SPECIES AND CRITICAL HABITATS NOT LIKELY ADVERSELY AFFECTED

This appendix is referenced in the U.S. Fish and Wildlife Service's (Service) Concurrence letter in Section 1.2 of the PROJECTS Biological Opinion (Opinion), and provides additional supporting information for our concurrence with the Action Agencies on several ESA-listed species and designated critical habitats. The Service concurs with the Action Agencies that their proposed PROJECTS restoration program may affect, but are unlikely to adversely affect the following species and critical habitats:

- Canada lynx and its critical habitat,
- Columbian white-tailed deer,
- Gray wolf,
- Grizzly bear,
- Northern Idaho ground squirrel,
- Pygmy rabbit,
- Woodland caribou and its critical habitat,
- Oregon spotted frog and its proposed critical habitat,
- Western snowy plover and its critical habitat, and
- Critical habitats for the following species: Mazama pocket gopher, marbled murrelet, Northern spotted owl, streaked horned lark, Fender's blue butterfly, Taylor's checkerspot butterfly, Kincaid's lupine, and Willamette daisy.

The following sections provide a brief description of ESA-listed species and/or their critical habitat, the proposed conservation measures for each species, and the Service's additional rationale beyond that contained in Section 1.2 for our concurrence. Any project that is determined to likely to adversely affect the any of above species or their critical habitat is not covered by this Opinion, and must go through an individual section 7 consultation.

1.1 Canada Lynx (*Lynx canadensis)* and Critical Habitat

Lynx inhabit lodgepole pine, cedar/hemlock and sub-alpine forest habitats at or above 914 m (3,000 feet) elevation in Idaho, Montana, Oregon and Washington. Canada lynx are specialized predators that are highly dependent on the snowshoe hare (*Lepus americanus*) for food, but also eat alternate prey such as squirrels and grouse. The range of the snowshoe hare coincides with Canada lynx. The snowshoe hare prefer diverse, early successional forests with dense stands of conifers and shrubby understories that provide food, cover to escape from predators, and protection during extreme weather. Lynx usually concentrate their winter foraging activities in areas where hare activity is high.

Canada lynx den in forests with large woody debris, such as downed logs and windfalls, to provide denning sites with security and thermal cover for kittens. In Washington, lynx used lodgepole pine (*Pinus contorta*), spruce (*Picea spp.*), and subalpine fir (*Abies lasiocarpa*) forests older than 200 years for denning. Based on information from the western United States, sites selected for denning also must provide for minimal disturbance by humans and proximity to foraging habitat (early successional forests), with denning stands at least 2.5 acres (one hectare) in size. Intermediate-age forests allow for lynx access between den sites and foraging areas, movement within home ranges, and random foraging opportunities.

On September 25, 2013, the Service announced a proposal to revise the critical habitat designation for the Contiguous United States Distinct Population Segment (DPS) of the Canada lynx. The primary constituent elements (PCEs) of critical habitat for Canadian lynx include, but are not limited to: 1. Space for individual and population growth and for normal behavior; 2. Food, water, air, light, minerals, or other nutritional or physiological requirements; 3. Cover or shelter; 4. Sites for breeding, reproduction, and rearing (or development) of offspring; and 5. Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

All of the constituent elements of critical habitat for lynx are found within large landscapes in what is broadly described as the boreal forest or cold temperate forest. Boreal forests used by lynx are generally cool, moist, and dominated by conifer tree species, primarily spruce and fir. Boreal forest landscapes used by lynx are a heterogeneous mosaic of vegetative cover types and successional forest stages created by natural and human-caused disturbances. In many places periodic vegetation disturbances stimulate development of dense understory or early successional habitat for snowshoe hares (Federal Register, Vol. 74, No. 36).

Risk of adverse effects to Canada lynx and its critical habitat from the proposed action is minimal. Few, if any restoration activities will be implemented in or near habitat that supports Canada lynx because of its limited range at high elevations in Washington, Oregon, and Idaho. Furthermore, the following conservation measures *(from HIP III 2013)* will be implemented:

a. Prior to initiating restoration activities in lodgepole pine, cedar/hemlock and sub-alpine forest habitats at or above 3,000 ft. elevation in Idaho, Oregon and Washington, contact the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* Canada lynx.
b. Activities within or near potential denning sites will be reviewed by the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* the lynx.
c. The project will meet the standards and guidelines identified in the Northern Rockies Lynx Management Direction (NRLMD) and/or in the current and upcoming revised (2013) LCAS (Lynx Conservation Assessment and Strategy) or most recent revisions of these documents. The current LCAS is available at: http://library.fws.gov/Pubs5/Lynx_consassess_2000.pdf
d. The project will not result in increased off-road vehicle/snowmobile access to lynx habitat during or following implementation.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of Canadian lynx, or adversely affect any PCEs of critical habitat. All potential effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect Canadian lynx, or destroy or adversely modify its critical habitat.

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1.2 Columbian White-tailed Deer (*Odocoileus virginianus leucurus*)

Columbian white-tailed deer (Columbian deer) are closely associated with riparian habitats in the Lower Columbia River in Wahkiakum, Cowlitz, and Clark Counties, Washington, and Clatsop, Columbia, and Multnomah Counties, Oregon. The deer found on islands in the Columbia River use tidal spruce habitats characterized by densely forested swamps covered with tall shrubs and scattered spruce, alder, cottonwood and willows. In the summer Columbia white-tailed deer preferentially inhabit mixed forests of western red cedar, red alder, and parkland habitat with a grassy understory. Fawning occurs from early June through mid- July. Habitat modification and fragmentation are the biggest threats to Columbian white-tailed deer.

Risk of adverse effects to Columbian deer is minimal. Restoration activities may temporarily disturb or displace deer, or result in a temporary loss of forage area if riparian vegetation is disturbed or removed; however any disturbance to Columbian white-tailed deer is expected to be insignificant or discountable due to the implementation of the following conservation measures:

a) Restoration projects in Columbian white-tailed deer habitat will follow guidelines in the the Service's 2010 *Lewis and Clark National Wildlife Refuge and Julia Butler Hansen Refuge for the Columbian White-tailed Deer Comprehensive Conservation Plan*[1]; and the Natural Resouces Conservation Service's 2011 *Conservation Implementation Strategy Columbia County White-Tailed Deer Habitat Improvement or the most recent revisions of these documents.* To avoid and minimize impacts to Columbian white-tailed deer during the fawning period, restoration activities will not occur from June 1 to July 15 within the following region: The Columbia River, including all islands and extending 3.2 km (2 miles) inland from both sides of the river, from Svensen Island, Clatsop County, to the confluence with the Willamette River. The Columbia River includes the outlet of Vancouver Lake from the Lake, north to its confluence with the Columbia River just south of the confluence of the Lewis River and Columbia Rivers. If survey and review of literature indicate the project will not impact Columbian white-tailed deer and this is confirmed by Service biologists with expertise in Columbian white-tailed deer biology, this timing restriction may be waived.
b) To avoid and minimize impacts to Columbian white-tailed deer and their movements, fencing projects on Puget Island, the Hunting Islands, Price Island, and 3.2 km (2 miles) inland from the Columbia River between 3.2 km (2 miles) east of Cathlamet and 3.2 km (2 miles) west of the community of Ridgefield, will use only three-strand wire (barbed or smooth) and have a maximum fence height of ~106 cm (42 inches) with lower strands at least 46 cm (18 inches) above the ground. Taller fences to temporarily exclude deer and other animals from plant establishment areas are allowed, but must be removed within 3 years.
c) Project personnel will be instructed to not approach Columbian white-tailed deer adults or fawns at any time and to reduce vehicle speeds around project sites where deer occur, to avoid vehicle-deer collisions.
d) Herbicides will not be used in known or suitable Columbian white-tailed deer fawning areas from June 1 to July 15. Use only herbicides listed under PDC 29.

