hoh Village on the Reservation decommissioning occurs, there would be a short-term minor adverse effect on visual quality and aesthetics from construction activities and the use of heavy equipment along the Lower Hoh Road. These activities would create some bare dirt conditions in the areas that structures have been removed and may remove some minor landscaping vegetation. However, these activities would only be visible to Tribal members who travel down into the Reservation. In the long term, many of the structures would be removed and the areas would revegetate and become naturalized, blending into the surrounding environment. Therefore, there would be a moderate beneficial effect on visual quality and aesthetics from the decommissioning of the Hoh Village on the Reservation.

4.4. Air Quality

The Clean Air Act, as amended, requires EPA to establish National Ambient Air Quality Standards (NAAQS) for six pollutants harmful to human and environmental health, including ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter (PM) (including PM that is less than 10 micrometers in diameter [PM10] and fine particulate matter less than 2.5 micrometers in diameter [PM2.5]) (EPA 2016a). Clean Air Act and Amendments of 1990 define a “non-attainment area” as a locality where air pollution levels persistently exceed NAAQS or that contribute to ambient air quality in a nearby area that fails to meet standards. Maintenance areas are those areas that had a history of non-attainment but are now consistently meeting the NAAQS. Federally funded actions in non-attainment and maintenance areas for these pollutants are subject to conformity regulations (40 CFR Parts 51 and 93). According to the EPA Green Book (2023), Jefferson County is currently in attainment status for all criteria pollutants (EPA 2023). Therefore, the Proposed Action would not require a conformity analysis.

Fugitive dust, which is considered a component of PM, can also affect air quality. Fugitive dust is released into the air by wind or human activities, such as construction, and can have human and environmental health impacts. The Hoh Indian Tribe does not have any specific ordinances related to dust or air quality. EPA has established emission standards for some on-road and off-road vehicle emissions.

No Action Alternative

Under the No Action alternative, no construction would take place and the existing conditions in the Hoh Village on the Reservation and South Hoh Highlands would remain the same; therefore, there would be no short- or long-term adverse impacts on air quality.

Proposed Action

General Consequences of the Proposed Action

In the long term, the Proposed Action would increase the number of Tribal members living on Tribal lands. However, adverse impacts on air quality from increased vehicle use and maintenance with gas-powered equipment would be negligible.

Project-Specific Consequences

Stages 1, 2, and 3

Stages 1, 2, and 3 would have a negligible, short-term adverse impact on air quality from the construction equipment and vehicle use that would increase emissions and fugitive dust (PM) from excavation and construction activities. Impacts on air quality would be short term and would not affect the general public because they would be localized to a relatively undeveloped area and there would be no residents present during construction.

Stages 4, 5, and 6

During implementation of Stages 4, 5, and 6, residents living in the housing built under the previous stages could be adversely impacted by negligible changes in air quality while construction is underway. Construction activities would create fugitive dust that would be minimized through the use of best management practices (BMPs) such as regularly watering exposed soils. Therefore, Stages 4, 5, and 6 would have negligible, short-term adverse impacts on air quality from the construction equipment and vehicle use that would increase fugitive dust and emissions.

Decommissioning of the Hoh Village on the Reservation

Decommissioning of the Hoh Village on the Reservation would have a negligible, short-term adverse impact on air quality from the construction equipment and vehicle use that would increase emissions and fugitive dust from excavation and decommissioning activities. Impacts on air quality would be short term and would not affect the general public because residents and Tribal facilities would have relocated to the South Hoh Highlands and would not be present.

4.5. Surface Waters and Water Quality

The Clean Water Act (CWA) of 1977, as amended, regulates the discharge of pollutants into water, with sections falling under the jurisdiction of the USACE and EPA. Section 404 of the CWA establishes the USACE permit requirements for discharging dredged or fill materials into waters of the United States. Under the National Pollutant Discharge Elimination System, EPA and the WDOE regulate both point and nonpoint pollutant sources, including stormwater and stormwater runoff, via

a permitting system. Activities that disturb one or more acres of ground are required to apply for a permit through WDOE.

The project area is in the Nolan Creek-Hoh River watershed (HUC code 171001010707). Two stream reaches in the Nolan Creek-Hoh River watershed are impaired for aquatic life because of temperature (EPA 2022a). Historical logging practices on the Olympic Peninsula have altered forest cover such that stream temperatures have been affected. There are no impaired waterbodies or known water quality issues within the project area either at the South Hoh Highlands or at the Hoh Village on the Reservation (EPA 2022a).

There are no known waterbodies in the South Hoh Highlands site other than several small wetlands and seasonal channels (**Figure 4-3**). According to the USFWS National Wetlands Inventory (NWI) Mapper, there are no surface waters or wetlands in the developed areas of the Hoh Village on the Reservation. However, there are three riverine features (two perennial streams and the Hoh River), several wetlands, and the Pacific Ocean within close proximity to the existing Hoh Village on the Reservation. Several of the structures in the Hoh Village on the Reservation are within the channel migration zone (**Figure 4-1**) and could be impacted if the Hoh River were to change course as described in Section 4.2.

No Action Alternative

Under the No Action alternative, there would be no short-term impact on surface waters and water quality because no construction or vegetation removal would occur that could result in sedimentation or impair water quality. In the long term, flooding in the Hoh Village would continue and likely worsen, and surface waters along the lower Hoh River would remain subject to pollution and sedimentation impacts from flooding. Therefore, the No Action alternative could have a minor adverse impact on surface waters and water quality in the long term if a large-scale flood were to occur. The adverse effects of channel migration on the Hoh Village on the Reservation are discussed in Section 4.2.2.

Proposed Action

Stages 1 through 6

Construction of the Proposed Action would have no short- or long-term impacts on surface waters or water quality. The proposed work would avoid wetlands in the South Hoh Highlands and nearby waterbodies and there would be no in-water work. BMPs, such as silt fences and swales, would be implemented as necessary during construction to prevent stormwater runoff from carrying sediments to nearby wetlands and downslope streams. The proposed roadways would be paved and would contain appropriate stormwater management structures to avoid impacts on water quality in downslope waterbodies.

Figure 4-3. Project Area Surface Waters

Decommissioning of the Hoh Village on the Reservation

There would be no short-term effects on surface waters and water quality from the decommissioning of the existing Hoh Village on the Reservation. BMPs similar to those used during construction at the South Hoh Highlands would be implemented to eliminate any construction-related runoff and sediment from entering surface waters and wetlands. In the long term, decommissioning of the Hoh Village on the Reservation would remove structures and infrastructure from the floodplain and channel migration zone. This would reduce the potential for flood-born debris and pollutants to enter surface waters and impact water quality during floods. Therefore, there would be a minor beneficial impact on surface waters and water quality from reduced flood-related debris and pollution.

4.6. Wetlands

EO 11990, Protection of Wetlands, requires federal agencies to consider alternatives to work in wetlands and limits potential impacts on wetlands if there are no practicable alternatives. FEMA regulation 44 CFR Part 9, Floodplain Management and Protection of Wetlands, sets forth the policy, procedures, and responsibilities to implement and enforce EO 11990 and prohibits FEMA from funding activities in a wetland unless no practicable alternatives are available. Activities that disturb wetlands may also require a permit from USACE under Section 404 of the CWA.

A wetland delineation conducted in January 2020 identified six small palustrine emergent and shrub/scrub depressional wetlands in the Hoh Highlands (**Figure 4-4**). These wetlands were formerly a single wetland and stream channel, but past fill activities associated with past timber harvests, appear to have drastically changed the hydrology and reduced water flow in the former channel area, causing portions of the wetlands to dry out, thereby creating multiple, smaller wetlands. The wetlands receive water from precipitation and overland stormwater flow from adjacent elevated areas to the south and southeast. The wetlands closest to where construction activities are proposed were rated as Category III wetlands using the WDOE Wetland Rating System for Western Washington.

The South Hoh Highlands is on Tribal Trust Lands; therefore, Jefferson County wetland buffer regulations would not apply to the wetlands on the South Highlands Parcel.

According to the USFWS NWI Mapper, there are no wetlands in the developed areas of the existing Hoh Village on the Reservation. However, there are several wetlands close to the existing Hoh Village on the Reservation. The majority of these wetlands are palustrine forested or emergent wetlands and lie along the Hoh River, north of Chalaat Loop (**Figure 4-5**).

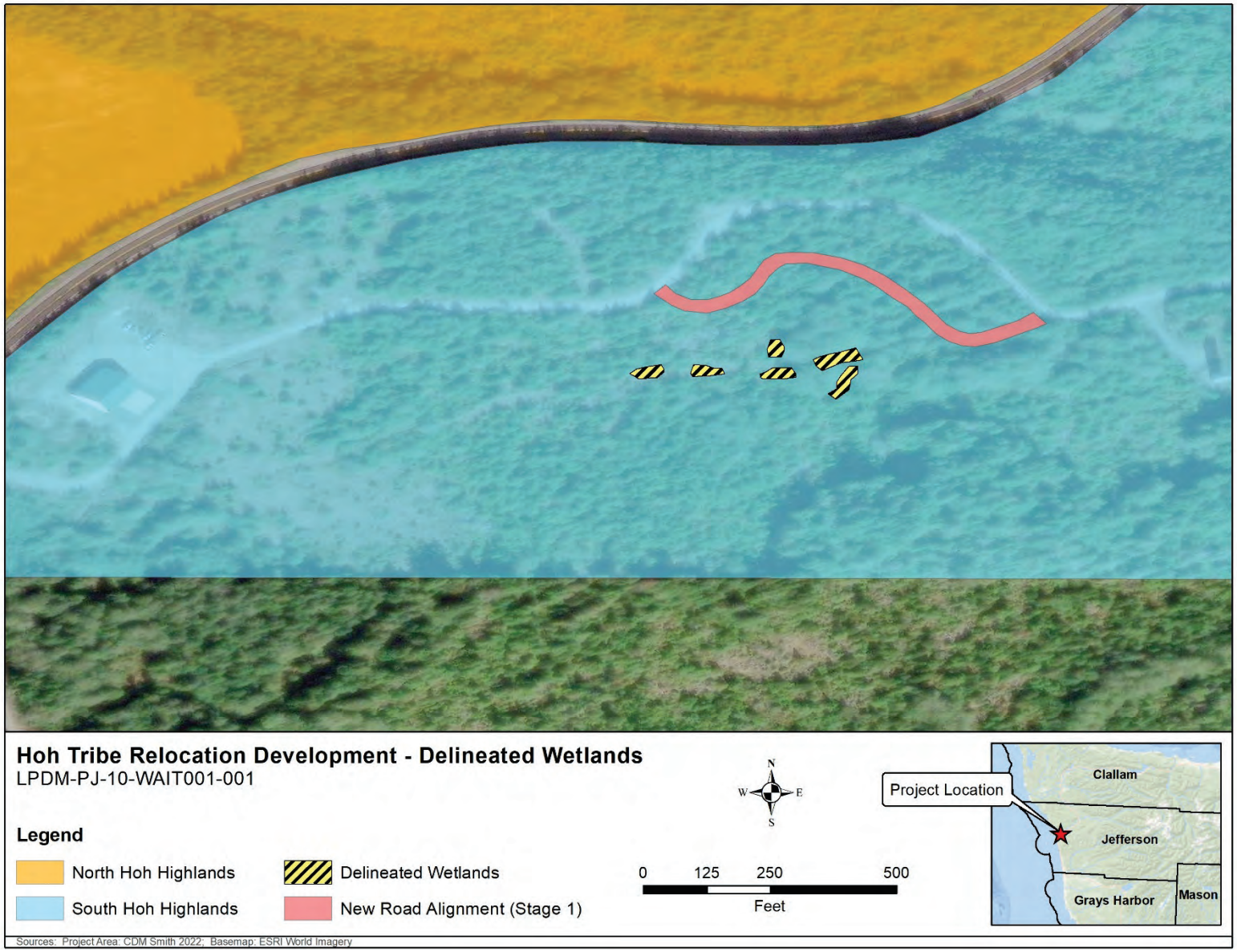

Figure 4-4. South Hoh Highlands Wetlands

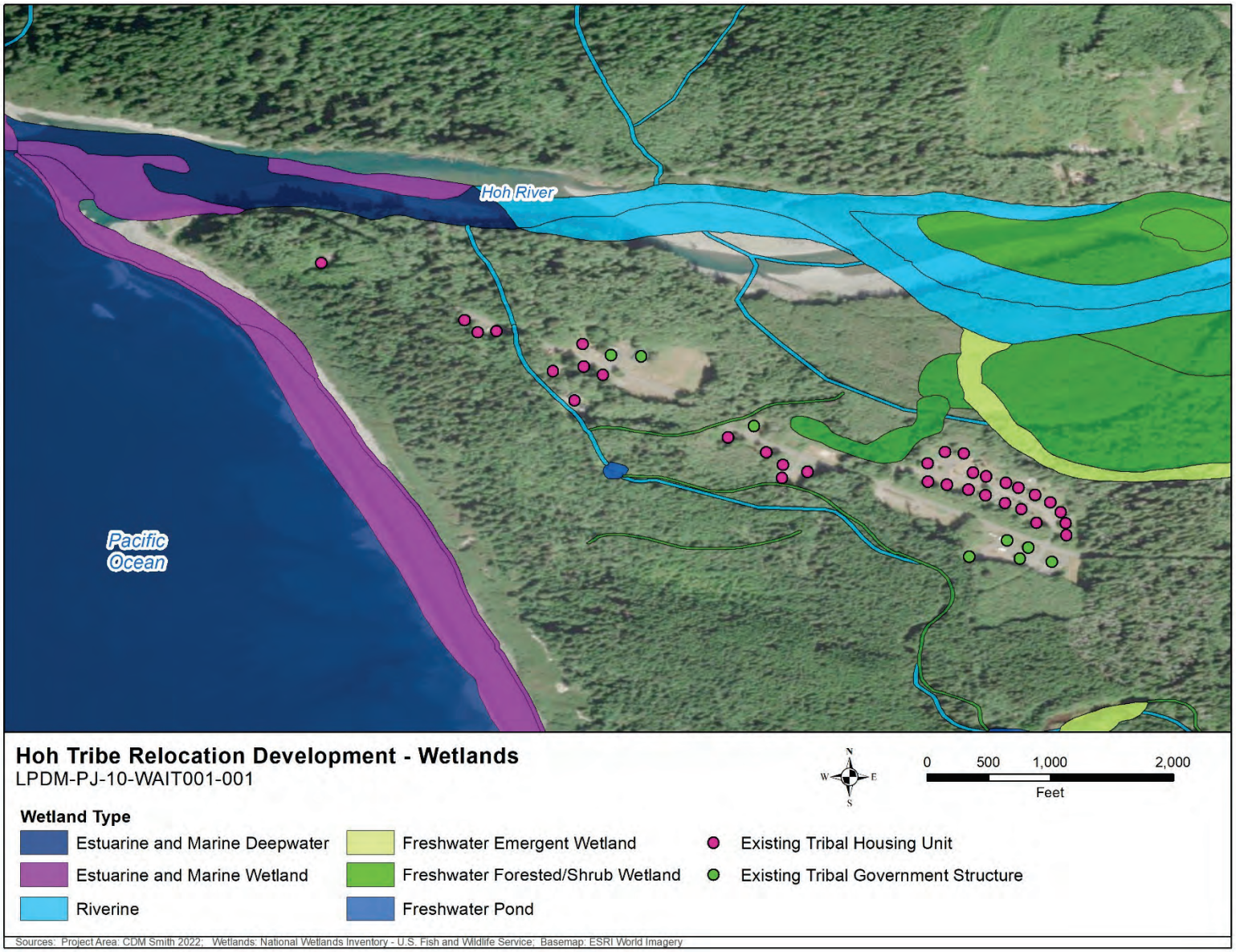

Figure 4-5. Hoh Village on the Reservation NWI Wetlands

No Action Alternative

Under the No Action alternative, there would be no impact on wetlands because no construction or vegetation removal would occur that could create sedimentation or impact wetland functions. In the long term, if the parcel were to be logged again, it is likely that a buffer would be provided around the wetlands and that direct impacts would be avoided. Although, the state forest practices regulations do not apply to work on Tribal lands, the Tribe is very concerned about the impacts that logging have had on surface water temperatures and the associated effects on fisheries; therefore, logging conducted by the Tribe would conform to best practices with respect to wetland buffers. Therefore, there would be no impact on wetlands in either the short or long term.

