United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503

In Reply Refer To:
01EWFW00-2021-I-0937

Memorandum

To: Superintendent, Mount Rainier National Park
Ashford, Washington

From: *For* State Supervisor, Washington Fish and Wildlife Office
Lacey, Washington

Thomas McDowell
Digitally signed by Thomas McDowell
Date: 2021.06.22 12:14:58 -07'00'

Subject: MORA Lahar Detection Station Installations

This memorandum transmits the U.S. Fish and Wildlife Service's (USFWS) response to your letter, dated April 9, 2021, requesting informal consultation under section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (ESA), on the proposed MORA Lahar Detection Installation Project (Project). Your letter and biological assessment were received by this office on April 9, 2021. You requested our concurrence with your determination that the proposed Project "may affect but is not likely to adversely affect" the threatened marbled murrelet (*Brachyramphus marmoratus*) and northern spotted owl (*Strix occidentalis caurina*).

You included information on the gray wolf (*Canis lupus*) in the biological assessment, but consultation is not necessary for recovered species. You determined the action would not result in jeopardy of the white bark pine (*Pinus albicaulis*), and did not request conferencing for the proposes species, so it is not addressed in this letter. Additionally, you determined that the action would have "no effect" on additional listed species and designated critical habitat. "No effect" determinations rest with the federal action agency. The USFWS has no regulatory or statutory authority for concurring with "no effect" determinations, and no consultation with the USFWS is required. We recommend that the federal action agency document their analyses on effects to listed species and maintain that documentation as part of their project file.

Summary of the Proposed Action

Mount Rainier National Park (Park), in cooperation with the United States Geological Survey, proposes to construct 9 lahar detection and volcanic monitoring stations on Mount Rainier. The stations are located throughout the southwest quadrant of the park. Eight of the proposed monitoring stations will be free-standing hut enclosures with varying dimensions (maximum of 60 inches by 60 inches by 80 inches). The huts will have an approximate disturbance footprint of 10-foot by 10-foot. The Gobblers Knob monitoring station would be mounted on a historic fire lookout tower. Features added at Gobblers Knob will include a new antenna mast, a small antenna, and two solar panels. A buried seismometer and data cable trench are proposed, which will require burying the seismometer about 30-foot from the structure and excavating a trench to extend the data cable to the structure. All electronic equipment will be housed in the basement of the fire lookout.

Several of the sites will require the use of helicopters for initial installation and subsequent maintenance. Installation will require up to seven round trips to each project location by a small helicopter. Initial installation flights would occur in September and October. Subsequent maintenance flights are expected to include four round trip helicopter flights per site every five years for maintenance and would occur after Labor Day (Sept. 6, 2021). It is expected that approximately two emergency repair flights will be required for emergency maintenance annually. Emergency flights could occur at any time of year.

Conservation Measures Included in the Proposed Action

Disturbed areas will be revegetated if determined to be necessary.

- Helicopter transport of equipment, materials, and personnel to the sites will occur after Labor Day to reduce impacts on nesting murrelets and spotted owls (excluding emergencies).

- Within potential murrelet habitat and during their nesting season (April 1 through September 23), project activities will begin two hours after official sunrise and cease two hours before official sunset to avoid potential disruption during peak activity periods for feeding and incubation exchanges.

- Sites below 4,800-foot (Mount Wow, Tahoma Bridge, and Tahoma Vista Overlook) will be installed after September 23 to minimize impacts on nesting spotted owls and murrelets.

- Helicopter flights will occur a minimum of 2,000-foot above ground level in accordance with park recommendations for avoiding impacts.

- If spotted owl surveys reveal activity centers have shifted, then construction limitations will be adjusted accordingly.

- Construction personnel will be informed of the occurrence and status of listed species and will be advised of potential impacts to the species.

Effects to Northern Spotted Owls

Surveys for spotted owls have been conducted annually in the park since 1997 as part of an ongoing spotted owl demography study. Spotted owls are present in the Park and have been detected within the action area in the past. The proposed installation of lahar monitoring stations would result in vegetation removal and temporary increased noise levels within areas used by spotted owls for roosting and foraging. The proposed project would result in permanent impacts to 100 square feet and temporary impacts to 500 square feet of grassy or shrubby vegetation within spotted owl habitat at the Tahoma Bridge site. No mature trees would be removed, and the project would not result in a loss of nesting or roosting habitat for spotted owls. Adjacent suitable habitat would remain intact and unchanged.