[1] http://www.fws.gov/pacific/planning/main/docs/WA/jbh-lc/Draft%20CCP%20EIS/0%202%20Table%20of%20Contents.pdf

e) Restoration projects proposed within the areas identified in conservation measures a & b above, which include activities under: Dams, Water Control or Legacy Structure Removal, River, Stream, Floodplain, Wetland Restoration, Set-back or Removal of Existing Berms, Dikes, and Levees, will be reviewed by the appropriate Service field office to confirm the project will have *no effect* or *is not likely to adversely affect* Columbian white-tailed deer or its critical habitat.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of Columbian white-tailed deer. All potential effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect Columbian white-tailed deer.

1.3 Gray Wolf (*Canis lupus*)

The gray wolf was listed as endangered March 9, 1978 (43 FR 9615). The Rocky Mountain Distinct Population Segment of the gray wolf was delisted on February 27, 2008. Within the action area, the wolf remains listed in portions of Oregon and Washington.
Habitat for wolves is diverse and generally encompasses areas with adequate supply of prey. Wolves prey primarily on ungulates but may also prey on smaller mammals, including beaver.

Wolves breed in mid- to late February and pups are usually born two months later. Dens are often in underground burrows, but can occur in abandoned beaver lodges, hollow trees, and shallow rock caves. Dens are commonly located on southerly aspects of moderately steep slopes in well-drained soils (or rock caves/abandoned beaver lodges), usually within 366 m (400 yards) of surface water and at an elevation overlooking surrounding low-lying areas. As pups grow older, they are taken from the den to a rendezvous site. One or more rendezvous sites are used over the summer until the pups are large enough to travel and hunt with the pack. Rendezvous sites are usually complexes of meadows and adjacent hillside timber, with surface water nearby.

The risk of adverse effects to gray wolves is minimal. Few, if any restoration activities will be implemented in or near habitat that supports gray wolves because they live in remote areas that typically have good habitat conditions that are not in need of restoration. Furthermore, the following conservation measures will be implemented:

a) Prior to implementing restoration actions in suitable habitat for wolves, the project manager will contact the appropriate Service field office to confirm the project is not likely to adversely affect gray wolves. Furthermore, the following conservation measures will be implemented:
b) Restoration activities generating noise above ambient levels within 1.6 km (1 mile) of any known gray wolf den or rendezvous site (based on current information from state wildlife agencies and the Service), will not occur from December 1 to June 30, unless the project is reviewed by the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* the gray wolf.
c) Restoration activities will not increase trail or road densities within gray wolf habitat.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of the gray wolf. All effects from the proposed

restoration program will be insignificant. Therefore, the Service concurs the proposed action is not likely to adversely affect the gray wolves.

1.4 Grizzly Bear (*Ursus arctos horribilis*)

The grizzly bear was listed as threatened July 28, 1975 (40 FR 31734). The grizzly bear has a broad range of habitat use. Contiguous, relatively undisturbed mountainous habitat having a high level of topographic and vegetative diversity characterizes most areas where the species remains. Forest cover is also especially important to grizzly bears. However, the search for food has a primary influence on grizzly bear movements and individuals will go where they are able to locate food resources.

Mating appears to occur from late May though mid-July with delayed implantation until late November. Den excavation starts as early as September or may take place just prior to entry in late November. Dens are usually at higher elevations dug on steep slopes where wind and topography cause an accumulation of deep snow that is unlikely to melt during warm periods. Birth of cubs occurs during hibernation near February 1. Upon emergence from the den, grizzly bears they seek the lower elevations, drainage bottoms, avalanche chutes, and ungulate winter ranges where their food requirements can be met. Throughout late spring and early summer they follow plant phenology back to higher elevations. In late summer and fall, there is a transition to fruit and nut sources as a food source, as well as herbaceous materials that may occur at lower elevations.

The risk of adverse effects from project activities on grizzly bears is minimal. Few, if any restoration activities will be implemented in or near habitat that supports grizzly bears (including core habitat), because they live in remote areas that typically have good habitat conditions that are not in need of restoration. If restoration were to occur in these habitats, suitable habitat for grizzly bears or their prey will not be degraded or removed. Furthermore, the following conservation measures will be implemented:

a) Prior to implementing restoration actions in suitable habitat for grizzly bears, the project manager will contact the appropriate Service field office to confirm the project is not likely to adversely affect grizzly bears.

b) Restoration activities generating noise above ambient levels will not occur within 0.4 km (0.25 mile) (and 1.6 km (1.0 mile) for pile driving) of known grizzly bear den sites (based on current information from state wildlife agencies and the Service) from October 15 through May 15. Activities within 0.4 km (0.25 mile) of a known den site at any time of year will be reviewed by the appropriate Service field office to confirm the project will have *no effect* or *is not likely to adversely affect* grizzly bear.

a. Restoration activities generating noise above ambient levels, motorized vehicle use (including helicopters), or increasing human use within 0.4 km (0.25 mile) (1.6 km (1.0 mile) for pile driving) of grizzly bear core areas is not covered by this programmatic Opinion and will require a separate Section 7 consultation.

b. Restoration activities will not degrade or destroy key grizzly bear foraging habitat (e.g., avalanche chutes, berry/shrub fields, fruit/nut sources).

c. Restoration activities will not increase trail or road densities within core areas or areas actively used by grizzly bears.

d. Within recovery areas, or areas actively used by grizzly bears, all attractants, including food and garbage, will be stored in a manner unavailable to wildlife at all times.
e. Within recovery areas, or areas actively used by grizzly bears, no-cut buffers (minimum of 25 feet) will be maintained in riparian zones to provide vegetative screening along streams and wetlands. Visual cover will also be maintained adjacent to roads and major habitat components such as snow chutes and shrub fields.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of the grizzly bear. All effects from the proposed restoration program will be insignificant. Therefore, the Service concurs the proposed action is not likely to adversely affect the grizzly bear.

1.5 Northern Idaho Ground Squirrel (*Spermophilus brunneus brunneus*)

The Northern Idaho ground squirrel was listed as threatened April 5, 2000. The northern Idaho ground squirrel needs large quantities of grass seed, stems and other green leafy vegetation to store fat reserves for its eight-month hibernation period (August/early September through late April/May). Adult males are first to emerge from burrows in the spring followed by females and their young. Populations of the northern Idaho ground squirrel have been found in Adams and Valley Counties of western Idaho, though the species historic range extends into neighboring Washington County.