Proposed Action

General Consequences of the Proposed Action

The Proposed Action would have no impact on wetlands because the proposed activities would be designed and implemented to avoid wetland areas and there would be no fill or work in wetlands. BMPs described in Section 4.5 (Surface Waters and Water Quality) would prevent stormwater runoff from carrying sediment or pollution to nearby wetlands. In addition, a buffer of at least 50 feet would be left around the wetland areas to protect water quality (Koehlinger 2023).

4.7. Floodplains

EO 11988, Floodplain Management, requires federal agencies to avoid, to the extent possible, short- and long-term, adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. FEMA regulations (44 CFR Part 9.7) use the 1-percent-annual-chance flood as the minimal area for floodplain impact evaluation. Additionally, EO 13690 established a Federal Flood Risk Management Standard (FFRMS) to help increase community resiliency to flooding and EO 14030, Climate Related Financial Risk, directs federal agencies to implement this new standard through their programs. While new rules are developed, FEMA issued a partial implementation policy for the FFRMS that applies to its hazard mitigation assistance programs and covered projects within the floodplain. FEMA follows an eight-step decision-making process to ensure compliance with EO 11988, which requires the evaluation of alternatives to the use of a floodplain prior to funding the action. According to FEMA's flood insurance rate map 53031C1000C (dated June 7, 2019), the South Hoh Highlands and about half of the Hoh Village on the Reservation is in Zone X, an area of minimal flood hazard and the other half of the Hoh Village on the Reservation is in Zone A, a 100-year floodplain (**Figure 4-6**). As noted in Section 2 (Purpose and Need), there have been many flooding incidents in the Hoh Village on the Reservation and **Figure 2-1** illustrates the 100-year flood depths and affected structures.

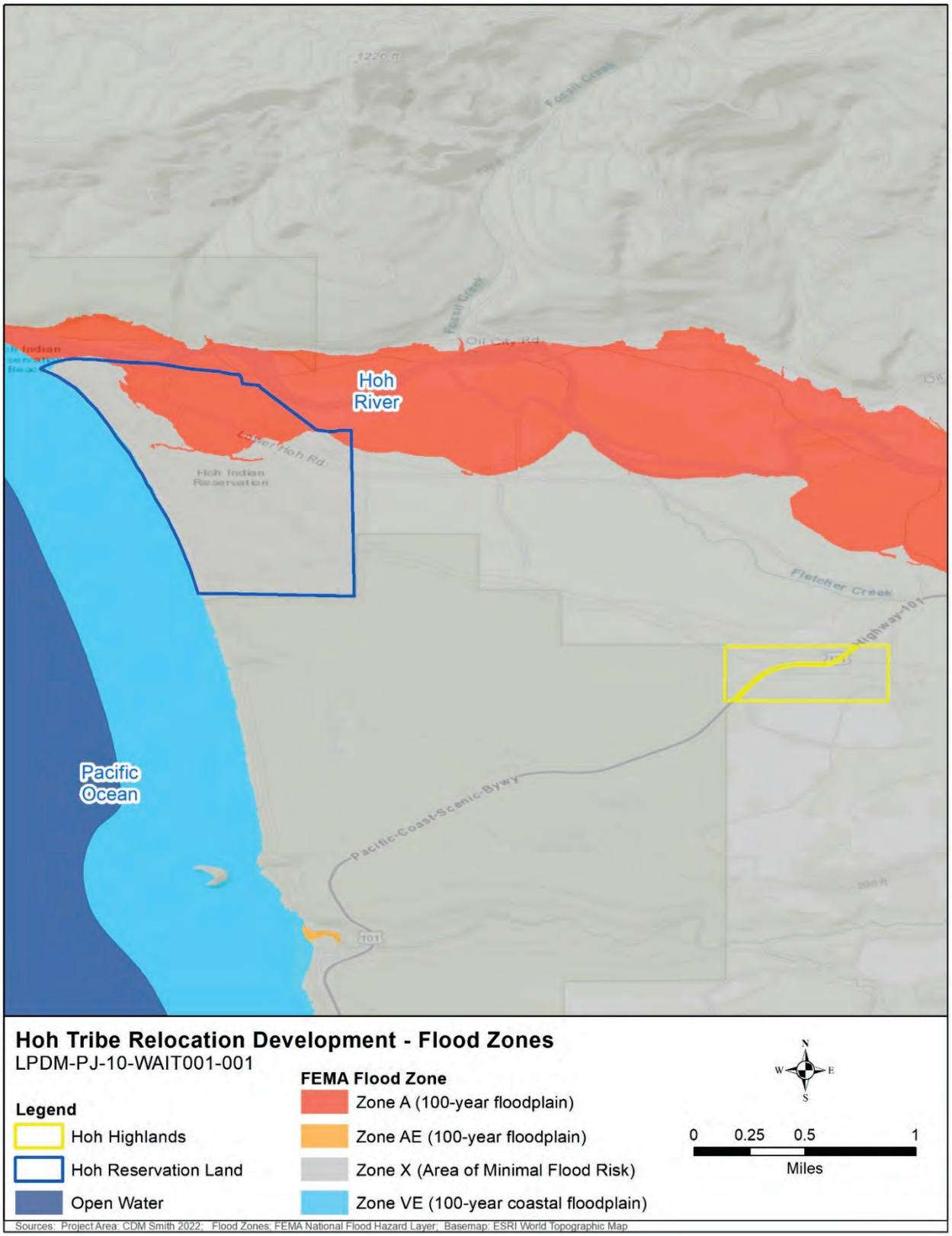

Figure 4-6. Flood Hazard Zones

No Action Alternative

Under the No Action alternative, no construction would take place and existing floodplain conditions would persist and likely worsen over time through climate change. There would be minor short- and long-term adverse impacts on floodplains because repetitive flooding would continue resulting in the release of debris and pollutants from structures and infrastructure damaged by floodwaters. As described in Section 2, climate change is expected to result in an increase in the frequency and severity of storm events, which would lead to an increase in flood frequency, extent, depth, and duration. This may result in additional structures becoming subject to repetitive losses and others becoming uninhabitable. An increase in floodplain extent would also result in a larger area being impacted by flood-related debris and pollutants. Therefore, there would be a long-term moderate adverse impact on floodplains and on vulnerable buildings and infrastructure under the No Action alternative.

Proposed Action

General Consequences of the Proposed Action

There are no floodplains within the South Hoh Highlands site; therefore, there would be no impact on floodplains in the short or long term from construction or operation of the proposed infrastructure or housing at the South Hoh Highlands (**Figure 4-6**).

In the long term, the Proposed Action would provide alternative housing options for Tribal members, and it would be expected that the population in the existing Hoh Village on the Reservation would eventually be minimized. Some structures may be left in place during the decommissioning of the Hoh Village on the Reservation; however, most of the structures and infrastructure would be removed from the floodplain, which would reduce the amount of flood-borne debris and pollutants that enter surface waters during floods and with flood losses. Therefore, the Proposed Action would have a moderate beneficial effect on floodplains in the long term (see **Appendix B;** 8-Step Decision Making Checklist in compliance with EO 11988, Floodplain Management and 44 CFR Part 9).

4.8. Vegetation

Most of the South Hoh Highlands area has been logged as recently as 2006 and is vegetated with secondary forest, shrub, and herbaceous communities (**Figure 4-7**). Approximately 4.5 acres of secondary growth forest in the southwestern portion of the proposed South Hoh Highlands was not logged during the 2006 timber harvest. This 4.5 acres would not be impacted during implementation of the Proposed Action and would be designated as a forest reserve park. The most mature tree stands have heights of 25 to 35 feet and consist of Douglas fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*), Sitka spruce (*Picea sitchensis*), and red alder (*Alnus rubra*). The understory is dense in areas and consists of salmonberry (*Rubus spectabilis*), elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), red huckleberry (*Vaccinium parvifolium*), and sword fern (*Polystichum munitum*). Invasive Scotch broom (*Cytisus scoparius*) is dominant along roadsides and other disturbed areas, and Himalayan blackberry (*Rubus armeniacus*) is also present (**Figure 4-8**).

Figure 4-7. Existing Vegetation Conditions Within the South Hoh Highlands

Figure 4-8. Scotch Broom Dominating Disturbed Areas in the South Hoh Highlands

The western portion of the parcel, west of Highway 101 and outside of the South Hoh Highlands, consists of a large open field vegetated with herbaceous vegetation and devoid of trees or shrubs. Portions of this field appear to support patches of sedges (**Figure 4-9**). Directly west of this field is forest. The initial approximately 50 feet of the forest, west of the field, consists of Douglas fir, western redcedar, and Sitka spruce with diameter at breast heights (DBH) ranging from 8 to 16 inches and heights to approximately 50 feet (**Figure 4-10**). Farther west of this initial 50 feet of forest, starting at a line generally consistent with the Olympic National Park boundary, the trees are larger and consist of western redcedar, Douglas fir, and Sitka spruce, many with a DBH exceeding 24 inches and a height of more than 50 feet. Understory vegetation is fairly open and consists of salal, evergreen huckleberry, and western sword fern (CDM Smith 2022).

Vegetation in the existing Hoh Village on the Reservation is comprised primarily of manicured lawns and ornamental vegetation near to structures. There are forested and emergent wetlands to the north of Chalaat Loop and second- and third-growth upland forests surround the rest of the village. Most of the cleared areas where structures exist are relatively small and do not include mature native vegetation.

Invasive Species

EO 13112 requires federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts that invasive species cause. The bark beetle (Scolytinae) is present in the project area and is a concern throughout forested areas.

No Action Alternative

Under the No Action alternative, in the short term, there would be no impact on vegetation because no construction or vegetation removal would occur. In the long term, invasive species within the disturbed areas would persist; however, the second growth forest would be allowed to mature. Therefore, the No Action alternative would have a minor beneficial effect on vegetation in the long term.

Proposed Action

General Consequences of Stages 1 through 6

In the long term, the Proposed Action would be a permanent change in land-use and could remove as much as 45 acres of second growth forest, shrub, and herbaceous communities in the South Hoh Highlands area. Where possible, vegetation may be preserved for landscape purposes or re-established to avoid impacts from erosion. However, because there would be an overall reduction in forest cover, the Proposed Action would have a minor impact on vegetation within the South Hoh Highland in the long term.

Figure 4-9. Open Field Located in the North Hoh Highlands North of Highway 101

Figure 4-10. Young Stand of Trees West of the Open Field Along the Western Boundary of the North Hoh Highlands

Project-Specific Consequences of the Proposed Action

Stage 1

Stage 1 would remove approximately 1.0 acre of vegetation for the widening of the existing road and construction of the new access road and another approximately 1.8 acres for clearing of the 14 house lots. Stage 1 would have a negligible impact on vegetation in the short term because the vegetation that would be affected is composed primarily of invasive species along the road-widening portion and young third growth forest in the area of the new access road and the future housing lots. Where possible, vegetation may be preserved for landscape purposes or re-established to avoid impacts from erosion.

Stage 2

Stage 2 would potentially remove as much as 1.5 acres of vegetation for the construction of the center, outdoor emergency pet shelter, outdoor concrete slab for barbeques, and picnic tables for community gatherings. The proposed work area for Stage 2 has been previously disturbed and is sparsely vegetated. Therefore, there would be a negligible impact on vegetation in the short term from removal of the limited existing vegetation in the proposed work area.

Stage 3

Stage 3 would potentially remove up to 1 acre of vegetation for construction of the community drain field. The sites for the 14 housing units proposed under Stage 3 would have been previously cleared during Stage 1 and would not include additional vegetation removal. The proposed area for the community drain field has been previously disturbed and is vegetated with second growth forest. Removal of the second growth forest to construct the drain field would have a negligible impact on vegetation in the short term.

Stage 4

Stage 4 would potentially remove approximately 6.5 acres of vegetation to construct as many as 33 additional housing sites. The wetlands and wetland vegetation immediately east of the proposed Stage 4 work area would be avoided. The vegetation that would be removed during Stage 4 is composed of second growth forest, shrub, and herbaceous communities that include some invasive species. It could take up to 60 years before the forest was mature enough to provide suitable habitat for ESA-listed species. If the Proposed Action occurs before 2050, the forest stands would be unlikely to be mature enough to provide significant habitat for native wildlife species or timber value. Therefore, in the short term, Stage 4 would impact vegetation by removing up to 6.5 acres of existing vegetation; however, the impacts would be negligible because the existing vegetation is not mature and includes invasive species.

Stage 5

Stage 5 could potentially remove all vegetation within the approximately 7.7 acres identified for government services and facilities that had not been removed in previous stages. The forested area in the southwestern portion of the South Hoh Highlands that is identified as a forest reserve park would be maintained as forest vegetation and allowed to mature. The vegetation that would be removed during Stage 5 is composed of second growth forest, shrub, and herbaceous communities

that include some invasive species. Because most of these areas have been previously disturbed, implementing components of Stage 5 would have a negligible, short-term impact on vegetation within the South Hoh Highlands.

Stage 6

The vegetation in the remaining approximately 13.5 acres in the South Hoh Highlands could be largely removed for future housing in Stage 6. Similar to the rest of the South Hoh Highlands, this area is currently covered with relatively young second growth forest that is unlikely to be mature enough to provide significant habitat for native wildlife species or timber value until about 2050. Depending on the age and composition of the vegetation when Stage 6 is proposed, potential impacts on vegetation could vary. Agencies proposing to use this PEA in a decision-making process on Stage 6 housing should evaluate whether the potential impacts on vegetation are greater than a minor adverse impact. If development is proposed prior to 2035, adverse impacts are expected to be minor.

Decommissioning of the Hoh Village on the Reservation

During the decommissioning of the existing Hoh Village on the Reservation, there would be short-term minor adverse effects on vegetation from ground disturbance and the removal of landscape vegetation around the structures that are being demolished, removed, or decommissioned. In the long term, most areas that have been decommissioned would be allowed to revegetate with natural vegetation while some areas may remain landscaped for Tribal use. Therefore, by allowing some currently landscaped areas to mature into native stands, the decommissioning of the Hoh Village on the Reservation would have a minor long-term beneficial effect on vegetation on the Reservation.

4.9. Fish and Wildlife

The project area is in the EPA's Level IV Coastal Uplands ecoregion (EPA 2010). Most of the South Hoh Highlands area is composed of young successional forest that offers habitat for some wildlife species. The existing Hoh Village on the Reservation provides limited habitat for wildlife species; however, second- and third-growth forests and wetlands do provide suitable habitat surround the village. There are no fish bearing streams in the existing Hoh Village on the Reservation; although, the Hoh River is only approximately 0.1 miles from structures in the village. Birds and mammals typically associated with forested habitats in the region that were observed directly or indirectly through identified sign during an August 2022 site visit, include black bears (*Ursus americanus*), black-tailed deer (*Odocoileus hemionus*), sooty grouse (*Dendragapus fuliginosus*), Pacific slope flycatcher (*Empidonax difficilis*), common raven (*Corvus corax*), American robin (*Turdus migratorius*), cedar waxing (*Bombycilla cedrorum*), and dark-eyed junco (*Junco hyemalis*) (CDM Smith 2022). Other species typically associated with forested habitats in the region, but not observed during the site visit, include Rocky Mountain elk (*Cervus canadensis*), bobcat (*Lynx rufus*), and raccoon (*Procyon lotor*) (Landscope 2022). There are no waterbodies that support aquatic species within the proposed project area.

The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 United States Code [U.S.C.] 703–711), provides protection for migratory birds and their nests, eggs, and body parts from harm, sale, or other

injurious actions, except under the terms of a valid permit issued pursuant to federal regulations. All native birds are protected by the MBTA, and existing habitat in the project area has the potential to support a variety of native bird species. Several migratory bird species could occur in the project area, including species such as evening grosbeak (*Coccothraustes vespertinus*), olive-sided flycatcher (*Contopus cooperi*), and rufous hummingbird (*Selasphorus rufus*) (USFWS 2022a). The nesting season for migratory birds is generally March through July, depending on the species.

The Bald and Golden Eagle Protection Act of 1940 prohibits the take, possession, sale, or other harmful action on any golden or bald eagle, alive or dead, including any part, nest, or egg (16 U.S.C. 668(a)). Bald eagles (*Haliaeetus leucoephalus*) use large trees in close proximity to waterbodies for nesting and roosting (Washington State Department of Fish and Wildlife [WDFW] [WDFW 2022a]). Suitable habitat for nesting and roosting bald eagles occurs approximately 0.5 miles from the project area along the Hoh River. WDFW Priority Habitat and Species (PHS) data on bald eagle nests do not record any nests within 660 feet of the proposed project area (WDFW 2021). Golden eagles (*Aquila chrysaetos*) nest in large trees, or on cliff ledges, rocky outcrops, or human-made structures, such as power poles and transmission towers (WDFW 2022b). Suitable habitat for golden eagles does not occur within or adjacent to the proposed project area.