The proposed use of helicopters and other equipment will cause increased levels of noise and human activity in the Project area. Spotted owl nesting behaviors may be disrupted by loud noise and activity that occurs in close proximity to an active nest site during the early portion of the spotted owl nesting season (USFWS 2013, p. 82). We define the spotted owl early nesting season in Washington as March 1 to July 15. Early nesting season behavior includes nest site selection, egg laying, incubation, and brooding of nestlings to the point of fledging (Forsman et al. 1984, pp. 32-38). For small helicopters and most ground-based activities, we use a distance of 0.25-mi to represent the area where project activities "may affect" spotted owls, and we use a distance of 60 m (65 yards) (from an active nest, or unsurvey suitable nesting habitat) where ground-based activities are likely to disrupt spotted owl nesting behaviors (USFWS 2013, pp. 82-83).

Three of the proposed monitoring stations (Ararat, Tahoma Vista, Tahoma Bridge) are located within 100 m of known spotted owl 0.7-mi radius core use areas surrounding a nest site. Core areas represent those portions of the spotted owl home range that are most heavily used for foraging during the nesting season. The seasonal restriction included in the project description will avoid potential disturbance effects to spotted owls during the early nesting period. Construction activities that occur during the latter half of the spotted owl nesting season (July 16 to September 30) are not expected to disrupt nesting spotted owls. In the late nesting season, juvenile spotted owls have fledged and are able to thermoregulate, fly short distances, and are no longer completely dependent upon the adults for daily feedings (Forsman et al. 1984, p. 38). A flush response from either an adult or juvenile at this stage of development is not likely to reduce the fitness or ability of juveniles to survive. Therefore, the biological effects of noise and visual disturbance that occurs during the late nesting season are considered insignificant.

For small helicopters, we consider a 150-foot radius around the helicopter landing zone or sling site to be the potential area where spotted owls could be directly injured from flying debris due to rotor wash (USFWS 2013, pp. 82-83). There is no suitable nesting habitat within 150-foot of a proposed site so the potential effects of rotor wash on spotted owls during detection station construction are discountable.

Spotted owl territories encompass thousands of acres of forest habitat which they range across searching for prey. It is likely that individual spotted owls that are foraging or roosting near a project activity may occasionally be flushed away from a foraging perch or a roosting site by

project noise and activity. Such flush responses that occur away from an active nest site are insignificant, because the owls are simply moving away from the source of disturbance, rather than being forced to flush away from an active nest site.

Low-level sounds from helicopter overflights across large areas of the Park that are detectable to spotted owls may result in minor behavioral responses, such as scanning or head-turning behaviors, or increased vigilance for short periods. Such minor behavioral responses are considered to have insignificant effects to spotted owls. In combination, the nature, location, and timing of the activities, including the conservation measure ensuring that spotted owl nest sites will be protected during the early nesting season, ensure that the effects of the proposed activities will be insignificant, discountable, or both. Therefore, based on the above analysis, we concur that the proposed action may affect, but is not likely to adversely affect spotted owls.

Effects to Marbled Murrelets

There is approximately 26,500 acres of potential murrelet nesting habitat in the Park, extending up to an elevation of about 3,800-foot (Raphael et al. 2006). The Park has conducted surveys for murrelets intermittently since 1994. Murrelet presence has been documented in the Carbon, Mowich, Puyallup, and Nisqually River (NPS 2009). Because of the difficulty of detecting murrelet nests, no active nests have been located within the Park (NPS 2009). However, based on the presence of suitable murrelet nesting habitat and multiple presence detections, it is assumed that murrelets are nesting in these areas. Murrelets nest within the Park from April 1 to September 23.

Most of the proposed lahar detection sites are above 3,800-foot in elevation and are not within suitable habitat for murrelet. Project locations below 3,800-foot in elevation are Mount Wow, Tahoma Vista Overlook, and the existing Kautz Helipad.

Project activities will not reduce available habitat for murrelets because work will occur in previously disturbed areas or will occur in nonhabitat areas above 3,800-foot in elevation. Where vegetation disturbance occurs below 3,800-foot (Mount Wow and Tahoma Vista), no trees that provide suitable nesting habitat will be removed, and it will not impact suitable marbled murrelet habitat.