The squirrel occurs in dry meadows surrounded by ponderosa pine and Douglas-fir forests, including lands managed by the U.S. Forest Service's Payette National Forest (1,500 to 7,500-feet elevations). This species is not likely to be found in riparian areas of streams.

The risk of adverse effects from project activities on the northern Idaho ground squirrel is minimal. Few, if any, restoration activities will be implemented in or near habitat that supports Northern Idaho ground squirrel because of its limited range. Furthermore, the following conservation measures will be implemented:

a) Prior to implementing restoration actions in suitable or occupied habitat for Northern Idaho ground squirrel, the project manager will contact the appropriate Service field office to confirm the project has no effect or is not likely to adversely affect Northern Idaho ground squirrel.
b) If a project occurs within northern Idaho ground squirrel suitable habitat, a qualified wildlife biologist must conduct onsite surveys during the appropriate time of year at least three times during a 7-day period in potential northern Idaho ground squirrel habitat to determine their presence. If surveys are not completed, suitable habitat will be assumed occupied.
a. If upland projects will occur within 0.4 km (0.25 mile) of a known occurrence or potential habitat of northern Idaho ground squirrel, contact the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* the northern Idaho ground squirrel.
b. Avoid pile driving within 1.6 km (1 mile) of occupied northern Idaho ground squirrel habitat, unless it is confirmed the activity is not likely to adversely affect northern Idaho ground squirrel.

c. Avoid all restoration activities within occupied northern Idaho ground squirrel between April 1 and August 15 to avoid the northern Idaho ground squirrel above ground activity period, unless confirmed by the appropriate Service field office that the project will have *no effect* or is *not likely to adversely affect* the northern Idaho ground squirrel.
d. Do not locate parking, vehicle turnout, staging or fueling areas, or any type of temporary sites associated with a project, within occupied or potential habitat.
e. No off-road travel will occur in occupied habitat.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of the northern Idaho ground squirrel. All effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect the northern Idaho ground squirrel.

1.6 Pygmy Rabbit *(Brachylagus idahoensis)*

The pygmy rabbit was listed as endangered November 30, 2001 (66 FR 59769). Pygmy rabbits are typically found in areas that include tall, dense stands of sagebrush (*Artemisia spp.*), and are highly dependent on sagebrush to provide both food and shelter throughout the year. During winter months the rabbits' diet consists of up to 99% sagebrush. In the summer and spring months, their diet becomes more varied, including more grass and forbs. The pygmy rabbit digs its own burrows, which are typically found in deep, loose soils. However, pygmy rabbits occasionally make use of burrows abandoned by other species and, as a result, may occur in areas of shallower or more compact soils that support sufficient shrub cover (76 FR 38203).

Pygmy rabbits breed in early spring, having up to three litters per year and averaging six young per litter. Recent information on captive and wild pygmy rabbits indicates that pregnant females dig secret, relatively shallow burrows, known as natal burrows. These natal burrows, which are found in the vicinity of the pygmy rabbit’s regular burrows, are used to give birth in and for nursing and early rearing of their litters.

The risk of adverse effects from project activities on the pygmy rabbit is minimal. Few, if any restoration activities will be implemented in or near habitat that supports pygmy rabbit because of its limited range in Washington. Furthermore, the following conservation measure will be implemented:

a. Prior to initiating restoration activities in the central Columbia Plateau (Douglas, Lincoln, Adams and Grant counties in Washington State) in dense, tall stands of sagebrush, or if any evidence of pygmy rabbit presence is detected in a project area outside of these counties, but within the historical range of the pygmy rabbit, contact the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* the pygmy rabbit.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of the pygmy rabbit. All effects from the proposed

restoration program will be insignificant. Therefore, the Service concurs the proposed action is not likely to adversely affect the pygmy rabbit.

1.7 Southern Selkirk Mountains Woodland Caribou *(Rangifer tarandus caribou)* and Critical Habitat

Southern Selkirk Mountains woodland caribou (woodland caribou) were listed as endangered January 14, 1983 (48 FR 49245). Woodland caribou have large, concave hoofs that spread widely to support the animal in snow and soft tundra. The feet also function as paddles when caribou swim. Caribou are the only member of the deer family (Cervidae) in which both sexes grow antlers. Antlers of adult bulls are large and massive; those of adult cows are much shorter and are usually more slender and irregular. In late fall, caribou are clove-brown with a white neck, rump, and feet and often have a white flank stripe.

A general description of seasonal habitats used by the woodland caribou follows (Table 7); a more detailed description is available in the Recovery Plan for woodland caribou at: http://ecos.fws.gov/docs/recovery_plan/940304.pdf.

Table 1: Seasonal habitats used by woodland caribou.

Season	Habitat Description
Early Winter	Mature to old-growth cedar-hemlock and spruce-fir stands, with 70% canopy closure, and high windthrow and lichen densities.
Late Winter	High elevation, open canopied spruce-fir stands, with high lichen density.
Spring	Mature timber with canopy openings.
Calving	Secluded, high elevation, mature old-growth forest.
Summer	Relatively flat terrain, with abundant understory cover, and variable overstories.
Fall	Mature old-growth stands with dense understories.

The woodland caribou occurs in the Selkirk mountains at elevations of 4,000 feet or above in Bonner or Boundary counties in Idaho, or east of the Pend Oreille River, Pend Oreille County, Washington. Critical habitat was designated for the woodland caribou on December 28, 2012 (77 FR 71042) and covers approximately 30,010 acres of Federal land above 5,000 feet within with in Boundary County, Idaho, and Pend Oreille County, Washington for the caribou.

Risk of adverse effects to Selkirk caribou and its critical habitat from the proposed action is minimal. Few, if any restoration activities will be implemented in or near habitat that supports Selkirk caribou because of its limited range at high elevations in Washington and Idaho.

Furthermore, the following conservation measures to avoid and minimize impacts to this species will be implemented as appropriate:

a. Prior to initiating restoration activities at elevations at 4,000 feet or above in Bonner or Boundary counties in Idaho or east of the Pend Oreille River, Pend Oreille County, Washington, within recovery zones (as defined in the Woodland Caribou Recovery Plan[2]), contact the appropriate Service field office to confirm the project will have *no effect* or is *not likely to adversely affect* woodland caribou.
b. Projects that are scheduled during early winter in the woodland caribou recovery area or within 0.8 km (0.5 miles) of these habitats and generate noise above ambient levels will be evaluated by the local Service office to determine if there will be disturbance effects to woodland caribou.
c. Any vegetation management in woodland caribou habitat will not affect more than 1.0 acre of native forest per year.
d. Projects will not result in increased access for snowmobiles or other off-road vehicles and will not result in new roads in woodland caribou habitat.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of woodland caribou, or adversely affect any PCEs of its critical habitat. All potential effects from the proposed restoration program will be insignificant or discountable. All critical habitat is on Federal lands, and if restoration projects occur on critical habitat on Federal land, a species conservation plan must have been developed, and will be followed, per the requirements of coverage for the Opinion. Therefore, the Service concurs the proposed action is not likely to adversely affect woodland caribou, or destroy or adversely modify its critical habitat.