No Action Alternative

Under the No Action alternative, there would be no impact on fish in the South Hoh Highlands area because the area does not offer habitat for fish species. In the long term, flooding in the Hoh Village on the Reservation would continue and likely worsen, and surface waters along the lower Hoh River would remain subject to pollution and sedimentation impacts from flooding, which would have a minor adverse impact on fish species in the Hoh River. Additionally, the young forest stands in the South Hoh Highlands would continue to mature into later successional forests, which would offer additional habitat elements for wildlife species. Therefore, the No Action alternative would have a minor long-term benefit on wildlife species.

Proposed Action

General Consequences of the Proposed Action

There are no fish bearing streams within the South Hoh Highlands site and the implementation of mitigation measures would prevent any impacts to aquatic species during Stages 1 through 6. However, the removal of vegetation in the South Hoh Highlands has the potential to impact wildlife species and their associated habitats in the area. Construction-related noise could disturb wildlife and cause individuals to move from their preferred areas or temporarily change their behavior. Up to 45 acres of habitat would be affected by the Stages 1 through 6, much of which is currently of poor quality for the wildlife species typically found in the area because of its young age and prevalence of invasive plant species. The older forest in the southeastern portion of the South Hoh Highlands area would be left in place and allowed to mature. The South Hoh Highlands is surrounded by national park forest lands, commercial timber lands, and very low-density residential development. Although there would be a permanent loss of habitat, it would not measurably affect the populations of any species. Therefore, both short- and long-term adverse impacts on wildlife species would be minor.

The Proposed Action could affect migratory birds if work were to occur during the breeding season. Removal of vegetation in the South Hoh Highlands could result in inadvertent nest destruction or cause birds to abandon nests. Ground-nesting and shrub-nesting birds would be impacted to a greater extent than birds that nest in the upper canopy of trees because the existing habitat does not support species that require a mature forested canopy. Up to 45 acres of vegetation would be removed or disturbed; however, much of it is of poor quality for migratory birds owing to its young age and prevalence of invasive plant species, which are not suitable for nesting. Provided vegetation removal occurs before about 2035, the Proposed Action would have minor, localized adverse impacts on migratory birds if vegetation is removed during the breeding season. Because of the climate in the South Hoh Highlands and the duration of the proposed construction, it is unlikely that the breeding season could be completely avoided. Under these circumstances, the Proposed Action would be subject to the MBTA, and the Hoh Indian Tribe would be responsible for obtaining and complying with any necessary permits from USFWS before implementing work and for retaining documentation of coordination and compliance. Agencies proposing to use this PEA in a decision-making process after about 2035 should evaluate whether the potential impacts on wildlife are greater than a minor adverse impact because of the growth of vegetation and development of more diverse habitat structures.

Decommissioning of the Hoh Village on the Reservation

The decommissioning of the Hoh Village on the Reservation would remove structures and infrastructure from the floodplain and channel migration zone. This would reduce flood-borne debris and pollutants from entering surface waters and impacting water quality during floods and would have minor long-term beneficial effects on aquatic species.

Wildlife species that may occur within the existing Hoh Village on the Reservation would be accustomed to human activity and disturbance and high-quality habitat is not present adjacent to existing structures. In the short term, construction-related noise could disturb wildlife and cause individuals to move from their preferred areas or temporarily change their behavior. These impacts are expected to be minor because the duration of demolition for each structure would be short and there is an abundance of more suitable habitat surrounding the village. In the long-term, human activity and disturbance in the decommissioned village would diminish and previously cleared areas would be allowed to revegetate and provide habitat for wildlife species. Therefore, the decommissioning of the Hoh Village on the Reservation would have minor long-term benefits for wildlife.

4.10. Threatened and Endangered Species and Critical Habitat

The ESA of 1973 gives USFWS and the National Marine Fisheries Service (NMFS) authority for the protection of threatened and endangered species. This protection includes a prohibition on direct take (e.g., killing, harassing) and indirect take (e.g., destruction of habitat).

The ESA defines the action area as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action” (50 CFR 402.02). Therefore, the action area where effects on listed species must be evaluated may be larger than the project area where

project activities would occur. The action area extends beyond the project area to encompass potential effects of noise generated during construction from the use of heavy equipment, including excavator/bulldozers, backhoes, trenchers, dump trucks, road pavers and compactors, and generators. To account for potential noise impacts, the action area includes a 0.25-mile buffer extending from the project area. This distance was based on established sources that indicate there would be no disturbance to nesting ESA-listed marbled murrelets (MAMU) or northern spotted owls (NSO) at a distance of 0.25 miles from heavy equipment operation (USFWS 2014a, 2014b).

The USFWS Information for Planning and Consultation was used to identify proposed, threatened, and endangered species that may potentially occur in the action area. In addition, information available from the NMFS was used to identify potential fish species that could occur in the action area. All ESA-listed species that may be near the action area are listed in **Table 4.3** (USFWS 2022b) and are briefly discussed below. There are no species under the jurisdiction of the NMFS within an area where they may be affected by the Proposed Action. FEMA prepared a biological assessment that evaluated the potential effects of the Proposed Action on ESA-listed species under USFWS jurisdiction (FEMA 2022).

Table 4.3. Federally Listed Species with the Potential to Occur Within or Near the Project Area

Common Name	Scientific Name	Status
Birds		
Marbled Murrelet	Brachyramphus marmoratus	Threatened
Northern Spotted Owl	Strix occidentalis caurina	Threatened
Yellow-billed Cuckoo	Coccyzus americanus	Threatened
Fishes		
Bull Trout	Salvelinus confluentus	Threatened

Sources: USFWS 2022b

Designated critical habitat for bull trout occurs in the Hoh River approximately 0.1 miles north of the Hoh Village on the Reservation and approximately 0.8 miles north of the South Hoh Highlands, and in Cedar Creek approximately 1 mile south of the South Hoh Highlands. There is no critical habitat within the project area or within an area that may be affected by the Proposed Action.

Marbled Murrelet (MAMU): The proposed project area is within the current known range of the MAMU. MAMUs nest in forest stands with old-growth characteristics that are generally within 50 miles of the coast (USFWS 1997). Impacts on MAMU are characterized as either "disturbance" or "disruption," with disruption being a more severe subset of potential impacts. Heavy equipment use may disrupt MAMU behavior if they occur within 330 feet of the source of the noise (Hamer and Nelson 1998, USFWS 2020). The proposed project area does not contain suitable nesting habitat for the MAMU and the nearest suitable habitat is more than 330 feet west of the South Hoh Highlands site and more than 0.25 miles south of the Hoh Village on the Reservation, in the Olympic National Park (**Figure 4-11** and **Figure 4-12**) (FEMA 2022). Therefore, MAMU would not occur within the

disruption zone around either the proposed construction or demolition areas; but MAMU could occur within the disturbance zone around the South Hoh Highlands. The WDFW PHS maps show 839 MAMU occurrences have been recorded within 5 miles of the proposed project area and the nearest MAMU occurrence record is approximately 0.7 miles southwest of the South Hoh Highlands site. Designated critical habitat for the MAMU occurs approximately 2.1 miles southeast of the proposed project area. Based on the potential for suitable habitat in the action area, there is the potential for noise generated from the Proposed Action to affect MAMUs.

Northern Spotted Owl (NSO): The proposed project area is within the current known range for NSO. NSO nest in mature forests with a dense canopy. Based on research described in Delaney et. Al. 1999, the disruption distance for NSO is 200 feet from heavy equipment use. The proposed project area does not contain suitable nesting habitat for NSO; however, potentially suitable habitat does occur in the action area more than 200 feet west of the South Hoh Highlands and more than 0.25 miles south of the Hoh Village on the Reservation (**Figure 4-11** and **Figure 4-12**) (FEMA 2022). The WDFW PHS maps show three NSO detections have been recorded within a 5-mile radius of the proposed project area. Designated critical habitat for the NSO occurs approximately 11.2 miles northeast of the proposed project area. Based on the potential for suitable habitat in the action area, there is the potential for noise generated from the Proposed Action to affect NSO.

Yellow-billed Cuckoo (YBC): The proposed project area is within the current known range for the YBC. Suitable habitat for the YBC includes large riparian tracts of dense wooded habitats and woodlands with low scrubby vegetation along streams and marshes (USFWS 2022a). There is no suitable habitat for the YBC in the action area and there are no records of YBC within 5 miles of the action area. Designated critical habitat for the YBC is more than 500 miles south of the proposed project area.

Bull Trout: The WDFW Statewide Washington Integrated Fish Distribution dataset and PHS maps identify the Hoh River (0.9 miles north of the South Hoh Highlands site and 0.1 miles north of the Hoh Village on the Reservation), Cedar Creek (approximately 1 mile south of the proposed project area), and Braden Creek (approximately 0.5 miles northeast of the proposed project area) as having documented occurrences of bull trout (WDFW 2022c). Designated critical habitat for bull trout occurs in the Hoh River approximately 0.9 mile north of the South Hoh Highlands site and approximately 0.1 mile north of the Hoh Village on the Reservation. There are no streams in the project area nor are there any surface water connections from the project area to any of the streams with documented occurrences of bull trout.

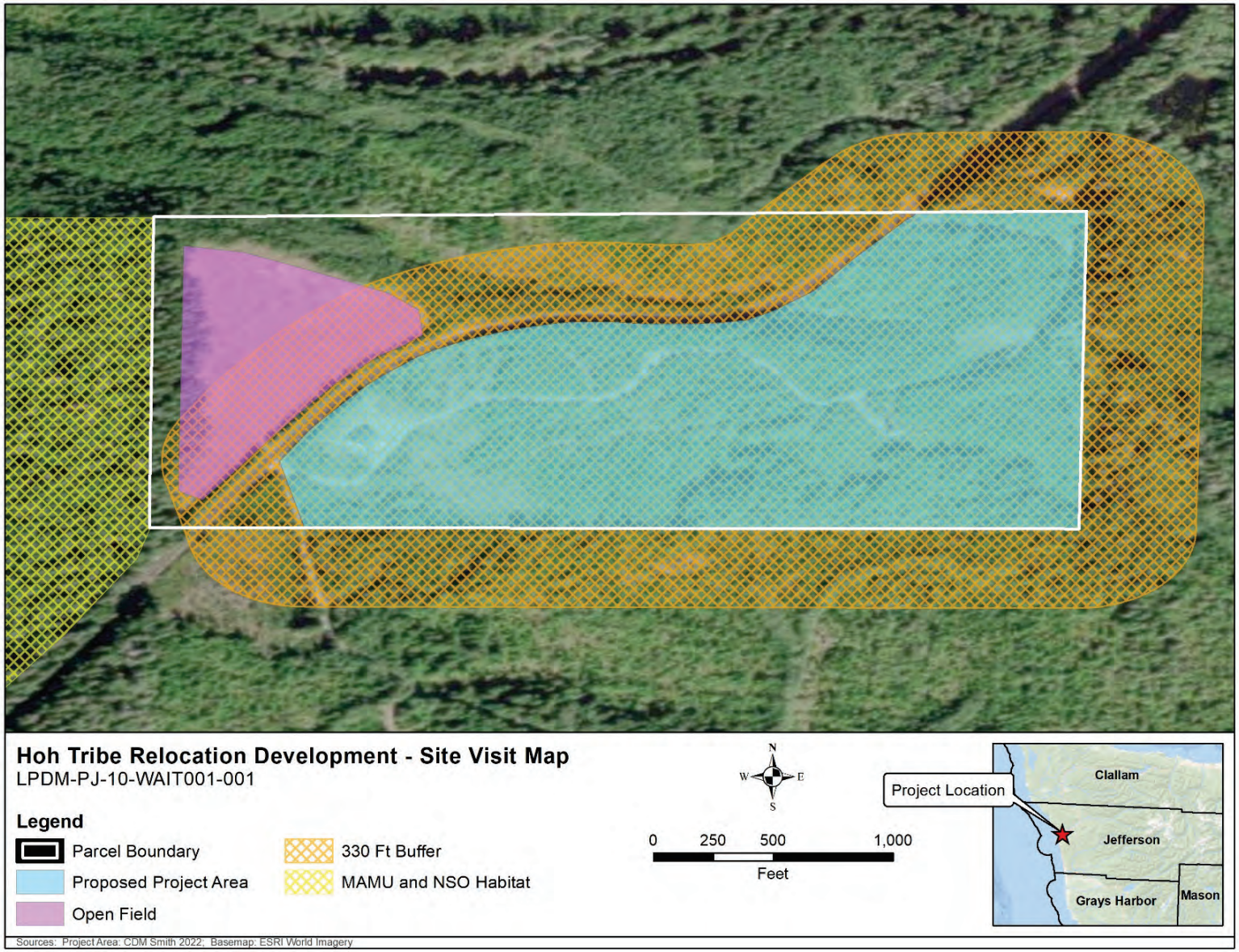

Figure 4-11. Marbled Murrelet and Northern Spotted Owl Habitat

Figure 4-12. Marbled Murrelet and Northern Spotted Owl Habitat

Essential Fish Habitat (EFH): The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) designates EFH for certain commercially managed marine and anadromous fish species and is intended to protect the habitat of commercially managed fish species, including anadromous fish species, from being lost as a result of disturbance and degradation. Based on the NMFS EFH mapper, there is EFH present for Chinook and Coho salmon in the Hoh-Quillayute Watershed; however, there are no fish-bearing streams and no EFH within the South Hoh Highlands site or the existing Hoh Village on the Reservation.

No Action Alternative

The No Action alternative would have no short-term, construction-related impacts on ESA-listed species and their habitats because no construction activities or vegetation removal would occur. In the long term, flooding in the Hoh Village on the Reservation would continue and likely worsen, and surface waters along the lower Hoh River would remain subject to pollution and sedimentation impacts from flooding, which would have a minor adverse impact on bull trout. In the long term, the young successional stands in the South Hoh Highlands would continue to mature into later successional forests, which could eventually provide suitable habitat for NSO and MAMU. Therefore, there could be minor long-term benefits to ESA-listed species.

Proposed Action

General Consequences of Stages 1 through 6

Stages 1 through 6 could have negligible short-term impacts on ESA-listed species from construction-related activities that produce noise. These activities could disturb NSO and MAMU if they were present in the action area. In addition, the existing noise disturbances that occur along Highway 101 from heavy truck traffic and roadway maintenance projects (e.g., bridge repairs that include pile driving) indicate that there are already noise disturbances along the edge of the South Hoh Highlands site that likely contribute to disturbance within the action area. Because the Stages 1 through 6 may affect but are not likely to adversely affect listed species, FEMA initiated informal consultation with USFWS on March 17, 2023, by submitting the Biological Assessment, and USFWS concurred with this determination on March 28, 2023 (**Appendix C**).

Project-Specific Consequences

Stage 1

In the long term, operation and maintenance of the underground utilities and infrastructure associated with Stage 1 would cause a minimal increase in noise and human activity levels within the South Hoh Highlands that would not result in impacts on NSO or MAMU behavior.

Stages 2 through 6

In the long term, under Stages 2 through 6, human activity that could disturb NSO and MAMU if they were present in the action area would increase as Hoh tribal members begin to reside within the housing units and use the public infrastructure. However, because noise disturbances that occur along Highway 101 are already present within the action area and no suitable habitat would be removed during construction or occupation of the Proposed Action, there would be a negligible effect on threatened and endangered species if they were to occur within the action area.

Decommissioning of the Hoh Village on the Reservation

There is no suitable habitat for ESA listed species within this action area. Therefore, there would be no short- or long-term impacts on MAMU, NSO, or YBC. There would be no in-water work or herbicide use as part of the decommissioning of the village. Mitigation measures such as the use of silt fences and straw waddles to prevent erosion from overland flow would provide protection for bull trout that may occur off-site; thus, there would be no short-term impacts on aquatic species. In the long term, the decommissioning of the Hoh Village on the Reservation would remove structures and infrastructure from the floodplain and channel migration zone. This would reduce flood-borne debris and pollutants from entering surface waters and impacting water quality during floods and would have minor long-term beneficial effects on bull trout.

4.11. Cultural Resources

This section provides an overview of potential environmental effects on cultural resources, including historic properties. Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), requires that activities using federal funds undergo a review process to

consider potential effects on historic properties that are listed in or may be eligible for listing in the National Register of Historic Places. Cultural resources include prehistoric or historic archeology; historic standing structures; historic districts; objects; artifacts; cultural properties of historic or traditional significance, referred to as Traditional Cultural Properties, which may have religious or cultural significance to federally recognized Indian tribes; or other physical evidence of human activity considered to be important to culture, subculture, or community for scientific, traditional, religious, or other reasons.