We have previously completed analyses of the potential for noise and visual disturbance to murrelets (USFWS 2013, pp. 101-110). In these analyses, we concluded that normal murrelet nesting behaviors are likely to be disrupted by equipment noise and human activity that occurs in close proximity to an active nest site or when the activity occurs within the line-of-sight of a nesting murrelet. For ground-based activities, we use a distance of 100 m (110 yards) to define the area where construction activities are most likely to disruptnesting behaviors. Only one of the proposed monitoring stations, Tahoma Vista, is within 100 m of murrelet habitat. This site is accessible via the road, and helicopters will not be used.

At Tahoma Vista, there is a small area (0.55 ha) of potential nesting habitat within a radius of 100 m of the proposed lahar monitoring station.

The proposed work will occur after September 5, which coincides with the late murrelet nesting season. In Washington, we define the nesting season as the period from April 1 to September 23. However, over 95 percent of murrelet chicks have fledged by September 4 (USFWS 2012, p. 2). This Project will result in a small amount of potential nesting habitat being exposed to noise disturbance during the late nesting season. Given the limited area of potential nesting habitat exposed, the short duration of the proposed action, and the fact the most murrelets have completed their nesting cycle by early September, we consider the likelihood that an active nest site will be present within the defined 100 m disruption distance from the facility to be discountable. Areas of potential murrelet nesting habitat located within a 0.25-mile radius of the monitoring stations could be exposed to low-levels of distant construction noise during the late nesting season. Low-level helicopter sounds from helicopter overflights that are detectable to murrelets may result in minor behavioral responses, such as scanning or head-turning behaviors, or increased vigilance for short periods. Such minor behavioral responses are considered to have insignificant effects to nesting murrelets.

For small helicopters, we estimate a 150-foot radius around the helicopter landing zone or sling site to be the potential area where murrelets could be directly injured from flying debris due to rotor wash (USFWS 2013, pp. 103-104). There is no potential nesting habitat within 150- foot of any of the proposed monitoring sites, so the potential effects of rotor wash on

In combination, the nature, duration, and location of the activities lead us to conclude that the effects of the proposed activities to murrelets will be insignificant, discountable, or both. Therefore, based on the above analysis, we concur that the proposed action is not likely to adversely affect murrelets.

Concurrence

This concludes informal consultation pursuant to the regulations implementing the ESA (50 CFR 402.13). This action should be re-analyzed if new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to a listed species or designated critical habitat that was not considered in this consultation; and/or, if a new species or critical habitat is designated that may be affected by this project.