1.8 Oregon Spotted Frog *(Rana pretiosa)* and Proposed Critical Habitat

On September 26, 2013, the Service proposed the Oregon spotted frog for listing (78 FR 59334). This species is the most aquatic native frog in the Pacific Northwest. It is almost always found in or near a perennial body of water that includes zones of shallow water and abundant emergent or floating aquatic plants, which the frogs use for basking and escape cover. Oregon spotted frogs prefer relatively large, warm marshes (approximate minimum size of 9 acres) that can support a large enough population to persist despite high predation rates (Hayes 1994) and sporadic reproductive failures. Large concentrations of Oregon spotted frogs have been found in areas with the following characteristics: 1) the presence of good breeding and overwintering sites connected by year-round water; 2) reliable water levels that maintain depth throughout the period between oviposition and metamorphosis; and 3) the absence of introduced predators, especially warm-water game fish and bullfrogs.

Oregon spotted frogs currently have a very limited distribution west of the Cascade crest in Oregon, are considered to be extirpated from the Willamette Valley in Oregon, and may be extirpated in the Klamath and Pit River basins of California. They are known to exist in five

[2] http://ecos.fws.gov/docs/recovery_plan/940304.pdf

counties in Washington (Whatcom, Skagit, Thurston, Skamania and Klickitat) and five counties in Oregon (Jackson, Lane, Wasco, Deschutes and Klamath).

On September 26, 2013, the Service proposed to designate 68,192 acres and 37 stream-km (23 stream miles) as critical habitat for the Oregon spotted frog throughout Washington and Oregon. Of the proposed designated (acres plus stream) critical habitat, 67% is federally owned, 3% is state owned, 30% is under local municipality or private ownership, and less than 1% is under county jurisdictions. No tribal lands are proposed as critical habitat (78 FR 59334).

Risk of adverse effects to Oregon spotted frog and its critical habitat from the proposed action is minimal. The following proposed conservation measures are intended to avoid any impacts to Oregon spotted frog and its proposed critical habitat:

a. Aquatic restoration projects within proposed critical, suitable or occupied habitats or within 5 km (3.1 miles) of proposed critical habitat will be reviewed by the local Service office to ensure the project is not likely to adversely affect Oregon spotted frog and will not adversely affect PCEs of the proposed Oregon spotted frog critical habitat, per PDC 6.c of the proposed action.
b. Electrofishing will not occur in proposed Oregon spotted frog critical habitats or within 5 km (3.1 miles) of these critical habitats at any time, unless the local Service office has determined there is no likelihood of adverse effects to Oregon spotted frog individuals (frogs, tadpoles, or eggs). If Oregon spotted frog individuals are found during any electrofishing activities, all such activities shall be terminated, and the local Service office will be notified immediately to determine next steps.

The above conservation measures ensure that any restoration project will not cause adverse effects to the Oregon spotted frog or its proposed critical habitats. All potential negative effects from the proposed restoration program will be insignificant or discountable, if not avoided entirely. Therefore, the Service concurs the proposed action is not likely to adversely affect the Oregon spotted frog. Also, it is the Service's conference opinion that the proposed restoration activities are not likely to destroy or adversely modify proposed critical habitat.

1.9 Western Snowy Plover (*Charadrius nivosus nivosus)* and Critical Habitat

The western snowy plover was listed as threatened March 5, 1993 (58 FR 12864). The Pacific coast population of the western snowy plover is defined as those individuals that nest beside or near tidal waters, and includes all nesting colonies on the mainland coast, peninsulas, offshore islands, adjacent bays and estuaries from southern Washington to southern Baja California, Mexico. Historic records indicate that western snowy plovers nested in at least 29 locations on the Oregon coast. Currently, only eight locations in Oregon support nesting western snowy plovers, a 72% reduction in active breeding locations.

The nesting season extends from early March through late September. The breeding season generally begins earlier in more southerly latitudes, and may be two to four weeks earlier in southern California than in Oregon and Washington. Fledging (reaching flying age) of late-season broods may extend into the third week of September throughout the breeding range. Nests typically occur in flat, open areas with sandy or saline substrates. Vegetation and

driftwood are usually sparse or absent. The typical clutch size is three eggs but can range from two, and in rare cases, up to six eggs.

Snowy plover chicks leave the nest within hours after hatching to search for food. They are not able to fly for approximately four weeks after hatching, during which time they are especially vulnerable to predation. Adult plovers do not feed their chicks, but lead them to suitable feeding areas. Adults use distraction displays to lure predators and people away from chicks. Adult plovers signal the chicks to crouch, with calls, as another way to protect them. They may also lead chicks, especially larger ones, away from predators. Most chick mortality occurs within six days after hatching.

Snowy plovers are primarily visual foragers. They forage on invertebrates in the wet sand and among surf-cast kelp within the intertidal zone, in dry, sandy areas above the high tide, on salt pans, and along the edges of salt marshes, salt ponds, and lagoons. They nest in open, flat, sparsely vegetated beaches and sand spits above the high tide. Plovers often return to the same breeding sites year after year[3].

On June 19, 2012, the Service revised critical habitat (77 FR 36728). The areas identified in the revised final rule constitute revisions of areas excluded and designated as critical habitat for the Pacific Coast western snowy plover on September 29, 2005 (70 FR 56970), and proposed revisions to that rule published on March 22, 2011 (76 FR 16046) and January 17, 2012 (77 FR 2243). The revised final critical habitat designation includes approximately 6,077 acres in 4 units within Washington, approximately 2,112 acres in 9 units within Oregon, and 16,337 acres in 47 units within California).

The Service has determined that the Pacific Coast western snowy plover's PCEs of critical habitat are: 1) sparsely vegetated areas above daily high tides (e.g., sandy beaches, dune systems immediately inland of an active beach face, salt flats, seasonally exposed gravel bars, dredge spoil sites, artificial salt ponds and adjoining levees) that are relatively undisturbed by the presence of humans, pets, vehicles or human-attracted predators; 2) sparsely vegetated sandy beach, mud flats, gravel bars or artificial salt ponds subject to daily tidal inundation but not currently under water, that support small invertebrates such as crabs, worms, flies, beetles, sand hoppers, clams, and ostracods; and, 3) surf or tide-cast organic debris such as seaweed or driftwood located on open substrates such as those mentioned above (essential to support small invertebrates for food, and to provide shelter from predators and weather for reproduction). All areas designated as critical habitat for the Pacific Coast western snowy plover were occupied by the species at the time of listing and contain sufficient PCEs to support essential biological function. These PCEs were identified on the basis that they are essential for Pacific Coast western snowy plover reproduction, food supplies, and shelter from predators and weather elements. Additionally, these areas are essential because they provide protection from disturbance and space for growth and normal behavior.