During decommissioning of the Hoh Village on the Reservation, it is anticipated that all residential housing would be demolished and removed, and residential utilities would either be removed or abandoned in place. Cleared housing areas would be converted into green space and would either be replanted or would be allowed to naturally revegetate. Therefore, the only ground disturbance at the Hoh Village on the Reservation would be on previously disturbed ground.

Pursuant to 36 CFR 800.4(a)(1), FEMA has defined an Area of Potential Effects (APE) that includes all areas within which the undertakings may directly or indirectly affect cultural resources. The APE includes the entire Hoh Highlands parcel, which is approximately 73 acres and is owned by the Tribe. The vertical depth of the APE includes the anticipated deepest extent of project-related ground-disturbing activity, not to exceed 6 feet below existing grade where deeper sewer and septic features are proposed.

The vicinity of the APE has been an important location for traditional Hoh land use; however, the land across the entirety of the APE has undergone substantial disturbance over the past century, including logging and road construction (WillametteCRA 2023).

On August 24, 2022, WillametteCRA reviewed records on file with the Washington Department of Archaeology and Historic Preservation's (DAHP) online database system to identify any previous cultural resource studies and archaeological or historical resources within or near the APE. No previously inventoried archaeological resources are within the APE (WillametteCRA 2023).

The DAHP Archaeological Predictive Model considers the entire APE vicinity as having a high to very high sensitivity for buried Native American archaeological resources, considering the proximity to critical water resources and the Hoh Village, and the likely traditional use of this area dating back countless generations. However, the actual sensitivity of the APE is considered to be lower based on the substantial historic alterations to the ground surface, primarily from clear-cut logging, highway construction, and the recent infrastructure development (WillametteCRA 2023).

No cultural resources were identified during the 2022 archaeological survey fieldwork, and most of the APE was directly examined during the survey, either by closely spaced systematic pedestrian survey transects or, where dense vegetation made access more difficult, meandering transects (WillametteCRA 2023).

FEMA determined that no historic properties would be affected by the Proposed Action, and that no further archaeological survey measures are necessary for the subsequent development within the parcel, as proposed by the Tribe. However, unanticipated discovery of cultural resources is always a

possibility during any major construction activity; therefore, the Tribe would implement an Inadvertent Discovery Plan for this project.

FEMA submitted the cultural resources survey to the Hoh THPO on April 12, 2023, and the THPO concurred with the findings that there would be no historic properties affected on May 2, 2023 (Appendix C).

No Action Alternative

Under the No Action alternative, there would be no short- or long-term effects to cultural resources both because no construction would take place within the project area and because there are no historic properties present.

Proposed Action

General Consequences of the Proposed Action

No cultural resources were identified within the APE and FEMA determined that no historic properties would be affected by the Proposed Action for stages 1 through 5; therefore, there would be no impact on cultural resources in the short or long term, during any of these stages. However, unanticipated discovery of cultural resources is always a possibility during any construction activity; therefore, an Inadvertent Discovery Plan would be implemented for this project.

During Stage 6, the demolition and removal of structures in the Hoh Village on the Reservation could have the potential to affect structures that may be eligible for listing on the National Historic Register. There is no current information about the age or historic integrity of any of the structures, but the EPA EJ Screen indicates a higher-than-average potential for exposure to lead, which is usually associated with older housing stock that may contain lead paint or lead pipes. Therefore, if Stage 6 is federally funded or requires federal approvals or permits, a subsequent NHPA consultation may be required depending on the scope of work and scale of effects, as determined by the federal agency.

4.12. Hazardous Materials

Hazardous materials are those substances defined by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, and the Toxic Substances Control Act. The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, which was further amended by the Hazardous and Solid Waste amendments, defines hazardous wastes. In general, both hazardous materials and waste include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or to the environment when released or otherwise improperly managed.

Hazardous materials may be encountered in the course of a project, or they may be generated by the project activities. To determine whether any hazardous waste facilities exist in the vicinity or upgradient of the proposed project area, or whether there is a known and documented environmental issue or concern that could affect the proposed project area, a search for Superfund

sites, toxic release inventory sites, industrial water dischargers, hazardous facilities or sites, and multiactivity sites was conducted using EPA's NEPA Assist website (EPA 2022b). According to the database, no hazardous waste facilities or hazardous waste sites are present within 1 mile of the project area.

A Phase 1 Environmental Site Assessment was also conducted for the project area to determine if any potential 'Recognized Environmental Conditions' may be present. No issues of concern relative to hazardous materials were identified. The 2022 Westech Company Environmental Assessment (Westech Company 2022) contains a more detailed description of the Phase 1 Environmental Site Assessment.

No Action Alternative

Under the No Action alternative, existing conditions would not change relative to hazardous materials. No short-term impact would occur. In the long term, flooding in the Hoh Village on the Reservation would continue and likely worsen, which could damage residential and community structures that may contain household hazardous materials releasing them into the environment. Therefore, there would be a minor long-term adverse impact from the release of hazardous materials.

Proposed Action

General Consequences of the Proposed Action

Because there are no known hazardous waste sites or hazardous materials within the project area, the Proposed Action would not impact or be impacted by hazardous materials from known hazardous waste sites.

Relative to potentially unknown hazardous materials, constructing Stages 1 through 6 of the Proposed Action would require excavating soil and ground disturbance. Because there are no known prior land uses on the South Hoh Highlands and no known hazardous waste sites on the South Hoh Highlands or Hoh Village on the Reservation, it is unlikely that unknown hazardous materials would be encountered during construction.

Relative to hazardous material risks, constructing the Proposed Action would require using mechanical equipment such as bulldozers, loaders, excavators, dump trucks, and personnel vehicles. Fuel or oils used to operate equipment and vehicles could leak or spill. However, the short-term construction period would be temporary, and the Tribe would be responsible for ensuring compliance with state and federal regulations pertaining to the storage of materials and operation of equipment, including procedures for controlling, cleaning, and reporting any spills. Decommissioning of the Hoh Village on the Reservation would require excavating soil, ground disturbance, and structure demolition. There are no known hazardous waste sites on or around the Hoh Village on the Reservation; however, existing structures have the potential to contain hazardous materials, including lead-based paint (LBP) and asbestos-containing materials (ACM). If improperly handled and disposed of, LBP and ACM would have a significant adverse impact on human health. However,

compliance with applicable federal, state, and local regulations and best-practices regarding the identification, notification, handling, and disposal of LBP and ACM (consistent with the Clean Air Act's National Emission Standards for Hazardous Air Pollutants) would reduce adverse effects from unknown hazardous materials. In the absence of Tribal policies or regulations for the handling of hazardous materials, the Tribe would follow relevant state and federal regulations and best practices. Therefore, with implementation of mitigation measures and best-practices related to LBP and ACM prior to structure demolition, the Proposed Action would have a negligible short-term impact.

Infrastructure and tribal facilities would be constructed under Stages 1, 2, and 5 of the Proposed Action, and housing would be constructed under Stages 3, 4, and 6. Operation of certain facilities, such as fire or emergency response facilities, would require storage and use of potentially hazardous substances, including, but not limited to, cleaning chemicals and medical supplies. In addition, newly constructed households would represent a new source of hazardous materials in the form of normal household cleaning supplies. Newly introduced materials would be stored in small quantities, dispersed among structures throughout the project area (i.e., not stored in one central location). It is assumed that homeowners would be responsible in their storage and use of hazardous materials in and around their homes. The introduction of new potentially hazardous materials where there presently are none would represent a minor long-term adverse impact relative to hazardous materials.

4.13. Noise

Sounds that disrupt normal activities or otherwise diminish the quality of the environment are considered noise. Noise events that occur during the night (10 p.m. to 7 a.m.) are more annoying than those that occur during normal waking hours (7 a.m. to 10 p.m.). Assessment of noise impacts includes the proximity of the Proposed Action to sensitive receptors, which are defined as an area of frequent human use that would benefit from a lowered noise level. Typical sensitive receptors include schools, churches, hospitals, nursing homes, and libraries. Typical noise events in the project area are presently associated with climatic conditions (wind, rain), truck and traffic noise from nearby Highway 101, and the occasional airplane engine overhead. Rustling leaves may produce noise levels of approximately 20 A-weighed decibels (dBA) and a rural residential area might produce noise levels between 25 dBA and 45 dBA (AASHTO 2023). Heavy trucks on Highway 101 would produce noise levels around 80 to 85 dBA (as measured 50 feet from the line of travel) in short bursts as they travel along the highway (AASHTO 2023). Sound attenuates (is less noticeable) the farther away a receptor is from the source, and intervening vegetation or buildings may also reduce the sound level at a receptor location. Under existing conditions, the nearest receptor to the project area is a single residence that is more than 1,000 feet from the proposed Stage 1 and 3 work areas.

No Action Alternative

Under the No Action alternative, there would be no construction of new infrastructure, government facilities, or housing and no demolition of structures. Therefore, there would be no change in existing noise levels that could affect residents in or near the project area.

Proposed Action

General Consequences of the Proposed Action

In the long term, occupation of housing and operation and maintenance of the tribal government facilities and infrastructure would result in higher noise levels than currently exist at the site. However, the proposed rural residential land uses would have relatively low noise levels and would not affect the residents in and near the project area.

Project-Specific Consequences

Stages 1, 2, and 3

With implementation of Stages 1, 2, and 3 at the South Hoh Highlands, noise would be generated by construction equipment and additional vehicle use. Construction would require using mechanical equipment such as bulldozers, loaders, rock trucks, chippers, and personnel vehicles. The loudest equipment likely to be used would be bulldozers and excavators, which can produce noise levels up to 85 dBA when perceived from approximately 50 feet away (Federal Highway Administration 2017).

In the short term, each of these stages would increase noise levels within the immediate vicinity of the work for the duration of construction. However, the nearest residence is over 1,000 feet away from the South Hoh Highlands, so there would be no effect on that location. Increases in noise levels would be temporary, would occur during normal waking hours, and vehicle and equipment runtimes would be kept to a minimum further minimizing any potential effects. Short-term impacts from noise would be negligible. Stages 1 through 3 would have minor adverse long-term noise impacts.

Stages 4, 5, and 6

During construction of Stages 4, 5, and 6, residents living in the housing built under the previous stages would be impacted by the increased noise levels of the construction activities, resulting in minor short-term adverse impacts. During construction of Stage 6, there would be minor short-term adverse impacts on the nearest residential receptor. BMPs, including limiting construction to daytime hours, would reduce the potential impact on residents of previous stages, as well as to the residence northeast of Stage 6. As the population of the Highlands increases, there would also be a slight increase in the overall noise within the project area due to the presence of people, everyday activities such as mowing lawns, garbage pickups, and an increase in vehicles within the area. Therefore, Stages 4, 5, and 6 would have minor long-term noise impacts.

Decommissioning of the Hoh Village on the Reservation

With the decommissioning of the Hoh Village on the Reservation, noise would be generated by machinery similar to the equipment used for construction. In the short term, the decommissioning would increase noise levels within the immediate vicinity of the work for the duration of demolition. However, decommissioning of the Hoh Village on the Reservation would generally occur after residents had moved out of this location. Increases in noise levels would be temporary, would occur during normal waking hours, and vehicle and equipment runtimes would be kept to a minimum further minimizing any potential effects. Short-term impacts from noise would be negligible. In the

long term, decommissioning would have minor beneficial effects related to noise because there would be less activity in the area of the village.

4.14. Land Use and Zoning

The South Hoh Highlands has been designated by the Tribe as the preferred location for Tribal Government and Public Service facilities. A conceptual Master Site Plan has been developed (**Figure 3-1**) designating areas for a mix of housing units and community services. The existing land uses surrounding the Hoh Highlands site are national park lands to the west, tribal and private lands to the north and south, and private timber land to the east. Some of the private parcels to the north and south contain residential structures, but the majority of the land is forested.

The Hoh Tribe does not require permitting for construction occurring on the Reservation or on Tribal lands. Structures built on the Reservation or trust lands are inspected by the tribal building official, with electrical inspections completed by state inspectors.

No Action Alternative

Land use would not be affected by the No Action alternative; however, the Tribe has purchased and brought the South Hoh Highlands into Trust status to provide improved opportunities for the Tribe and to provide safe living conditions outside of the floodplain and tsunami zones. The No Action alternative would not be consistent with the Tribe's Master Site Plan and continued land use in the Hoh Village on the Reservation would have a long-term adverse impact from persistent vulnerabilities to flood hazards and associated damage to buildings and infrastructure.

Proposed Action

Project-Specific Consequences

Stages 1 through 6

The Proposed Action would change the use of roughly 45 acres of the South Hoh Highlands parcel from forested to residential and governmental uses. While this would be a change in land use, it would be consistent with the Tribe's Master Site Plan and would increase the use of the site by Tribal members. It would also allow Tribal members the option of increasing personal safety in moving out of the Hoh River floodplain and the tsunami zone. Because the South Hoh Highlands has been designated by the Tribe for these uses, the Proposed Action is compatible with the Tribe's overall plan as well as surrounding land uses and would have no effect on zoning.

Decommissioning of the Hoh Village on the Reservation

In the long term, most of the existing structures and infrastructure in the Hoh Village on the Reservation would be removed and land uses would change from residential and governmental to open space and natural habitats. Some community structures and required infrastructure would be expected to remain to provide a place for community activities and access to the river and the ocean. These activities would be compatible with the Tribe's overall plan and would have no effect on land use and zoning.

4.15. Transportation

The project area is in a remote area with relatively little transportation infrastructure. The primary roadway providing access to the project area is a gravel road off Highway 101. Jefferson County Transit runs public buses to the Hoh Tribal Center, about 2 miles northwest of the project area, approximately every 4 hours each way during the week, and twice a day on weekends. A bus stop is located on Highway 101, near the project area entrance. Highway 101 borders the project area and is the only route to the larger community of Forks, 24 miles to the north. Highway 101 carries all of the traffic along the outer coast of the Olympic Peninsula, including passenger vehicles, freight, and logging trucks. Lower Hoh Road is located northwest of the project area and connects the South Hoh Highlands project area with the existing Hoh Village on the Reservation. This road only supports local traffic.

No Action Alternative

Under the No Action alternative, no FEMA-funded infrastructure would be established. The existing access road in the project area would not be widened and additional access roads would not be constructed. The lack of infrastructure would slow down or halt the continued effort of moving the Hoh Village on the Reservation to an area outside of the flood and tsunami hazard zones. The existing roads on the Hoh Reservation would continue to flood and be in danger of washouts, affecting residents' access to services, including emergency services and their ability to get on or off the Reservation. Therefore, there would be no change in the existing transportation network.

Proposed Action

General Consequences of the Proposed Action

For all stages as well as the decommissioning, construction crews would access the project area from Highway 101 and the existing internal roads. The existing gravel pit in the South Hoh Highlands area would be used for project construction material; therefore, there would be no need for project-related haul trucks on the highway. Decommissioning work may require some additional haul trucks to travel on the highway to carry demolition debris to an approved disposal site in Jefferson or Clallam Counties. However, the number of trucks would be small and would not add measurably to the traffic volumes on the highway. The work at the South Hoh Highlands may require several crews to be working at any given time and may require vehicle staging at points along the internal road network. No road closures would be expected. In the long term, the internal circulation pattern in the South Hoh Highlands would be improved. The primary access route would be widened, paved, and improved with a sidewalk on at least one side. This would improve the safety and capacity of the transportation network for both vehicles and pedestrians. There would be negligible short-term construction impacts on traffic and transportation in the entire project area and long-term benefits on transportation within the South Hoh Highlands from the increased circulation and improved road capacity and function. The Lower Hoh Road would be maintained to provide access to the river and the ocean for Tribal members.

Project-Specific Consequences

Stage 1

Stage 1 would include widening and paving the existing road, as well as constructing a new residential access road. Because the current uses of the existing road are infrequent tribal government trips for maintenance of the existing water tower and emergency services building, there would be no short-term construction-related impacts on traffic or transportation.

In the long-term, Stage 1 would widen the existing road and construct a new loop access road, improving the safety and capacity of the transportation network for both vehicles and pedestrians. Stage 1 would advance the Tribe's efforts to relocate residents of the Hoh Village away from flood and tsunami hazard areas. Stage 1 would have a long-term benefit on transportation within the project area.