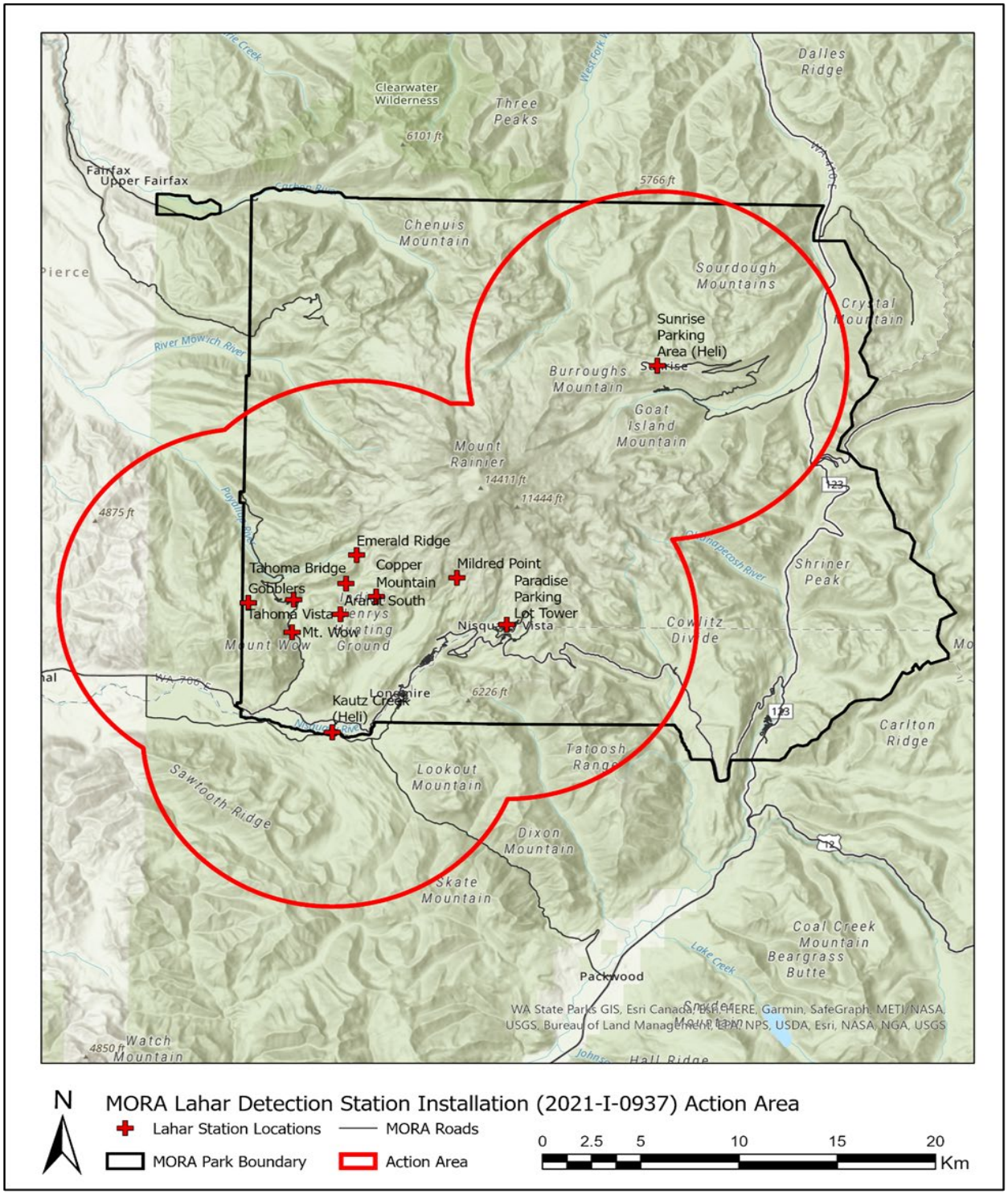
We appreciate your efforts to protect listed species and the habitats on which they depend while meeting your land management needs.
If you have any questions regarding this letter or our joint responsibilities under the ESA, please contact Tom Faughnan at Thomas_Faughnan@fws.gov or 360-753-7763 or Vince Harke at vince_harke@fws.gov or 360-753-9529.

Attachments:
Description of the Action Area
MORA Lahar Detection Station Area (2021-I-0937) Action Area

cc:
National Park Service, Ashford, WA (T. Swartout)
National Park Service, Ashford, WA (K. Skerl)
National Park Service, Ashford, WA (S. Beavers)
National Park Service, Ashford, WA (T. Tucker)
National Park Service, Ashford, WA (C. Tapp)

Description of the Action Area

The action area encompasses the temporary and permanent disturbed areas surrounding the proposed detection stations, and all areas to be affected by project-generated noise audible above the ambient noise level. Construction will be done with mostly non-mechanized and battery powered hand tools, generating negligible noise. Helicopters used for transport to sites will generate significant noise. The distance at which helicopter noise attenuates to background levels varies, depending on topography, vegetation, and other factors, but in general we expect that it will attenuate to background levels approximately 6 miles from each site (Figure 1).


Clearwater Wilderness
Three Peaks
6101 ft
Dalles Ridge
Fairfax
Upper Fairfax
5766 ft
Chenuis Mountain
Sourdough Mountains
Crystal Mountain
Sunrise Parking Area (Heli)
Burroughs Mountain
Goat Island Mountain
Mount Rainier
14411 ft
11444 ft
4875 ft
Emerald Ridge
Tahoma Bridge
Copper Mountain
Mildred Point
Paradise Parking Lot Tower
Gobblers Knob
Ararat South
Tahoma Vista
Mt. Wow
Mount Wow
Nisqually Vista
Cowlitz Divide
Shriner Peak
Kautz Creek (Heli)
6226 ft
Carlton Ridge
Tatoosh Range
Lookout Mountain
Sawtooth Ridge
Dixon Mountain
Skate Mountain
Coal Creek Mountain
Beargrass Butte
Packwood
Watch Mountain
4850 ft
WA State Parks GIS, Esri Canada, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS
N
MORA Lahar Detection Station Installation (2021-I-0937) Action Area
Lahar Station Locations
MORA Roads
MORA Park Boundary
Action Area
0 2.5 5 10 15 20
Km

LITERATURE CITED

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