Risk of adverse effects to western snowy plover and its critical habitat from the proposed action is minimal. Measures to avoid and minimize impacts to western snowy plovers and its critical

[3] http://www.fws.gov/arcata/es/birds/wsp/plover.html

habitat will be implemented as appropriate, including seasonal restrictions on restoration activities. Timing the restoration project outside of the plovers' nesting season will prevent adverse effects to individual nesting plovers and their young. The project manager will coordinate with the appropriate Service office to determine occupancy of a site before starting the project and use the appropriate conservations measures to avoid and minimize impacts to plovers. While wintering snowy plovers may be present during restoration activities, restoration efforts will be localized and plovers can easily move further down the beach away from any disturbance caused by the short-term restoration activities. Because each proposed action will improve, and may increase the amount of habitat available, the habitat (including critical habitat) will be more productive and able to better support plover needs. This will allow more complete expression of essential biological behaviors related to reproduction, feeding, rearing, and sheltering. The following conservation measures to avoid and minimize impacts to western snowy plover will be implemented:

a. Prior to initiating restoration activities on coastal beaches, project managers will coordinate with the appropriate Service field office to identify western snowy plover nesting and wintering areas.
b. Restoration activities occurring on coastal beaches will not occur within western snowy plover nesting or foraging habitat from March 15 to September 15.
c. Ground disturbing activities on coastal dunes that are occupied by snowy plovers will occur during the fall and winter months outside of the plover's critical nesting period (*i.e.,* March 15 to September 15). These activities will include the control or removal of invasive and non-native vegetation on coastal dunes through manual, mechanical, and chemical methods. Other restoration actions may include grading of beach/dune habitat and removal of wood from the beach, and placement of shell hash.
d. Proposed restoration activities generating noise above ambient levels will not occur within 0.4 km (0.25 mi) of a western snowy plover occupied beach during the critical nesting period.
e. In-channel nutrient enhancement activities will not occur in coastal streams from March 15 to September 15 nor within 15 km (9.3 mi) of a western snowy plover occupied beach, in order to not attract potential avian or mammalian predators to nesting areas.
f. Project personnel must take appropriate measures to not attract potential avian or mammalian predators to project sites in plover habitat. These include: eliminating human-introduced food sources, properly disposing of organic waste, and not planting vegetation that could be potential cover or perches for predators near designed critical or suitable habitats.

The above conservation measures ensure that any restoration project will not interfere with the normal behavior, feeding and reproduction of the western snowy plover, or adversely affect any PCEs of its critical habitat. All potential negative effects from the proposed restoration program will be insignificant or discountable. The goal of the proposed action is to restore native habitats to benefit native species, including snowy plovers. Each proposed action will improve, and may increase the amount and productivity of available habitat. Further, the size and extent of a typical restoration project relative to the overall size and extent of designated critical habitat is very small, and any negative effects to critical habitat are expected to be insignificant. Long-term beneficial effects are anticipated. Therefore, the Service concurs the proposed action is not likely to adversely affect the western snowy plover or its critical habitat.

1.10 Marbled Murrelet Designated Critical Habitat

Critical habitat for the marbled murrelet was described previously in the Opinion. The PROJECTS BA concluded that the proposed project would be not likely to adversely affect PCEs of designated critical habitat for the marbled murrelet. We concur with this determination for the following reasons:

1. Project activities that remove, downgrade, or do not maintain suitable, dispersal, or marbled murrelet habitat are not proposed and will not be covered under this consultation. Therefore, the proposed activities are not anticipated to have adverse effects to the PCEs of marbled murrelet critical habitat through habitat loss or modification. All effects will be insignificant or discountable.
2. The amount of (non-commercial) thinning relative to an individual project's action area will be negligible. Many riparian areas are dominated by dense, even-aged stands of small diameter conifers and hardwoods. Although some vegetation treatments will remove woody vegetation, most shrubs, trees, and limbs will remain in the stands as the actions are designed to restore habitat values in these areas. For example, the PDC for large wood placement state that silvicultural treatments will not occur if they remove or permanently degrade occupied, suitable, or critical habitats for listed terrestrial species.
3. Some vegetation treatments will promote/maintain late-seral trees, which marbled murrelets may use in the long-term.
4. Vegetation treatments within forests will be dispersed throughout the portion of the action area within the range of the marbled murrelet, which includes Oregon and Washington. This means that any potential effects to the PCEs of critical habitat are very unlikely to be concentrated in any one province or administrative unit.

The proposed PDC and above conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for marbled murrelet. All potential effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect PCEs of critical habitat for marbled murrelet.

1.11 Northern Spotted Owl Designated Critical Habitat

Critical habitat for the northern spotted owl was described previously in the Opinion. The PROJECTS BA concluded that the proposed project would be not likely to adversely affect the PCEs of designated critical habitat for the northern spotted owl. We concur with this determination for the following reasons:

1. Project activities that remove, downgrade, or do not maintain suitable, dispersal, or spotted owl critical habitat are not proposed and will not be covered under this consultation. Thus, the proposed activities are not anticipated to have adverse effects to the PCEs of spotted owl critical habitat (i.e., significantly modify spotted owl habitat

such that it results in death or injury) through habitat loss or modification. All effects will be insignificant or discountable.

2. The amount of (non-commercial) thinning relative to an individual project's action area will be negligible. Many riparian areas are dominated by dense, even-aged stands of small diameter conifers and hardwoods. Although some vegetation treatments will remove woody vegetation, most shrubs, trees, and limbs will remain in the stands as the actions are designed to restore habitat values in these areas. For example, the PDC for large wood placement state that silvicultural treatments will not occur if they remove or permanently degrade occupied, suitable, or critical habitats for listed terrestrial species.
3. Some projects may benefit spotted owls as a primary or secondary goal. For example, PDC 52 (Silvicultural Treatments) specifically targets improving habitat for northern spotted owl by demolishing roads, thinning, and understory management to improve the habitat for owls and their prey.
4. Vegetation plantings designed for aquatic restoration purposes (e.g., provide shade and reduce run-off to water bodies), may also benefit owl habitat by adding habitat complexity (e.g., restore native species and increase species diversity) within or near suitable spotted owl habitat.
5. Some vegetation treatments will promote/maintain late-seral trees, which spotted owls may use in the long-term.
6. Vegetation treatments within forests will be dispersed throughout the portion of the action area within the range of the spotted owl, which includes Oregon and Washington. This means that any potential effects to the PCEs of critical habitat are very unlikely to be concentrated in any one province or administrative unit.

The proposed PDC and above conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for northern spotted owls. All potential effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect PCEs of critical habitat for northern spotted owls.

1.12 Streaked Horned Lark Designated Critical Habitat

Critical habitat for the streaked horned lark was described previously in the Opinion. The PROJECTS BA concluded that the proposed project would be not likely to adversely affect the PCEs of designated critical habitat for the streaked horned lark. We concur with this determination for the following reasons:

1. Critical habitat for the streaked horned lark has been designated at 16 sites. The majority of the sites (9 subunits) are dredge spoil deposition areas on islands in the Columbia River, which are not likely to be the subject of restoration actions implemented under this program.
2. The remaining designated critical habitat sites (7 subunits) are on the Washington coast and on the Fish and Wildlife Service's Willamette Valley National Wildlife Refuge Complex. These sites all have the appropriate landscape context (wide, flat and open), and no actions associated with the proposed restoration program are likely to change this condition. These sites are also managed to maintain the vegetation structure necessary to provide suitable habitat for the streaked horned lark.