Stages 2 through 6

Stages 2 through 6 would all involve the construction of structures. Stages 3, 4, and 6 would also include the construction of additional internal access roads, improving circulation within the project area. All of these stages would advance the Tribe's plan to relocate people and government services and facilities away from flood- and tsunami-related risks. However, construction of structures would require construction materials and equipment to be hauled on semitrucks and flatbed trucks along Highway 101, which may cause the occasional slowdown as trucks enter and leave the project area. Increased construction traffic and trucks may also have minor short-term adverse impacts on residents of earlier stages. Therefore, Stages 2 through 6 would have minor short-term construction-related adverse impacts on Highway 101 traffic and residents. There would be long-term beneficial impacts from improved circulation, safety, and opportunities to realize the plan to provide housing and services outside of hazard zones.

Decommissioning of the Hoh Village on the Reservation

Decommissioning of structures and infrastructure in the Hoh Village on the Reservation would proceed only after structures were vacated and would be carried out in compliance with applicable tribal building codes. Demolition and decommissioning of structures would require construction materials and equipment to be hauled on semitrucks and flatbed trucks along Highway 101, but the number of trucks would be small and would not result in a measurable change in traffic volumes. Therefore, the decommissioning of the Hoh Village on the Reservation would have negligible short-term construction-related adverse impacts on Highway 101. The Lower Hoh Road would remain in place to allow access to the river and ocean and to community structures retained to provide a place for community activities in close proximity to the water. There would be long-term beneficial impacts from less traffic in the lowlands and residents would no longer be blocked from residences or public services by floods and washouts.

4.16. Utilities

Existing utilities on the South Hoh Highlands site include a water tower (owned by the Tribe) and underground electrical services. The water tower currently draws water from wells along Lower Hoh

Road that is pumped up to the tower and then distributed to the site along an existing water main under the existing access road. The current power supply to the property is a single 200-amp service provided by Clallam County Public Utility District located in Forks, Washington. Pull boxes and the existing conduit along the main road in the project area are rated for three-phase service; although the existing service is a single-phase, 200-amp power service. A cell phone booster tower is located adjacent to the emergency services building on the site. There is currently no sewer or septic service in the site. Existing utilities in the Hoh Village on the Reservation include water, underground electrical services, and septic.

No Action Alternative

Under the No Action alternative, utility services, including water and sewer, would not be constructed or expanded. Existing conditions would not change relative to utilities. No short- or long-term impacts would occur. Utility services in the Hoh Village on the Reservation would continue to be at risk from floods and tsunamis.

Proposed Action

General Consequences of the Proposed Action

Construction of the Proposed Action would involve construction of new utility services and utility transmission and conveyance infrastructure within the South Hoh Highlands area and decommissioning or abandonment of existing utility infrastructure in the Hoh Village on the Reservation. Under Stages 1, 2, and 3, new utility transmission and conveyance infrastructure in the South Hoh Highlands would include water, sewer, electric, and telephone/internet cables for each building lot. New water mains and service connections to residential building lots for future housing would be added along the proposed access roads. Sewer collection lines and small underground pump stations would be installed under the road to provide service to building lots and carry sewage to a community drain field. A community drain field would be constructed under Stage 2 and 3, enabling on-site sewage disposal service.

Electrical service would be upgraded to a three-phase power supply, which would provide both more power for future development and would be a more consistent and efficient supply. The Clallam County Public Utility District would string new lines on existing power poles and through existing conduits along approximately 8 miles of Highway 101. The new three-phase line would then be pulled through the existing underground conduit on the South Hoh Highlands site. New underground electrical service would be installed along new access roads to each building lot developed in each stage.

Utilities would be extended as needed for each new stage, with the full anticipated buildout capacity constructed within the new improvements for each stage. For example, utilities in the primary access road would be sized to accommodate the future development so that the roadway would not need to be excavated again for later stages of development.

Construction activities would not be expected to disrupt services present at the time of each stage of construction. Any potential outages required to connect new services to existing services would be short in duration and residents would be provided ample notice of the schedule. Once the South Hoh Highlands housing development is complete, it is anticipated that residential housing in the Hoh Village on the Reservation would eventually be demolished and removed, and residential utilities would either be removed or abandoned in place. The Lower Hoh Road would remain to allow access to the river and ocean and some community structures and required infrastructure may remain to provide a place for community activities in close proximity to the water. Utility decommissioning or abandonment in the Hoh Village on the Reservation would occur as part of the structure decommissioning and only after the structure is vacated. Therefore, the Proposed Action would have a negligible short-term impact on utility services.

In the long term, the Proposed Action would increase the number of residents on tribal lands with an accompanying increase in consumption of electricity and water and generation of wastewater. However, because residents and government functions would move out of the flood and tsunami hazard areas, the net increase would be less than the proposed development in the Highlands. The existing water well production is anticipated to be adequate for the full buildout of all of the stages. The increased demand is not anticipated to exceed Clallam County Public Utility District's capacity, particularly because the project would be constructed in stages, allowing the District time to adapt. Therefore, there would be no long-term adverse impact on utilities. The provision of utilities to residents and government services in the Highlands, outside of flood and tsunami hazard areas, would be more reliable and provide resiliency to residents in the event of emergencies that affect the Reservation. Therefore, there would be a long-term benefit related to utilities under the Proposed Action.

4.17. Public Health and Safety

There is an existing tribal emergency services building on the project site, but it is not fully functional yet. Police and fire services are provided by the Hoh Indian Tribe from the village on the Reservation. There is a health clinic on the Reservation and the nearest hospital is in Forks, Washington, approximately 24 miles north on Highway 101.

No Action Alternative

Under the No Action alternative, existing conditions would not change relative to public health and safety. No short-term impacts on existing public health services or emergency services would occur. Under the No Action alternative, the existing public health and safety services would continue to be based in the Hoh Village on the Reservation where they are vulnerable to flood and tsunami risks, which could make services unavailable during an emergency when they may be most needed. In addition, the frequency and severity of flooding is expected to increase with climate change. Therefore, there could be a periodic, long-term, moderate adverse impact on public health and safety under the No Action alternative.

Proposed Action

General Consequences of the Proposed Action

Over the long term, improvements in utility infrastructure and communications under the Proposed Action could allow emergency responders to store or stage equipment out of the flood and tsunami hazard areas. The Proposed Action would enable the Tribe to advance efforts to relocate residents and government services currently in the Hoh Village on the Reservation. Relocation would both move people out of harm's way and provide a more resilient base of operations for emergency responders. Therefore, the Proposed Action would have a moderate long-term benefit on public health and safety.

Project-Specific Consequences

Stages 1, 2, and 3

Because the South Hoh Highlands site is currently uninhabited and would continue to be through Stage 3, there would be no effect from construction activities on public health and safety. Under the Proposed Action, the installation of roads and utilities would improve site accessibility and road safety. Power would be upgraded to the emergency services building (Stage 1), further increasing operational reliability, and the tsunami evacuation center (Stage 2) would be constructed to serve multiple purposes, such as an emergency operations center, evacuation center, outdoor emergency pet shelter, and areas for community gatherings. The center could serve people stranded in the area by an emergency regardless of tribal status, providing a broader public safety function. Stages 1, 2, and 3 would have moderate long-term benefits on public health and safety.

Stages 4 and 6

Construction of Stages 4 and 6 would be focused on areas not previously developed in other stages; therefore, construction activities would be out of the way of existing residents or users of the government facilities. Therefore, there would be negligible impacts on public health or safety during construction of Stages 4 and 6. Stages 4 and 6 would construct additional housing in the South Hoh Highlands and provide opportunities for people to move out of the flood and tsunami hazard areas in the Reservation. Therefore, Stages 4 and 6 would have moderate long-term benefits on public health and safety.

Stage 5

Components of Stage 5 would include upgrading the existing fire building to a shared First Responder facility, and construction of a medical and child welfare building, library/foodbank, administration office, education facility, recreational facilities, and sports facilities. Each of these facilities may be constructed at different times and each component has independent utility from the others. Construction of some of these facilities would be along the primary access road and work zones would be separated from other vehicle and pedestrian residential access along the road. Therefore, there would be a negligible impact on the health and safety of residents and visitors from short-term construction activities. Each of these government and community facilities would provide emergency services, or health and recreational services to residents and visitors. Therefore,

implementation of Stage 5 would have moderate beneficial long-term impacts on public health and safety.

Decommissioning of the Hoh Village on the Reservation

Decommissioning of structures and infrastructure in the Hoh Village on the Reservation would proceed only after structures were vacated and would be carried out in compliance with applicable tribal building codes. Decommissioning activities could create potential health and safety impacts from disturbance, handling, and disposal of LBP and ACM. These potential impacts are discussed in further detail in Section 4.12 (Hazardous Materials). Decommissioning would proceed only after tribal health and safety services had relocated to the South Hoh Highlands site and become operational to avoid gaps in health and safety service. Therefore, decommissioning of the Hoh Village on the Reservation would have no short- or long-term impacts on public health and safety.

4.18. Environmental Justice

Environmental justice is defined by EO 12898 (59 Federal Register 7629) and CEQ guidance (1997). Under EO 12898, demographic information is used to determine whether minority populations or low-income populations are present within the areas potentially affected by the range of project alternatives. If so, a determination must be made whether implementation of the project alternatives may cause disproportionately high and adverse human health or environmental impacts on those populations.

The study area for the proposed project includes the project area and access and staging areas. Environmental justice analysis requires using demographic data; therefore, the study area for the environmental justice analysis includes the Hoh Village on the Reservation, the tribal trust lands including the South Hoh Highland site, and an area within 0.5 miles. The study area represents the area where project-related impacts would occur, potentially causing disproportionately high and adverse effect on neighboring minority and low-income populations. For the purposes of this analysis, environmental justice populations are identified using demographic indicators and Environmental Justice Indexes. Demographic indicators are the percent of minority or low-income populations which are compared to the next larger geographic unit.

In accordance with the FEMA *EO 12898 Environmental Justice: Interim Guidance for FEMA EHP Reviewers*, environmental justice populations are defined by demographic indicators using the following criteria:

- A minority population exists if the People of Color Population equals or exceeds the 50th percentile compared to the average of the county where the affected environment is located.
- A low-income population exists if the Low-Income Population equals or exceeds the 50th percentile compared to the average of the county where the affected environment is located.

Using Environmental Justice Indexes, environmental justice populations are defined as present if any of the following indexes equal or exceeds the 80th percentile compared to the average of the state where the affected environment is located:

- National Scale Air Toxics Assessment (NATA) Air Toxics Cancer Risk
- NATA Respiratory Hazard Index
- NATA Diesel Particulate Matter
- Particulate Matter 2.5 Micrometers and Smaller (PM 2.5)
- Ozone
- Lead Paint Indicator
- Traffic Proximity and Volume
- Proximity to Risk Management Plan Sites
- Proximity to Treatment Storage and Disposal Facilities
- Proximity to National Priorities List Sites
- Underground Storage Tanks
- Wastewater Discharge Indicator

The study area is the Hoh Reservation and associated trust lands in Jefferson County, Washington. Table 4.4 and Table 4.5 depict the demographic indicators and Environmental Justice Indexes for the study area and the county and identify if environmental justice populations are present based on the criteria described above.

Table 4.4. Environmental Justice Population Demographic Indicators

Demographic Indicator	Study Area	Jefferson County Average	Environmental Justice Population Present
People of Color (percent)	59	13	Yes
Low-Income (percent)	55	28	Yes

Source: EPA 2022

Table 4.5. Environmental Justice Indexes

EJ Index	Index Percentile in State	Environmental Justice Population Present[1]
NATA Air Toxics	20	No
NATA Respiratory	21	No
NATA Diesel Particulate Matter	0	No
PM 2.5	0	No
Ozone	16	No
Lead Paint	82	Yes
Traffic	12	No
Risk Management Plan Sites	0	No
Treatment and Disposal	0	No
National Priorities List	6	No
Underground Storage Tanks	50	No
Wastewater Discharge	45	No

Source: EPA 2023
Notes:
[1] *Index equals or exceeds the 80th percentile compared to the average of Washington State; therefore, an environmental justice population is present.*

As shown in **Table 4.4** and **Table 4.5**, the study area meets the criteria for containing environmental justice populations based on thresholds for minority populations, low-income populations, and the lead paint index. EPA defines minority populations (people of color) as individuals who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino (all people other than non-Hispanic white-alone individuals). Low-income populations are measured as households with an income that is less than or equal to twice the federal poverty level. Environmental justice populations also include Native and Indigenous people. The population that resides and works within the study area, particularly within the Hoh Reservation, is predominantly Native American.

The lead paint index is based on the age of the housing stock in the study area, primarily indicating the presence of structures built prior to 1960 when lead paint was regularly used. This index does not account for any remediation that may have occurred.

No Action Alternative

Under the No Action alternative, existing environmental justice populations within the Hoh Village on the Reservation would remain within the hazard zones, vulnerable to flooding and tsunamis. As described in Section 3.1, a flood or tsunami would have moderate direct and indirect adverse impacts on the population within the study area. Direct impacts would include property damage, property loss, or personal injury, and indirect impacts would include declining housing quality from repetitive flood damage, the need to relocate populations off the Reservation, and impacts on the

cultural practices of subsistence hunting and fishing, basket weaving, canoeing, and local material harvest. Because tribal housing and services are only available on the Reservation, these impacts disproportionately affect an overburdened community. Tribal members that find housing off the Reservation that may be outside of the hazard zones are impacted by lost opportunities to engage in cultural practices and community. Non-tribal residents of the study area or the larger comparison area of Jefferson County do not face these same impacts; there are more housing options outside of hazard zones for persons who do not also face the loss of cultural connections and tribal services by exercising those options. Housing on the Reservation may also be subsidized by the Tribe and thus more available to low-income households, further limiting options to find housing options outside of hazard zones in the general area.

Under the No Action alternative there would be no change in the risk of a flood or tsunami and because primarily environmental justice populations would be impacted by these hazards, there would be a disproportionately high and adverse impact on environmental justice populations.

Proposed Action

General Consequences of the Proposed Action

In the long term, the Proposed Action would provide options for housing on Tribal lands outside of flood and tsunami hazard zones, and access to Tribal government services that are not subject to disruption from hazards. Therefore, the Proposed Action would have a long-term beneficial effect on environmental justice populations within the study area by reducing the exposure of an overburdened community to hazards.

Project-Specific Consequences

Stages 1, 2, and 3

Stages 1, 2, and 3 would involve construction of critical infrastructure in an area not at risk for flood or tsunami. Temporary construction impacts from Stages 1, 2, and 3, such as noise and traffic, would occur near the work sites. Constructing Stages 1, 2, and 3 would not have any direct or indirect adverse impacts to humans within the study area, including environmental populations, because there are no existing residences in the area where construction work would occur. Therefore, Stages 1, 2, and 3 would have no short-term adverse impact on environmental justice populations.

Stages 4, 5, and 6

Stages 4, 5, and 6 would involve construction of additional structures, including additional housing and community facilities. Construction of these stages would potentially impact residents of the 14 single-family or duplex housing units that would be constructed under Stage 3. Construction activities would produce noise and create potential safety impacts from construction near existing residences. These potential impacts are discussed in further detail in Section 4.13 (Noise) and Section 4.17 (Public Health and Safety).

Individuals who would take up residence in the homes constructed under Stage 3 would be expected to be members of the Tribe; therefore, it is reasonable to assume that the future residents of homes constructed under Stage 3 would be primarily from environmental justice populations. Therefore, Stages 4, 5, and 6 would have a short-term minor adverse impact on environmental justice populations. The short-term construction impacts on the environmental justice residents of Stage 3 would not be disproportionately high and adverse. With each stage of construction, the disproportionate impact of flooding and tsunami hazards on the Reservation population would be reduced because there would be increased housing options on Tribal lands but outside of the hazard zones, and Tribal government services would be increasingly available outside of the hazard areas. Therefore, Stages 4, 5, and 6 would have no disproportionate high and adverse impact on environmental justice populations.

Decommissioning of the Hoh Village on the Reservation

Decommissioning of structures and infrastructure in the Hoh Village on the Reservation would proceed only after structures were vacated and tribal services were relocated to the South Hoh Highlands site. Therefore, decommissioning of the Hoh Village on the Reservation would have no disproportionate high and adverse impact on environmental justice populations.

4.19. Summary of Effects and Mitigation

Table 4.6 provides a summary of the potential environmental effects from implementing the Proposed Action, any required agency coordination efforts or permits, and any applicable proposed mitigation or BMPs.

Table 4.6. Summary of Impacts and Mitigation

Resource	Potential Impacts	Mitigation/BMPs
Geology, Topography, Soils, and Farmland Soils	Geology – no short-term impacts; minor long-term benefit. Topography, Soils, and Farmland Soils – negligible short- and long-term impacts.	N/A
Visual Quality and Aesthetics	Stages 1, 2, and 3 would have no impact on visual quality and aesthetics. Stages 4 and 5 would have a minor adverse impact in the short term. In the long term, Stages 4 and 5 would have a negligible impact on visual quality and aesthetics. Stage 6 would have a minor short- and long-term adverse impact on visual quality and aesthetics. Decommissioning of the Hoh Village on the Reservation would have minor short term adverse impact and moderate long-term beneficial impact on visual quality and aesthetics.	N/A

Resource	Potential Impacts	Mitigation/BMPs
Air Quality and Climate	All project activities would have negligible short-term impacts on air quality and climate. In the long term, all project activities would have negligible impacts on air quality, and a moderate benefit related to resiliency against climate change.	• Emission-producing equipment use would generally occur from 8 a.m. to 4 p.m., leaving time for emissions to dissipate before starting the following day.
Surface Waters and Water Quality	No short-term impacts on surface waters and water quality. Minor long-term beneficial impacts from decommissioning of the Hoh Village on the Reservation and associated reduction of flood-born debris and improved water quality.	• Erosion control BMPs, including but not limited to, swales and silt fences.
Wetlands	No short- or long-term impacts on wetlands.	• Avoid wetlands placing fill or clearing in wetlands. • Approximately 50-foot buffers maintained around wetlands. • Erosion control BMPs, including but not limited to, swales and silt fences.
Floodplains	No short-term impacts on floodplains. Moderate long-term beneficial impacts from decommissioning of the Hoh Village on the Reservation and associated reduction of flood-born debris and improved water quality.	N/A
Vegetation	Stages 1 through 5 would have negligible short-term impacts from removing vegetation and invasive species; Stage 6 would have minor long-term impacts from vegetation removal if it were to take place before 2035. Stages 1 through 6 would have a cumulatively minor long-term adverse impact from conversion of up to 45 acres of potential forest land. Decommissioning of the Hoh Village on the Reservation would have a minor long-term beneficial effect on vegetation.	N/A
Fish and Wildlife	Minor short- and long-term impacts on wildlife and migratory birds from vegetation removal; no impact on eagles; no short-term impact on aquatic species. Long term beneficial impact to aquatic species from improved water quality along the Hoh River.	• Erosion control BMPs would be installed, as necessary, to prevent sedimentation from entering downstream waterbodies.

Resource	Potential Impacts	Mitigation/BMPs
Threatened and Endangered Species	All Stages would have none to negligible short-term impacts on MAMU and NSO from project-related noise. Stage 1 would not result in long-term impacts on MAMU or NSO. Stages 2 through 6 would have negligible effect on MAMU and NSO from increased human activity. Stages 1 through 6 may affect, but would not likely adversely affect, MAMU and NSO. Decommissioning of the Hoh Village on the Reservation would have no short-term effect on ESA listed species and no long-term effect on MAMU, NSO, or YBC, but would have a long-term beneficial effect on bull trout from decreased pollution entering surface waters.	• Erosion control BMPs would be installed as necessary to prevent sedimentation from entering downstream waterbodies.
Cultural Resources	No historic properties affected under Stages 1 through 5. Stage 6 would require reevaluation of eligibility if federally funded or if federal permit or approvals required.	• An Inadvertent Discovery Plan will be implemented for this project, to be used in the event of unanticipated discovery of cultural resources during major construction. • If federal funding, permit, or approval required for Stage 6, Section 106 consultation may be required.
Environmental Justice	The Proposed Action would have no short-term disproportionately high and adverse impact on environmental justice populations. Long-term beneficial effects would occur.	N/A

Resource	Potential Impacts	Mitigation/BMPs
Hazardous Materials	The Proposed Action would have a negligible short-term adverse impact. The Proposed Action would have a minor long-term adverse impact.	• Surveys to identify LBP and ACM would be conducted prior to structure demolition; LBP and ACM would be handled and disposed of according to federal, state, and local regulations. • Equipment would be kept in good condition. • Any spills or leaks from equipment would be contained and cleaned up right away. • All equipment and project activities would adhere to local regulations to reduce the risk of hazardous leaks and spills.
Noise	Stages 1 through 3 and decommissioning would have negligible short-term impacts from increased noise within the project area and the immediate vicinity of the work. Stages 4 through 6 would have minor short-term impacts on residents of previous stages. All stages would have minor adverse long-term noise impacts. Decommissioning would have minor beneficial long-term impacts.	• Noise-producing equipment use would occur during less-sensitive, waking hours (7 a.m. to 10 p.m.). •
Land Use and Zoning	Although existing land uses would change at both the South Hoh Highlands and the Hoh Village on the Reservation, there would be no effect on zoning because the proposed action is compatible with the Tribe's overall plan.	N/A
Transportation	Stage 1 and decommissioning would have negligible short-term impacts. Stages 2 through 6 would have minor short-term adverse impacts. All stages would have long-term benefits.	N/A
Utilities	The Proposed Action would have a negligible short-term adverse impact. The Proposed Action would have a long-term beneficial effect.	N/A
Public Health and Safety	All stages would have a moderate long-term benefit.	N/A

SECTION 5. Cumulative Effects

This section addresses the potential cumulative effects associated with the implementation of the Proposed Action. As defined by the CFR, cumulative effects are effects on the environment that result from the incremental effects of a proposed action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or nonfederal) or person undertakes those other actions (40 CFR 1508.1, 2022). CEQ's regulations for implementing NEPA require an assessment of cumulative effects during the decision-making process for federal projects. The CFR also states that cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The South Hoh Highlands site is in a generally undeveloped area; past projects on the South Hoh Highland parcel include excavation of a gravel pit, construction of a water tower and a fire station, and the parcel was logged as recently as 2006. The Proposed Action supports the Hoh Indian Tribe's long-term future objective to relocate residents of the existing Hoh Village to the South Hoh Highlands parcel to reduce the impact of severe storms, floods, and tsunamis on Hoh Indian Reservation residents. As government services transition to the South Hoh Highlands, human activity would be expected to increase in the vicinity of the South Hoh Highlands and decrease in the vicinity of the Hoh Village on the Reservation. As the number of houses increases in the South Hoh Highlands, residents would have the opportunity to move out of the flood and tsunami hazard areas and most of the existing structures on the Reservation would be decommissioned or removed.

In combination with past activities that have disturbed the South Hoh Highlands, the Proposed Action would further disturb the site, introducing infrastructure and increasing human activity. However, past activities have already resulted in a parcel that is substantially altered from the surrounding forest lands and the addition of the Proposed Action would be a minor incremental increase in alteration.

There are no reasonably foreseeable future projects in the lands surrounding the South Hoh Highlands. Lands to the west are preserved in the Olympic National Park. The parcels to the north and south are owned by the Tribe, The Nature Conservancy, and several private owners. Some of the privately held parcels have a single-family residence already constructed on them and they do not appear to be part of larger timber holdings. The land to the east is currently owned by a private timber company and the land could be foreseeably subject to timber harvest at some time in the future. While the trees appear to be older than those on the South Hoh Highlands, it may still be several decades before they are ready for harvest again.

The future transition of government services to the South Hoh Highlands would be offset by a decrease in activity in the vicinity of the Hoh Village on the Reservation, including abandonment and/or decommissioning of most existing structures in the Hoh Village on the Reservation. This reduction in activity is consistent with the long-term objective to relocate residents and services of the existing Hoh Village on the Reservation to the South Hoh Highlands parcel to reduce the impact of severe storms, floods, and tsunamis. Because transitioning activities from the current location to

the South Hoh Highlands would reduce the potential impacts of floods and tsunamis on residents and services within the Hoh Village on the Reservation, the effect of reasonably foreseeable future activities on residents is expected to be beneficial. There would also be long term related benefits on riparian vegetation, water quality, wetlands, and other floodplain functions along the Hoh River.

Therefore, the incremental effects of the of the Proposed Action on the cumulative impacts associated with past, present, and reasonably foreseeable future actions in the project area and existing Hoh Village on the Reservation are expected to be minor.

SECTION 6. Agency Coordination, Public Involvement, and Permits

This section provides a summary of the agency coordination efforts and public involvement process for the proposed Hoh Indian Tribe Relocation Development project. In addition, an overview of the permits that would be required under the Proposed Action is included.

6.1. Agency Coordination

Per the NHPA, FEMA consulted with the Hoh THPO on April 12, 2023, and the THPO concurred with the determination that there would be no historic properties affected on May 2, 2023.

FEMA initiated informal ESA consultation with USFWS on March 17, 2023. FEMA determined that the Proposed Action may affect, but is not likely to adversely affect, listed species. USFWS concurred with this determination on March 28, 2023.

FEMA submitted a Farmland Conversion Impact Rating form to the NRCS June 21, 2023, and the form was completed and returned to FEMA.

6.2. Public Participation

In accordance with FEMA's NEPA procedures, FEMA is releasing this draft PEA to the public and resource agencies for a 30-day public review and comment period. Comments on this draft PEA will be incorporated into the final PEA, as appropriate. This draft PEA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action; however, FEMA will take into consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. If no substantive comments are received from the public and/or agency reviewers, this draft PEA will be finalized and a FONSI will be issued by FEMA.

The Hoh Indian Tribe will make the draft PEA available on its website at https://hohtribe-nsn.org/. The draft PEA will also be available on FEMA's website at https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository. A hard copy of the draft PEA will be made available at the Natural Resources Office on the Hoh Reservation at 2196 Lower Hoh Road, Forks, WA. The comment period for the draft PEA will start when the public notice of PEA availability is published and will extend for 30 days. Comments on this draft PEA may be submitted via email to FEMA at fema-r10-ehp-comments@fema.dhs.gov (please include "Hoh Indian Tribe Relocation Development" in the subject line). Comments also may be submitted via mail to:

FEMA Region 10
Science Kilner, Regional Environmental Officer
130th 228th Street SW
Bothell, WA 98021

6.3. Permits

The Hoh Indian Tribe will be responsible for obtaining any necessary tribal, state, or federal permits needed to conduct the proposed work. The Proposed Action would be subject to the prohibitions of the MBTA, and the Hoh Indian Tribe would be responsible for obtaining and complying with any necessary permits from USFWS before starting work. The Proposed Action would take place entirely on Tribal lands, and the Hoh Indian Tribe and FEMA have not identified any other necessary permits at this time.

SECTION 7. List of Preparers

The following is a list of preparers who contributed to the development of the Hoh Indian Tribe Relocation Development draft PEA for FEMA. The individuals listed below had principal roles in the preparation of this document. Many others contributed, including senior managers, administrative support personnel, and technical staff, and their efforts in developing this draft PEA are appreciated.

Federal Emergency Management Agency

Reviewers		Role in Preparation
Kilner, Science	Regional Environmental Officer	Technical Review and Approval
Fisher, Philip	Archaeologist	NHPA consultation
Parr, Jeffrey	Biologist	ESA compliance
Kachra, Galeeb	NEPA Specialist	Quality Control/Technical Review

CDM Smith

Preparers	Experience and Expertise	Role in Preparation
Egge, Mathew	Transportation Planner	NEPA Documentation
Fogler, Wilson	Biologist	NEPA Documentation
Roberts, Jessica	Environmental Engineer	NEPA Documentation
Shepard, Brian	GIS Specialist	GIS
Stenberg, Kate	PhD, Senior Biologist, Senior Planner	Quality Control/Technical Review

This document was prepared by CDM Smith under Contract No.: 70FA6020D00000002, Task Order: 70FA6021F00000075.

SECTION 8. References

AASHTO. 2018. Policy on Geometric Design of Highways and Streets. Accessed August 11, 2023. Available at: https://aashtojournal.org/2018/09/28/aashto-releases-7th-edition-of-its-highway-street-design-green-book/.

AASHTO. 2023. Traffic Noise and Transportation. Accessed May 10, 2023. Available at: https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/.

CDM Smith. 2022. Site Visit Summary. August 30, 2022.

Council on Environmental Quality (CEQ). 2021. National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions. Federal Register 86 FR 10252. Accessed December 23, 2022. Available at: https://www.federalregister.gov/documents/2021/02/19/2021-03355/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions.

_____. 2016. *Final NEPA Guidance on Consideration of Greenhouse Gas Emissions and the Effects on Climate Change.* Accessed December 23, 2022. Available at: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf.

Council on Environmental Quality (CEQ). 1997. Environmental Justice, Guidance Under the National Environmental Policy Act. Accessed on November 30, 2022. Available at: https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/G-CEQ-EJGuidance.pdf.

Delaney, D. K., T. G. Grubb, P. Beier, L. L. Pater, and M. H. Reiser. 1999. "Effects of helicopter noise on Mexican spotted owls." Journal of Wildlife Management 63:60-76.

Dolcimascolo, A., D. W. Eungard, C. Allen, R. J. LeVeque, L. M. Adams, D. Arcas, V. V. Titov, F. I. González, C. Moore, C. E. Garrison-Laney, and T. J. Walsh. 2022. Detailed tsunami inundation of the Olympic Peninsula – Hoh, Map Sheet 2. Washington Geological Survey, Map Series 2022-01, Map Sheet 2 of 14. Accessed August 31, 2023. Available at: https://wadnr.maps.arcgis.com/apps/instant/basic/index.html?appid=0e9106679f734948928ee46e5b744b99.

Federal Emergency Management Agency. 2022. Biological Assessment, Hoh Tribe Relocation Development Project, LPDM-PJ-10-WAIT001-2002. December 2022.

Federal Highway Administration. 2017. *Construction Noise Handbook.* Section 9.0 Construction Equipment Noise Levels and Ranges. Available at: https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook09.cfm.

Hamer, T.E., and S.K. Nelson. 1998. "Effects of disturbance on nesting marbled murrelets: summary of preliminary results." Portland, OR, U.S. Fish and Wildlife Service.

Hoh Indian Tribe. 2022. Hazard Mitigation Plan Update. Accessed November 17, 2022. Available at: https://hohtribe-nsn.org/wp-content/uploads/2022/10/Hoh_Tribe_HMP_Public_Review_10172022.pdf.

International Code Council. 2018. The international Building Code. Accessed August 4, 2023. Available at: https://www.iccsafe.org/products-and-services/i-codes/2018-i-codes/ibc/.

Koehlinger, J. 2023. Personal communication, Hoh Tribal Interim THPO and Natural Resources Director to FEMA. Email dated July 21, 2023.

Landscope America (Landscope). 2022. Ecoregions in Washington. Accessed September 15, 2022. Available at: http://www.landscope.org/washington/natural_geography/ecoregions/.

Merced County. 2019. Draft Environmental Impact Report for the Oliveira Dairy Expansion Project, Appendix F-5: Air Quality Technical Appendix Proposed Greenhouse Gas Emissions Threshold. SCH # 2018081058 April 2019. Accessed December 23, 2022. Available at: https://files.ceqanet.opr.ca.gov/233988-2/attachment/EBVkS54LtLJIFPB48ppLI0BFLHtsEiGok3Y9paxLG44Qz0VzFCR5opDMHEnXpLuwokebM1ZDVP3zvLgn0.

Tabor, R.W. and W.M. Cady. 1978. Geologic Map of the Olympic Peninsula, Washington. Accessed September 2022. Available at: https://pubs.er.usgs.gov/publication/i994.

U.S. Climate Data. 2022. Climate Forks-Washington. Accessed September 15, 2022. Available at: https://www.usclimatedata.com/climate/forks/washington/united-states/uswa0149.

U.S. Environmental Protection Agency (EPA). 2023. EJ Screen: Environmental Justice Screening and Mapping Tool. Accessed April 18, 2023. Available at: https://www.epa.gov/ejscreen.

_____. 2022a. How's My Waterway. Accessed September 15, 2022. Available at: https://mywaterway.epa.gov/community/171001010707/overview.

_____. 2022b. NEPAssist. Accessed September 15, 2022. Available at: https://www.epa.gov/nepa/nepassist.

_____. 2022c. Nonattainment Areas for criteria Pollutants (Green Book). Accessed September 14, 2022. Available at: https://www.epa.gov/green-book.

———. 2016a. NAAQS Table. Accessed June 30, 2020. Available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table.

———. 2016b. What Climate Change Means for Washington. EPA 430-F-16-049, August 2016. Accessed April 19, 2023. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-wa.pdf.

———. 2010. Level III and IV Ecoregions of Washington. Accessed April 26, 2023. Available at: https://gaftp.epa.gov/EPADataCommons/ORD/Ecoregions/wa/wa_eco.pdf.

U.S. Fish and Wildlife Service (USFWS). 2022a. Environmental Conservation Online System: Yellow-billed Cuckoo (*Coccyzus americanus*). Accessed September 16, 2022. Available at: https://ecos.fws.gov/ecp/species/3911.