3. The continued presence of the primary constituent elements of critical habitat for the streaked horned lark is dependent on the periodic disturbance of the sites to set back vegetation succession. The restoration activities covered by this program would provide the necessary disturbance, without which habitat at the sites would transition to dense vegetation unsuitable for the streaked horned lark within the next few years.

The proposed PDC and above conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for the streaked horned lark. All potential effects from the proposed restoration program will be insignificant or discountable. Therefore, the Service concurs the proposed action is not likely to adversely affect PCEs of critical habitat for the streaked horned lark.

1.13 Mazama Pocket Gopher Designated Critical Habitat

Proposed programs would fund or carry out upland restoration in critical habitat for the Olympia, Tenino, and Yelm pocket gophers. The action area includes 1,607 acres of critical habitat for the three subspecies, which is all of the critical habitat units and subunits within in Thurston County, Washington (Olympia Pocket Gopher Critical Habitat: Olympia Airport Unit; Tenino Pocket Gopher Critical Habitat: Rocky Prairie Unit; Yelm Pocket Gopher Critical Habitat: Tenalquot Prairie Subunit and Rock Prairie Subunit) (79 FR 19712).

PCEs for the pocket gopher were described in the Opinion. Restoration actions under PDC 29 and 51 may affect critical habitat for the three subspecies; restoration actions under other PDC will have no effect to Mazama pocket gopher critical habitat PCEs, due to their location in non-habitat (usually wetlands or riparian areas). However, based on the project design criteria and conservation measures proposed in the programmatic PROJECTS BA and incorporated in this Opinion, we concur that proposed upland restoration actions under PDC 29 and 51 are not likely to adversely affect critical habitat for the Olympia, Tenino, and Yelm pocket gophers. A rationale for each PCE is provided below.

<u>Effects to PCE 1</u>: Proposed programs to fund or carry out upland restoration would have no impacts to soils that support the burrowing habits of the Olympia, Tenino, and Yelm pocket gophers, due to the conservation measures included in the project description such as using rubber-tracked tractors to minimize soil compaction, using the widest possible tractor arms when mowing, thus making the fewest possible passes through suitable habitat (and least amount of soil compaction) and requiring prior review upland restoration projects occurring in pocket gopher critical habitat to ensure that Mazama pocket gopher soil profiles – i.e., those qualities of the soil that make them usable by gophers – won't be affected. Only Nisqually soils are deemed likely to be susceptible to significant impacts from this type of compaction, and as such, work conducted in Nisqually soils will be undertaken only when soil moisture is low, thus avoiding the risk of compaction that would render the soil unusable by gophers. Other soil types are not as susceptible to compaction – they are generally shallower, or less compressible or friable due to sand, rock, or clay content. In some cases, they are wetter soils, and waiting for drier months to use wheeled or tracked equipment is necessary to avoid serious damage to plants and soils. Therefore, the proposed action would not affect PCE 1.

Effects to PCE 2a, 2b, and 2c: Proposed programs to fund or carry out upland restoration would decrease woody cover in suitable or potential Mazama pocket gopher habitat (PCE 2a), would improve the amount and quality of foraging habitat for Mazama pocket gophers (PCE 2b), and would not create and may eliminate barriers to dispersal within the units or subunits (PCE 2c). No long-term adverse effects to PCE 2a, 2b, or 2c are anticipated. Short-term adverse effects are either insignificant or discountable occur due to: 1) restrictions on placement (e.g., tilling/disking, sod rolling, shade cloth, and solarization will occur only outside of occupied habitats), scope (e.g., mowers will make the fewest passes possible by virtue of using wider mower decks), and timing of many of the upland restoration projects (e.g., prescribed burns will occur in late season, and use of mowing, tilling/disking, and seeding with a harrow will occur only in dry seasons; see *Conservation Measures* section); 2) using spot application treatments when applying forb-targeting herbicides in occupied gopher habitat (all designated critical habitat was considered to be occupied at the time of listing); 3) minimizing the use of heavy equipment and requiring rubber-tracked mowers and tractors so as to minimize the amount of forage vegetation that is crushed (e.g., for mowing, seeding with a harrow, and raking (which may occur within and outside of occupied habitat), and broadcast application of herbicides (which may only occur outside occupied habitat)); 4) implementing low-intensity prescribed burns that are unlikely to adversely impact foraging habitat, even in the short-term; and 5) requiring prior review of projects to ensure they are not likely to adversely affect critical habitat. Therefore, the proposed action would be not likely to adversely affect PCE 2a, 2b, or 2c.

The proposed PDC and conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for the Mazama pocket gopher. All potential effects from the proposed restoration program will be insignificant or discountable. No effects are anticipated to PCE 1, and no short-term or long-term adverse effects to PCE 2a, 2b, or 2c are anticipated. PCE 2a, 2b, and 2c of the Olympia, Tenino, and Yelm pocket gopher critical would be improved in the long term. Therefore, the Service concurs that the proposed action is not likely to adversely affect Olympia, Tenino, and Yelm pocket gopher critical habitat.

1.14 Fender's Blue Butterfly Designated Critical Habitat

Critical habitat for the butterfly was designated on October 31, 2006 (71 FR 63862-63977). Critical habitat units for the Fender's blue butterfly have been designated in Benton, Lane, Polk and Yamhill Counties, Oregon. The PCEs of critical habitat for the Fender's blue butterfly are the habitat components that provide the following.

1. Early seral upland prairie, wet prairie, or oak savanna habitat with a mosaic of low-growing grasses and forbs, an absence of dense canopy vegetation, and undisturbed sub-soils;
2. Larval host-plants Kincaid's lupine, longspur lupine and sickle-keeled lupine;
3. Adult nectar sources, such as: tapertip onion (*allium acuminatum*), narrowleaved onion, Tolmie star-tulip, *Camassia quamash* (common camas), *Cryptantha intermedia* (Clearwater cryptantha), common wooly sunflower, Oregon geranium, *Iris tenax* (Oregon iris), *Linum angustifolium* (pale flax), *Linum perenne* (blue flax), *Sidalcea campestris* (meadow checker-mallow), rose checker-mallow, *Vicia cracca* (bird vetch), *Vicia sativa* and *Vicia hirsuta*; and

4. Stepping-stone habitat consisting of undeveloped open areas with the physical characteristics appropriate for supporting the short-stature prairie oak savanna plant community (well-drained soils), within approximately 2 km (1.2 miles) of natal lupine patches.

Proposed restoration activities within critical habitat for Fender's blue butterfly habitat may affect PCEs for Fender's blue butterfly. However, based on the PDC and proposed conservation measures included in this programmatic Opinion, we conclude that proposed aquatic and upland restoration program "is not likely to adversely affect" critical habitat for Fender's blue butterfly because those actions would be "wholly beneficial" to each of the identified PCEs.

Effects to PCE 1. Proposed upland restoration activities would increase the size, diversity, and integrity of habitats that provide early seral upland prairie or oak savanna habitat in the action area by restoring disturbance regimes, removing invasive species, and planting native species. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 1.

Effects to PCE 2. Proposed upland restoration activities would increase the diversity and abundance of primary larval host plants in the action area by removing competition for larval host plants and planting more larval host plants. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 2.