_____. 2022b. IPaC – Information for Planning and Consultation. Accessed September 14, 2020. Available at: https://ecos.fws.gov/ipac.

_____. 2020. Formal Section 7 Programmatic Consultation on BPA's Columbia River Basin Habitat Improvement Program (HIP4) for the Columbia River Basin. Oregon Fish and Wildlife Office, Portland, Oregon. TAILS # 01EOFW00-19FY-F-0710.

_____. 2014a. Effects Analysis for Marbled Murrelet within Washington Municipal Boundaries. Supplemental Analysis for Washington State Department of Transportation by USFWS. Lacey, Washington.

_____. Effects Analysis for Spotted Owl in the Western Washington Lowlands Province. Supplemental Analysis for Washington State Department of Transportation by USFWS. Lacey, Washington.

_____. 2011. Climate Change in the Pacific Northwest. Accessed July 1, 2020. Available at: https://www.fws.gov/pacific/Climatechange/changepnw.html.

_____. 1997. Recovery Plan for the Marbled Murrelet (Washington, Oregon, and California Populations. Accessed September 14, 2022. Available at: https://ecos.fws.gov/docs/recovery_plan/970924.pdf.

U.S. Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey. Accessed September 16, 2022. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Washington Department of Ecology (WDOE). 2023. Stream Channel Migration Zones. Accessed January 4, 2022. Available at: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Stream-channel-migration-zones.

_____.2022. Mandatory Greenhouse Gas Reports. Accessed December 23, 2022. Available at: https://ecology.wa.gov/Air-Climate/Reducing-Greenhouse-Gas-Emissions/Tracking-greenhouse-gases/Mandatory-greenhouse-gas-reports#:~:text=Who%20is%20required%20to%20report,total%20GHG%20emissions%20in%20Washington.

Washington Department of Fish and Wildlife (WDFW). 2022a. Bald Eagle (*Haliaeetus leucocephalus*). Accessed September 16, 2022. Available at: https://wdfw.wa.gov/species-habitats/species/haliaeetus-leucocephalus.

_____. 2022b. Golden Eagle (*Aquila chrysaetos*). Accessed September 16, 2022. Available at: https://wdfw.wa.gov/species-habitats/species/aquila-chrysaetos#desc-range.

_____. 2022c. Statewide Washington Integrated Fish Distribution. Accessed September 16, 2022. Available at: https://geo.wa.gov/datasets/wdfw::statewide-washington-integrated-fish-distribution/about.

_____. 2021. Priority Habitats and Species GIS Data. Accessed April 25, 2023. Available at: https://geodataservices.wdfw.wa.gov/hp/phs/.

Washington Department of Natural Resources. No date. Geologic Risk for Washington State. Accessed September 4, 2023. Available at: https://www.dnr.wa.gov/publications/ger_geologic_risk.pdf.

Washington Military Department Emergency Management Division (WMDEMD). 2013. Understanding Tsunami Hazards in the State of Washington: How Vulnerable is the Hoh Reservation to Tsunamis? Accessed January 4, 2023. Available at: https://mil.wa.gov/asset/5ba420a91521d.

Westech Company. 2022. Environmental Assessment: Hoh Highlands Housing Project, Jefferson County, Washington.

Westech Company. 2020. Wetland Delineation Hoh Highland Housing Project Assessor's Parcel #'s 613-28-4001 & 4002 Hoh Reservation, Washington.

WillametteCRA. 2023. Cultural Resources Assessment for the Hoh Tribe Relocation Development Project, Jefferson County, Washington.

Appendices

Appendix A. Programmatic Environmental Assessment Compliance Checklist

Appendix B. Executive Order 11988 Floodplain Management 8-step Checklist

Appendix C. Agency Coordination

Appendix A. Programmatic Environmental Assessment Compliance Checklist

PEA Compliance Checklist

I. Project Information

Hoh Indian Tribe Relocation Development	Date:
Assessment under the Hoh Indian Tribe Relocation Development Programmatic Environmental Assessment (PEA) and Finding of No Significant Impact (FONSI) **This form is designed to help FEMA review each stage of the Hoh Tribe Relocation Development projects to determine if it should be covered by this PEA or whether another level of evaluation would be more suitable, including a tiered EA, an SEA, a stand-alone EA, or an environmental impact statement. This checklist may also be used by other federal agencies to evaluate whether a particular funding decision may be covered by this PEA. The checklist may serve as internal agency documentation of the review.*	
Federal Action triggering NEPA (e.g., Grant Program):	
Project Name and Project Number:	
Name and Contact Information of Person Completing this Form:	

Describe Purpose and Need for Action:

Is the Action located on the Hoh Highlands Parcel south of Highway 101?

☐ Yes

☐ No – The PEA only covers activities on the Hoh Highlands parcel south of Highway 101.

Action(s) Proposed:

Stage 1 and Stage 2 have been evaluated in the PEA as specific grant applications. No further review is necessary.

Stage 3

☐ Housing

☐ Community Drain Field

PEA Compliance Checklist

Stage 4

- ☐ Additional Housing
  - ☐ Single Family
    Number of Units: _____
  - ☐ Multi-family
    Number of Units: _____
  - ☐ Elder Housing
    Number of Units: _____
- ☐ Additional Infrastructure
  - ☐ Secondary Access Roads
  - ☐ Water
  - ☐ Sewer
  - ☐ Electrical

Stage 5

- ☐ Fire Station Upgrades
- ☐ Medical and Child Welfare Building
- ☐ Library/Foodbank
- ☐ Administration Office
- ☐ Education Facility
- ☐ Recreational Facilities
- ☐ Sports Facilities

Stage 6

- ☐ Future Housing
  - ☐ Single Family
    Number of Units: _____
  - ☐ Multi-family
    Number of Units: _____
  - ☐ Elder Housing
    Number of Units: _____
  - ☐ Future Infrastructure
    - ☐ Secondary Access Roads
    - ☐ Water
    - ☐ Sewer
    - ☐ Electrical

Decommissioning of the Hoh Village on the Reservation

- ☐ Demolition and removal of structures and utilities from the floodplain

PEA Compliance Checklist

Other proposed activities not included above:

Describe the No Action Alternative:

Describe the Proposed Action:

Describe Public/Agency Involvement to Date (if any):

List Required Permits, Approvals, or Authorizations and Status of Each:

PEA Compliance Checklist

II. Analysis of Environmental Consequences

For each resource, confirm that the potential effects of the proposed project are described in the PEA and that mitigation measures described in the PEA will be applied to the project. Review the Additional Impacts Questionnaire (Section III) and document if there are any additional impacts, resource types affected, or proposed mitigation for those additional impacts. If there are additional impacts the PEA coverage may not apply (check "no" in the last column). Determine whether the combination of potential effects described in the PEA and any additional impacts would result in significant impacts after mitigation measures are applied. If the impacts of the project would be significant, then the PEA coverage may not apply (check "no" in the last column). If there are additional impacts related to a particular resource that are not discussed in the PEA, a Tiered EA may need to be prepared even if the PEA thresholds are not exceeded. A Tiered EA may focus on only the resource(s) with the additional impacts and the resources marked "no" in the last column provide a guide for the scope of the tiered EA. Resources associated with coastal zones, wild and scenic rivers, and essential fish habitat are not included below because they do not occur in the Hoh Highlands. If a proposed project includes actions or affects resource types that are not covered in the PEA, a tiered EA, an SEA, or a standalone EA may be required. Projects outside of the Hoh Highlands south of Highway 101 or the decommissioning of the existing Hoh Village on the Reservation are not covered by the PEA.

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts **See Section III. Additional Impact Questionnaire*	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Geology, Topography, and Soils					
Visual Quality and Aesthetics					
Air Quality					
Surface Waters and Water Quality					
Wetlands					
Floodplains					
Vegetation					
Fish and Wildlife					

PEA Compliance Checklist

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts **See Section III. Additional Impact Questionnaire*	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Threatened and Endangered Species					
Cultural Resources					
Hazardous Materials					
Noise					
Transportation					
Utilities					
Public Health and Safety					
Environmental Justice					

PEA Compliance Checklist

III. Additional Potential Effects Questionnaire

Additional effects may include 1) effects that exceed thresholds described in the PEA, 2) effects that are not covered by the PEA even though they may not exceed thresholds for the PEA, or 3) effects on resource types not discussed in the PEA. The questions below are designed to help identify additional effects that may not be covered under the PEA. If the answer to a given question is 'Yes', additional impacts may occur and should be described in an attachment and summarized in Section II.

If additional impacts not fully described in the PEA may occur, then a Tiered EA, SEA, an EA, or an EIS might need to be prepared. A Tiered EA may be a brief document focusing on only the specific additional impact(s) identified. An SEA may also be a brief document focused on only those actions or resource types not covered in the PEA.

Geology, Topography, and Soils
Would the proposed project impact a topography or soils to a greater extent than described in the PEA? Would there be impacts related to seismic hazards that are not described in the PEA?

Visual Quality and Aesthetics
Would the proposed project result in impacts on the visual quality of the project area or for adjacent viewers? Would there be an increase in contrast or a change in context?

Would viewsheds be obstructed?

Air Quality
Would the proposed project result in new long-term source(s) of air emissions?

Has the attainment status of Jefferson County degraded below "attainment" based on the latest EPA Greenbook status? Would the proposed project involve many truck trips or a long duration of heavy equipment operation? If yes to both, a determination on whether the proposed project would exceed *de minimis* thresholds should be performed.

Climate
Would the proposed project result in new long-term source(s) of greenhouse gas emissions?

Surface Waters and Water Quality
Would the proposed project cause or contribute to long-term impacts on water quality? Would the proposed project impact water quality in such a way that TMDLs would be exceeded?

Would the proposed project require compensatory mitigation under Clean Water Act Section 404 regulations?

Wetlands
Would the proposed project adversely affect wetlands as determined through the 8-step process? Would state and federal regulatory agencies likely require compensatory mitigation for those adverse effects?

Floodplains
Would the project result the construction of new structures in the floodplain? Would the proposed project have a permanent adverse impact on a floodplain and require mitigation measures not included in the PEA?

Vegetation
Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all vegetation species in the project vicinity?

PEA Compliance Checklist

Would the proposed project contribute to the spread of invasive species?

Fish and Wildlife
Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all fish and wildlife species in the project vicinity?

Would the proposed project affect bald eagle nesting areas or winter roosts?

Would vegetation be removed during the migratory bird nesting/breeding season?

Threatened and Endangered Species
Would the determination of effect under Section 7 of the Endangered Species Act be "may affect, likely to adversely affect?"

Cultural Resources
Has the federal agency made, or is it expected to make, an Adverse Effect determination that would need to be resolved through a memorandum of understanding with the THPO, SHPO, or other consulting parties?

Hazardous Materials
Would the proposed project involve the release, clean up, or disposal of hazardous materials?

Has a phase I or II environmental site assessment indicated that contamination exceeding reporting levels is present in or near the project area and further action is warranted?

Land Use and Zoning
Is the proposed project or location inconsistent with Tribal land use policies and plans?

Noise

Would the proposed project generate new long-term source(s) of noise?

Would the proposed project require pile driving and would the noise impacts be more than moderate after mitigation measures are employed?

Traffic and Transportation
Would the proposed project have long-term impact(s) on traffic and transportation, both internally within the Hoh Highlands and on Highway 101?

Public Services and Utilities
Would the proposed project have long-term impact(s) on public services and utilities, including a permanent loss or major rerouting of utilities?

Public Health and Safety
Would the proposed project have long-term adverse effects on public health and safety, such as a permanent source of emissions or permanent reduction of water quality?

Environmental Justice
Would there be adverse impacts on Native American populations such that outreach and coordination to resolve potential adverse impacts would be required?

Appendix B. Executive Order 11988 Floodplain Management 8-step Checklist

Executive Order 11988 Floodplain Management Checklist (44 CFR Part 9)

Project Information

Project Title: **Hoh Indian Tribe Relocation Development**
Location: **Hoh Village on the Reservation and South Hoh Highlands**
Description of Proposed Action: **The proposed action is comprised of six stages that are components of a larger effort to relocate the Hoh Village on the Reservation, which is partially in the floodplain, to the South Hoh Highlands outside of the floodplain. The proposed action also includes decommissioning of the Hoh Village on the Reservation. See the Programmatic Environmental Assessment (PEA) Section 3.2 for a complete project description.**

Applicability

Actions which have the potential to affect floodplains or their occupants, or which are subject to potential harm by location in floodplains.

Will the proposed action potentially adversely affect the floodplain or support floodplain development? **No.**

Will the proposed action potentially be adversely affected by the floodplain? **No. The proposed action is to remove existing development from the floodplain. It supports the Tribe's long-term vision for resilience to climate change effects by relocating the Hoh Village on the Reservation to the South Hoh Highlands. The South Hoh Highlands are outside of the 1-percent annual chance floodplain, the 0.2-percent annual chance floodplain, and tsunami inundation zones.**

Critical Action

Determine whether the proposed action is an action for which even a slight chance of flooding is too great. Critical actions must be reviewed against the 500-year floodplain.

Is the action a critical action? No. Only the decommissioning of the Hoh Village on the Reservation involves work in the floodplain and is not a critical action. Decommissioning would include the dismantling and removal of residential housing and government facilities as well as the removal, decommissioning, or abandonment of utilities from the existing Hoh Village on the Reservation.

Step 1: Determine Proposed Action Location

Determine whether the proposed action is located in the 100-year floodplain (500-year floodplain for critical actions); and whether it has the potential to affect or be affected by floodplain or wetland (44 CFR Section 9.7).

Floodplain Determination

Flood Hazard Data

Is the project located in a 100-year floodplain as mapped by FEMA FIRM? **Stages 1 through 6 are outside of the 100-year floodplain as mapped by FEMA Federal Insurance Rate Map (FIRM). For Decommissioning, part of the Hoh Village on the Reservation is located in the floodplain of the Hoh River per FEMA FIRM Panel number 53031C1000C effective June 7,**

2019. About half of the Hoh Village on the Reservation is in Zone X, an area of minimal flood hazard and the other half of the Hoh Village on the reservation is in Zone A, a 100-year floodplain. Please see PEA section 4.7.

Is the project located in a 500-year floodplain as mapped by a FEMA FIRM? **No.**

Floodway/Coastal High Hazard Area

Is the project located in a floodway or coastal high hazard area? **No.**

Wetland Determination

Is the project in a wetland as mapped by the National Wetlands Inventory? **No. According to the USFWS National Wetlands Inventory Mapper, there are no surface waters or wetlands in the developed areas of the Hoh Village on the Reservation or in the South Hoh Highlands. See PEA Section 4.5.**

Scope

All 8 Steps required.

Step 2: Early Public Notice

Notify the public at the earliest possible time of the intent to carry out an action in a floodplain and involve the affected and interested public in the decision-making process. (44 CFR Section 9.8).

Was notice provided as part of a disaster cumulative notice? **Not applicable for Legislative Pre-Disaster Mitigation (LPDM) Grant Program.**

Was a project specific notice provided? **Initial draft notice is being made with the draft PEA. The notice is posted on https://www.fema.gov/emergency-managers/practitioners/enviornmental-historic/nepa-repository. FEMA is also publishing the public notice of the draft PEA availability in the Forks Forum on November 16, 2023.**

Step 3: Analysis of Practicable Alternatives

Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (including alternate sites, actions, and the "no action" option). If a practicable alternative exists outside the floodplain, FEMA must locate the proposed action at the alternative site (44 CFR Section 9.9).

See Section 3 of the PEA, which describes the no action alternative, the proposed action, and alternatives considered and dismissed.

Alternative Options

Is there a practicable alternative site location outside the 100-year floodplain (or 500-year floodplain for critical actions?) **No. Decommissioning must occur inside the 100-year floodplain.**

Is there an alternative action which has less potential to affect or be affected by the floodplain? **No. Decommissioning involves the dismantling and removal of residential housing and government facilities, and the removal, decommissioning, or abandonment of utilities of the existing Hoh Village on the Reservation, which is located in the floodplain. Areas where structures are removed would be converted into open space and natural habitats. See Section 3.2.7 of the PEA.**

Is the "no action" alternative the most practicable alternative? **No. See Section 3.1 of the PEA.**

Step 4: Identify Impacts

Identify the potential direct and indirect impacts associated with the occupancy or modification of the floodplains and the potential direct and indirect support of floodplain development that could result from the proposed action (44 CFR Section 9.10).