Effects to PCE 3. Proposed upland restoration activities would increase the diversity and abundance of adult nectar sources in the action area by removing competition for nectar plants and planting more nectar plants. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 3.

Effects to PCE 4. Proposed upland restoration would increase the amount and quality of stepping-stone habitats between natal lupine patches. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 4.

The proposed PDC and conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for the Fender's blue butterfly. All potential effects from the proposed restoration program will be insignificant or discountable. No short-term or long-term adverse effects to any PCEs are anticipated and the proposed action will have wholly beneficial effects to Fender's blue butterfly critical habitat. All PCEs of critical habitat would be improved in the short and long term. Therefore, the Service concurs that the proposed action is not likely to adversely affect Fender's blue butterfly critical habitat.

1.15 Taylor's Checkerspot Butterfly Designated Critical Habitat

On October 3, 2013, the Service designated critical habitat for Taylor's checkerspot butterfly (TCB) under the ESA. The critical habitat designation includes three critical habitat units (CHUs) which encompass approximately 1,941 acres in Island, Clallam, and Thurston Counties in Washington; and in Benton County, Oregon (78 FR 61506-61589). The critical habitat designation within the three CHUs is further subdivided into 11 subunits. Primary constituent

elements (PCEs) are the physical and biological features of critical habitat essential to a species' conservation. The PCEs of TCB critical habitat consist of four components (78 FR 61576-61577): 1) patches of early seral, short-statured, perennial bunchgrass plant communities, 2) primary larval host plants, 3) adult nectar sources, and 4) aquatic features.

Proposed programs would fund or carry out aquatic and upland restoration in critical habitat for TCB. The action area includes 1,941 acres of critical habitat for TCB, which is all of the critical habitat subunits (CHSUs) within CHUs 1, 2 and 4 in Washington State and Oregon. Restoration actions may affect critical habitat for TCB. However, based on the project design criteria and conservation measures proposed in the programmatic BA and incorporated in this programmatic Opinion, we conclude that proposed aquatic and upland restoration "is not likely to adversely affect" critical habitat for TCB because those actions would be "wholly beneficial" to each of the identified PCEs. A rationale for each PCE is provided below.

Effects to PCE 1. Proposed programs to fund or carry out upland restoration would increase the size, diversity, and integrity of patches of early seral, short-statured, perennial bunchgrass plant communities in the action area by restoring disturbance regimes, removing invasive species, and planting native species. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 1.

Effects to PCE 2. Proposed programs to fund or carry out upland restoration would increase the diversity and abundance of primary larval host plants in the action area by removing competition for larval host plants and planting more larval host plants. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 2.

Effects to PCE 3. Proposed programs to fund or carry out upland restoration would increase the diversity and abundance of adult nectar sources in the action area by removing competition for nectar plants and planting more nectar plants. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 3.

Effects to PCE 4. Proposed programs to fund or carry out aquatic restoration would increase the size and complexity of aquatic features in the action area, and generally restore aquatic features to natural conditions. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 4.

The proposed PDC and conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for the TCB. No short-term or long-term adverse effects to any PCEs are anticipated and the proposed action will have wholly beneficial effects to TCB critical habitat. All PCEs of TCB critical habitat would be improved in the short and long term. Therefore, the Service concurs that the proposed action is not likely to adversely affect TCB critical habitat.

1.16 Designated Critical Habitat for Kincaid's Lupine and Willamette Daisy

As described in the Opinion, both Kincaid's lupine and Willamette daisy occur in prairie habitats in the Willamette Valley, Oregon and southwest Washington. Both species have similar PCEs. Thus, the effects to critical habitat for these two species are discussed together. Briefly, the PCEs of critical habitat for Kincaid's lupine and Willamette daisy are the habitat components that provide early seral upland prairie or oak savanna habitat, with an absence of dense canopy vegetation and protection from competitive invasive species (PCE1). An additional PCE for Kincaid's lupine is the presence of insect pollinators (PCE 2).

Restoration activities most likely to affect the PCEs of these species include prairie restoration techniques used for prairie restoration (mowing, herbicide use, burning, or grazing and plant propagation. These proposed restoration activities would increase the size, diversity, and integrity of habitats that provide early seral upland prairie or oak savanna habitat in the action area by restoring disturbance regimes, removing invasive species, removing species that create canopy cover as they grow, and planting native species. The PDC and species-specific conservation measures will ensure activities occur at appropriate times and in such a manner that adverse effects will not occur. No short-term or long-term adverse effects to this PCE are anticipated. Therefore, the proposed action would be wholly beneficial to PCE 1.

Use of herbicides has the potential to affect the PCE 2; however, the herbicides allowed for use in this Opinion were selected because of their low toxicity. PDC for herbicide application also BMPs are used when these chemical are applied, thus minimizing any potential negative effects. For this reason, we anticipate effects to this PCE to be discountable. No short-term or long-term effects to this PCE is anticipated. Therefore, the proposed action is not likely to adversely affect PCEs for these two plant species.

The proposed PDC and conservation measures ensure that any restoration project will not adversely affect PCEs of critical habitat for Kincaid's lupine and the Willamette daisy. All potential effects from the proposed restoration program will be insignificant or discountable. No short-term or long-term adverse effects to either PCE are anticipated. The proposed action will have wholly beneficial effects to PCE 1 of critical habitat for Kincaid's lupine and Willamette daisy. Effects to PCE 2 of critical habitat for Kincaid's lupine are anticipated to be discountable. Both PCEs of critical habitat would be improved in the short and long term. Therefore, the Service concurs that the proposed action is not likely to adversely affect critical habitat for Kincaid's lupine and Willamette daisy.

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PROJECTS Action Implementation Form

USFWS/NMFS Review and Approval. Project managers shall submit this form with the Action Notification portion completed to NMFS or to USFWS (or both). The email boxes for form submission, usfws.biop.nwr@noaa.gov (for use by USFWS project biologists for NMFS species coverage), noaarc.biop.nwr@noaa.gov (for use by NOAA RC project biologists for NMFS species coverage), and projects@fws.gov (for use by USFWS and NOAA RC project biologists for USFWS species coverage) are to be used for **incoming only**.

Depending on the affected ESA-listed species, the following actions require approval from USFWS or NMFS, or both, as consistent with PROJECTS before that action will be authorized:

- Modification or variance of any requirement fish passage restoration;
- Fishways intended to attract, collect, exclude, guide, transport, or release an ESA-listed fish under NMFSs' jurisdiction including, but not limited to, a culvert retrofit, a pool-riffle structure, or a roughened chute
    - Fish screen review for pump intakes that exceeds 3 cfs
    - Culverts and bridges that do not meet width standards
- Headcut Stabilization and channel spanning non-porous rock structures that create discrete longitudinal drops greater than 6 inches
- Engineered logjams (ELJs) that occupy greater than 25% of the bankfull area
- Irrigation Diversion Replacement/Relocation & Screen Installation/Replacement
- Dam removal
- Channel Reconstruction/Relocation projects
- Off and side channel reconstruction when the proposed side channel will contain greater than 20% of the bankfull flow
- Tide gate Replacement/Retrofit
- Large scale, high risk upland/silvicultural activities (*i.e.*, large scale herbicide application, large scale prescribed fires, large scale timber harvests, *etc.*) where an incidence of take may be higher.
- Any precendent or policy setting activity not previously covered.