Is the proposed action based on incomplete information? **Yes, the decommissioning of the existing Hoh Village on the Reservation has not reached a conceptual level of design. It does not have an estimated timeline or details as the source of funding.**

Is the proposed action in compliance with the NFIP? **The proposed project (Decommissioning) is compliant with the purpose of the NFIP, to improve floodplain management, as the project will relocate the Hoh Village on the Reservation out of the floodplain and allow the floodplain to serve its natural function. The Hoh Indian Tribe is not currently a participating community in the NFIP, but this does not preclude the Hoh Indian Tribe from receiving the two proposed LPDM grants. These grant applications are for Stages 1 and 2 in South Hoh Highlands, which is outside the floodplain. No funding source has been identified for Stages 3 through 6 or for Decommissioning.**

Does the proposed action increase the risk of flood loss? **No. All stages of the proposed action including Decommissioning will help reduce the risk of flood loss.**

Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures? **No. Decommissioning would help to decrease the base discharge and flood hazard potential to other properties or structures.**

Does the proposed action minimize the impact of floods on human health, safety, or welfare? **Yes. While some structures may be left in place during the decommissioning of the Hoh Village on the Reservation, most of the structures and infrastructure would be removed from the floodplain. Removal would reduce the amount of flood-borne debris and pollutants that enter surface waters during floods. Please see PEA Section 4.7.2.**

Will the proposed action induce future growth and development, which will potentially adversely affect the floodplain? **No. The proposed action will reduce future growth and development in the floodplain. Until relocation to South Hoh Highlands occurs, the Tribe is restricting development within the existing lower Reservation boundary to only replacement of immediately critical infrastructure. See PEA Section 3.2.7.**

Does the proposed action involve dredging and/or filling of a floodplain? **No. Based on current understanding, the facility abandonment and decommissioning would be surficial. If Decommissioning is federally funded and if it involves future dredging or filling, additional review would be necessary for compliance with 44 CFR Part 9.**

Will the proposed action result in the discharge of pollutants into the floodplain? **No. Erosion control BMPs, including, but not limited to swales and silt fences, would be used during Decommissioning. See PEA Table 4.6 Summary of Impacts and Mitigation.**

Does the proposed action avoid the long- and short-term impacts associated with the occupancy and modification of floodplains? **The Proposed Action would result in long-term beneficial effect on floodplains because the Proposed Action would provide alternative housing options, outside of the floodplain, for Tribal Members. It would be expected that the population in the existing Hoh Village on the Reservation would eventually be minimized. Some structures may be left in place during Decommissioning. However, most of the structures and infrastructure would be removed from the floodplain, which would reduce the long-term impacts associated with occupancy and modification of floodplains.**

Will the proposed action forego an opportunity to restore the natural and beneficial values served by floodplains? **No. Decommissioning of the proposed action allows the opportunity to restore previously disturbed floodplain to open space and natural habitats.**

Will the proposed action result in an increase to the useful life of a structure or facility? **No.**

Will the action encroach on the Floodway in a manner that causes any increase of flood levels within the community during the occurrence of the base flood discharge? **No. There is no encroachment into the floodway. Based on the scope of proposed actions and mapped special flood hazards, there will not be an increase in flood levels within the community.**

Step 5: Minimize Impacts

Minimize the potential adverse impacts and support to or within floodplains as identified under Step 4; restore and preserve the natural and beneficial values served by floodplains (44 CFR Section 9.11).

Minimization Measures

Were flood hazard reduction techniques (see NFIP technical bulletins) applied to the proposed action to minimize flood impacts? Note: New construction or substantial improvement of a structure (i.e., walled, or roofed building) requires elevation or flood proofing (non-residential), except for listed Historic Structures. **N/A.**

Identify any flood hazard reduction techniques required as a condition of the grant: **N/A**

Were avoidance and minimization measures applied to the proposed action to minimize the short-term and long-term impacts on the floodplain? **Yes. Stages 1 through 6 would have no impacts on the floodplain. There would be minor short-term impacts on the floodplain during Decommissioning. This would be followed by long term beneficial impacts resulting from the**

decommissioning of the Hoh Village on the Reservation and associated reduction of flood-born debris and pollutants that enter surface waters and impact water quality during floods.

Were measures implemented to restore and preserve the natural and beneficial values of the floodplain? **Yes. When structures are removed during Decommissioning, the land would be converted into open space and would either be replanted or would be allowed to naturally revegetate and become naturalized. In the short-term, the Tribe is restricting development within the existing lower Reservation boundary to only replacement of immediately critical infrastructure.**

Step 6: Reevaluate Practicable Alternatives

Reevaluate the proposed action to first determine if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain values. Second, evaluate if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain unless it is the only practicable location (44 CFR Section 9.9).

Is the action still practicable at the floodplain site in light of the exposure to flood risk and ensuing disruption of natural values? **Yes (only applies to Decommissioning).**

Is the floodplain site the only practicable alternative? **Yes (only applies to Decommissioning).**

Is there any potential to limit the scope or size of the action to increase the practicability of previously rejected non-floodplain sites or alternative actions? **No. Decommissioning is already limited in that it proposes to remove and decommission existing development located in the Hoh Village on the Reservation.**

Can minimization of harm to or within the floodplain be achieved using all practicable means? **Yes.**

Does the need for action in a floodplain clearly outweigh the requirements of Executive Order 11988? **Yes.**

Step 7: Final Public Notice

Prepare and provide the public with a finding and public explanation of any final decision that the floodplain is the only practicable alternative (44 CFR Section 9.12).

Was notice provided as part of a disaster cumulative notice? **No.**

Was a project specific notice provided? **Yes.**

If yes, select the type of notice: **Publication of the final NEPA Environmental Assessment and decision will serve as final notice.**

Step 8: Implementation

Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in 44 CFR Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

Was grant conditioned on review of implementation and post-implementation phases to ensure compliance of Executive Order 11988? **No for Stages 1 and 2. If Decommissioning is federally funded, the funding agency will make this determination.**

The following conditions are not reflected in the Scope of Work and are required: **N/A**

Appendix C. Agency Coordination

From: Julie Ann Koehlinger
To: Fisher, Philip
Cc: Bob Smith; Kachra, Galeeb; Stenberg, Kate
Subject: Re: Hoh Relocation cultural resources survey draft report
Date: Tuesday, May 2, 2023 2:24:36 PM

Hi Phil,

I reviewed the document and concur with the findings.

Thank you!
Julie Ann

On Wed, Apr 12, 2023 at 6:21 PM Fisher, Philip <philip.fisher@fema.dhs.gov> wrote:

> Hi Julie,
>
> I hope all is well. Please see the attached final version of the archaeological survey report. Based on the assessment results, FEMA has determined the Undertaking will result in No Historic Properties Affected. If you could please respond with your concurrence or any additional comments for our documentation it would be much appreciated. Once we have the documentation we can finalize our Section 106 compliance review. Thank you again for all of your assistance with this and please let me know if there is anything else I can do. I look forward to working with you again in the future.
>
> Brest,
>
> Phil
>
> ---
>
> **From:** Julie Ann Koehlinger <julie.koehlinger@hohtribe-nsn.org>
> **Sent:** Tuesday, March 14, 2023 1:04 PM
> **To:** Fisher, Philip <philip.fisher@fema.dhs.gov>
> **Cc:** bryan.cole@hohtribe-nsn.org; Bob Smith <bob.smith@hohtribe-nsn.org>; Kachra, Galeeb <galeeb.kachra@fema.dhs.gov>; Stenberg, Kate <StenbergKJ@cdmsmith.com>
> **Subject:** Re: Hoh Relocation cultural resources survey draft report
>
>

An email is fine as long as we have the final version

On Tue, Mar 14, 2023 at 12:22 PM Fisher, Philip <philip.fisher@fema.dhs.gov> wrote:

> Hi Julie,
>
> No worries, and apologies in my delayed response. I will let WCRA know they can finalize the report and provide you with a final version. For your documentation, would you like a formal consultation letter with the final draft or just an email? Thank you for your time and I look forward to talking soon.
>
> Best,
>
> Phil
>
> ---
>
> **From:** Julie Ann Koehlinger <julie.koehlinger@hohtribe-nsn.org>
> **Sent:** Monday, March 6, 2023 11:26 AM
> **To:** Fisher, Philip <philip.fisher@fema.dhs.gov>
> **Cc:** bryan.cole@hohtribe-nsn.org; Bob Smith <bob.smith@hohtribe-nsn.org>; Kachra, Galeeb <galeeb.kachra@fema.dhs.gov>; Stenberg, Kate <StenbergKJ@cdmsmith.com>
> **Subject:** Re: Hoh Relocation cultural resources survey draft report
>
>
>
> Hi Phil,
>
> Thank you for your patience. I've reviewed the report and discussed it with my THPO. I don't have any comments to offer and would accept the report as written.

Julie Ann

On Fri, Dec 2, 2022 at 11:51 AM Fisher, Philip <philip.fisher@fema.dhs.gov> wrote:

> Good afternoon Julie,
>
> I hope all is well. Please see the attached draft survey report from WillametteCRA for the Hoh relocation project. If you could provide me with any comments and edits from the Tribe at your convenience I will include them with mine for WillametteCRA to address in the final version. Thank you for your time.
>
> Best,
>
> Phil
>
> Philip Fisher
>
> Archaeologist | Environmental & Historic Preservation | Region 10
>
> Mobile: (425) 471-9018
>
> philip.fisher@fema.dhs.gov
>
> *Federal Emergency Management Agency (FEMA), Region 10 is committed to providing access, equal opportunity, and reasonable accommodation in its services, programs, activities, education, and employment for individuals with disabilities. To request a disability accommodation contact me at least five (5) working days in advance at (425) 471-9018 or email me at philip.fisher@fema.dhs.gov.*

--

Julie Ann Koehlinger, MMA (she/her)

Natural Resources Director

Hoh Indian Tribe

julie.koehlinger@hohtribe-nsn.org

mobile: 360-780-0551

office: 360-374-5404

--

Julie Ann Koehlinger, MMA (she/her)

Natural Resources Director

Hoh Indian Tribe

julie.koehlinger@hohtribe-nsn.org

mobile: 360-780-0551

office: 360-374-5404

--

Julie Ann Koehlinger, MMA (she/her)
Natural Resources Director
Hoh Indian Tribe

julie.koehlinger@hohtribe-nsn.org
mobile: 360-780-0551
office: 360-374-5404

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
Lacey, Washington

In Reply Refer to:
FWS/R1/2022-0065059

Jeffrey Parr, Environmental Specialist
FEMA Region X
130 228th Street SW
Bothell, Washington 98021

Dear Mr. Parr:

Subject: Hoh Indian Tribe Relocation Development Project

This letter is in response to your March 17, 2023, request for our concurrence with your determination that the proposed relocation of public infrastructure for the Hoh Indian Tribe on Tribal Trust lands in Jefferson County, Washington, "may affect, but is not likely to adversely affect" federally listed species. We received your letter and Biological Assessment on March 20, 2023.

Specifically, you requested informal consultation pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq*.) (ESA) for the following federally listed species and designated critical habitat: marbled murrelet (*Brachyramphus marmoratus*) and northern spotted owl (*Strix occidentalis caurina*).

The Federal Emergency Management Agency has determined that the action will have "no effect" on additional listed species and designated critical habitat. The determination of "no effect" to listed resources rests with the action agency. The U.S. Fish and Wildlife Service (Service) has no regulatory or statutory authority for concurring with "no effect" determinations, and no consultation with the Service is required. We recommend that the action agency document their analysis on effects to listed species and maintain that documentation as part of the project file.

The Federal Emergency Management Agency has provided sufficient information to determine the effects of the proposed action and to conclude whether it would adversely affect federally

listed species and/or designated critical habitat. We base our concurrence on information provided by the federal action agency, best available science, and complete and successful implementation of conservation measures included by the federal action agency.

Summary of the Proposed Action

The proposed action is located on 45 acres of the Hoh Highlands parcel, Tribal Trust lands south of Highway 101 in Jefferson County, Washington. The site is further identified as being located in Section 28 of Township 26 North, Range 13 West.

The proposed action would install public infrastructure and utilities to support the Hoh Tribe's larger effort to relocate the Hoh village to an area outside of flood and tsunami hazard zones. The work under the proposed action would also include clearing and grubbing of the work areas, trenching and excavation to install underground utilities, backfilling of excavations with appropriate material and compaction, and paving of road surfaces. The proposed action is estimated to require 18 to 24 months to complete, which includes expected delays during the rainy season (November through April). Construction activities are expected to occur between 8 a.m. and 4 p.m. for the duration of the project.

The project area has been logged recently and is vegetated with secondary forest, shrub, and herbaceous communities. The forested areas to the north, east and south of the project area are a mixture of clearcut, regenerating forest, and tall but small-diameter conifers. To the west of the project area is a large open field vegetated with herbaceous vegetation, devoid of trees or shrubs, and beyond that is a band of previously harvested trees just outside the Olympic National Park (Park) boundary.

Effects to Marbled Murrelet

Marbled murrelet nesting habitat is assumed to be present within the Park boundary to the west of the project area, and the nearest murrelet occurrence record is approximately 0.7 mile southwest of the project area. The primary source of effects on murrelet nesting during construction would be heavy equipment noise, and the proposed action has the potential to negatively affect murrelet nesting behavior if work were to occur near active nest sites during the breeding season.

There is no suitable nesting habitat for marbled murrelets within the project area or murrelet disruption distance (110 yards (330 feet)), which is characterized by open field and previously harvested secondary forest. There is suitable nesting habitat present within the boundary of the Park, which falls within the murrelet disturbance distance (330 feet up to 0.25 mile). The existing noise along Highway 101 from heavy truck traffic and roadway maintenance projects indicate that there are already noise disturbances surrounding the project area. Long-term operation and maintenance of the underground utilities and infrastructure associated with the proposed action would cause a minimal increase in noise and human activity levels in the proposed project area, which would not be expected to result in effects on murrelet breeding behavior.

Because construction activities carried out under the proposed action would not occur within the marbled murrelet disruption distance (less than 330 feet), it is expected that effects on murrelet breeding behavior will not be measurable and will not significantly disrupt normal behaviors. Therefore, effects from the action to marbled murrelets are considered insignificant.

Effects to Northern Spotted Owl

Northern spotted owl nesting, roosting, and foraging (NRF) habitat is assumed to be present within the Park boundary to the west of the project area, and the forest edge habitat adjacent to the park boundary could potentially function as dispersal habitat. The proposed action has the potential to negatively affect spotted owl nesting behavior if work were to occur near active nest sites during the breeding season.

There is no NRF habitat within the spotted owl disruption distance (66 yards (200 feet)) from the project area, which is characterized by open field and previously harvested secondary forest. There is suitable nesting habitat present within the boundary of the Park, which falls within the spotted owl disturbance distance (200 feet up to 0.25 mile). The existing noise along Highway 101 from heavy truck traffic and roadway maintenance projects indicate that there are already noise disturbances surrounding the project area. Long-term operation and maintenance of the underground utilities and infrastructure associated with the proposed action would cause a minimal increase in noise and human activity levels in the proposed project area, which would not be expected to result in effects on spotted owl breeding behavior.

Because construction activities carried out under the proposed action would not occur within the northern spotted owl disruption distance (less than 200 feet), it is expected that effects on spotted owl breeding behavior will not be measurable and will not significantly disrupt normal behaviors. Therefore, effects from the action to northern spotted owls are considered insignificant.

Conclusion

Considering the status of listed species in the action area and the anticipated effects, the Service concurs that the project, as proposed, is not likely to adversely affect the marbled murrelet and northern spotted owl. This concludes consultation pursuant to the regulations implementing the ESA. Our review and concurrence with your effect determination is based on the implementation of the action as described. It is the responsibility of the Federal action agency to ensure that the actions they authorize or carry out are in compliance with the regulatory permit and ESA. If a permittee or the Federal action agency deviates from the measures outlined in a permit or project description, the Federal action agency has an obligation to reinitiate consultation and comply with section 7(d).

This action should be re-analyzed and re-initiation may be necessary if 1) new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation, 2) if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or 3) a new species is listed or critical habitat is designated that may be affected by this action.

This letter constitutes a complete response by the Service to your request for informal consultation. A complete record of this consultation is on file at the Washington Fish and Wildlife Office, in Lacey, Washington. If you have any questions about this letter or our shared responsibilities under the ESA, please contact the consulting biologist or supervisor identified below.

U.S. Fish and Wildlife Service Consultation Biologist(s):
Emma Walz (emma_walz@fws.gov)
Vince Harke (vince_harke@fws.gov)

Sincerely,

VINCENT HARKE
Digitally signed by VINCENT HARKE
Date: 2023.03.28 13:35:21 -07'00'

for Brad Thompson, State Supervisor
Washington Fish and Wildlife Office