Because the following species were recently listed and there is limited consultation history for these species, the USFWS Manager or designee for the affected state will review and approve projects that may affect the following species or their designated critical habitats:

- Oregon spotted frog
- Mazama pocket gopher
- Streaked horned lark
- Taylor's checkerspot butterfly
- Pygmy rabbit

USFWS or NMFS will notify project managers within 30 calendar days if the action is approved or disqualified if a response is required by one of the listed activities above. When requested, USFWS or NMFS will provide an estimate of the time necessary to complete the review based on the complexity of the proposed action and work load considerations at the time of the request.

Approval may be delayed if a substandard design is submitted for review during the post-design or action implementation stage and significant revision is necessary. These reviews are best initiated in the context of informal consultation during the preliminary development project phase, when project team members are developing goals and objectives with stakeholders.

Attach information to e-mail message if required or relevant to USFWS's or NMFS's review, such as:

- Erosion and pollution control plan
- Engineering designs
- Fire, herbicide, or forest harvest plans, as warranted.
- Comprehensive management plans

Project Reporting. The project manager shall submit the following reports as necessary:

> **Action Notification:** Submit this form to USFWS or NMFS at least **30** days prior to undertaking restoration activities.
> **Action Completion Reporting:** Submit this form to USFWS or NMFS within **60** days of completing all work below ordinary high water (OHW) or end of construction.
> **Fish Salvage Reporting:** Submit this form to USFWS or NMFS within **60** days of completing a capture and release as part of an action completed under PROJECTS.

Completion of the Action Implementation Form. Completion of this form is to document compliance with PROJECTS. It may be used to support, but does not necessarily substitute, for ESA documentation requirements by individual offices. It is the responsibility of the project manager to ensure ESA compliance is properly documented in project files according to each office's policies and procedures.

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Depending on the affected ESA-listed species, the following actions require approval from USFWS or NMFS, or both, as consistent with PROJECTS before that action will be authorized:

- Modification or variance of any requirement fish passage restoration;
- Fishways intended to attract, collect, exclude, guide, transport, or release an ESA-listed fish under NMFSs' jurisdiction including, but not limited to, a culvert retrofit, a pool-riffle structure, or a roughened chute
    - Fish screen review for pump intakes that exceeds 3 cfs
    - Culverts and bridges that do not meet width standards
- Headcut Stabilization and channel spanning non-porous rock structures that create discrete longitudinal drops greater than 6 inches
- Engineered logjams (ELJs) that occupy greater than 25% of the bankfull area
- Irrigation Diversion Replacement/Relocation & Screen Installation/Replacement
- Dam Removal
- Channel Reconstruction/Relocation projects
- Off and side channel reconstruction when the proposed side channel will contain greater than 20% of the bankfull flow
- Tide Gate Replacement/Retrofit
- Large scale, high risk upland/silvicultural activities (*i.e.*, large scale herbicide application, large scale prescribed fires, large scale timber harvests, *etc.*) where an incidence of take may be higher.
- Any precendent or policy setting activity not previously covered.

Because the following species were recently listed and there is limited consultation history for these species, the USFWS Manager or designee for the affected state will review and approve projects that may affect the following species or their designated critical habitats:

- Oregon spotted frog
- Mazama pocket gopher
- Streaked horned lark
- Taylor's checkerspot butterfly
- Pygmy rabbit

USFWS or NMFS will notify project managers within 30 calendar days if the action is approved or disqualified if a response is required by one of the listed activities above. When requested, USFWS or NMFS will provide an estimate of the time necessary to complete the review based

on the complexity of the proposed action and work load considerations at the time of the request. Approval may be delayed if a substandard design is submitted for review during the post-design or action implementation stage and significant revision is necessary. These reviews are best initiated in the context of informal consultation during the preliminary development project phase, when project team members are developing goals and objectives with stakeholders.

Attach information to e-mail message if required or relevant to USFWS's or NMFS's review, such as:

- Erosion and pollution control plan
- Engineering designs
- Fire, herbicide, or forest harvest plans, as warranted.
- Comprehensive management plans

Project Reporting. The project manager shall submit the following reports as necessary:

> **Action Notification:** Submit this form to USFWS or NMFS at least **30** days prior to undertaking restoration activities.
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1. Action Notification

Date of Request:		**BiOp Tracking Numbers:**	**USFWS: 01EOFW00-2014-F-0222** **NMFS: NWR-2013-10221**
		Lead Action Agency:	☐ USFWS ☐ NOAA RC
State:	☐ Idaho ☐ Oregon ☐ Washington		
Nature of habitat:	☐ Aquatic ☐ Upland ☐ Both		
Type of Request:	☐ Approval Required ☐ No Approval Required		
Statutory Authority *(Check all that apply)*:	☐ ESA (USFWS) ☐ ESA (NMFS) ☐ EFH (NMFS)		
Action Agency Contact:			
USFWS Database Number:		**NOAA RC RCDB Number:**	
Project Name (*e.g.*, Hay Cr. culvert replacement)**:**			
6th Field HUC & Name:			
Latitude & Longitude (in signed degrees format: DDD.dddd)**:**	**Latitude:**	**Longitude:**	
Proposed Construction Period:	**Start Date:**	**End Date:**	
Total Proposed Area of Treatment (Acres):			

Proposed habitat treatment and quantity:	Stream/Instream Restored					Upland Restored			
	Riparian Restored (Linear feet or miles)	**Channel Restored (Linear feet or miles)**	**Other (Linear feet or miles)**	**Fish passage (#)**	**Wetland Restored (acres)**	**Mowing (acres)**	**Burning (acres)**	**Herbicide (acres)**	**Planting, Thinning, Other (acres)**
Stream Access Gained (Linear feet or miles):									

Fish Passage Engineering Approval	☐ **Approved** ☐ **Not Approved** **Signature:**_____ **Date:** _____ **Notes:**

<u>Project Description</u>:

******Note: If you are utilizing herbicides during your restoration, please provide specific information regarding:***

- *Herbicide is being used*
- *Surfactant is being used if known*
- *Targeted non-desired (ie invasive, non-native, etc.) species – scientific name (common name)*
- *Application method*
- *Timing of application*
- *Site-specific BMPs employed*

<u>Are you requesting a variance? If so, please describe</u>:

Type of Action: *Identify the type of action proposed.*

- ☐ Fish Passage Restoration (Stream Simulation Culvert and Bridge Projects; Headcut and Grade Stabilization; Fish Ladders; Irrigation Diversion Replacement/Relocation and Screen Installation/Replacement)
- ☐ Large Wood (LW), Boulder, and Gravel Placement; Engineered Logjams (ELJ); Constructed Riffles, Constructed Riffles, Porous Boulder Weirs and Vanes; Gravel Augmentation; Tree Removal for LW Projects
- ☐ Dam and Legacy Structure Removal
- ☐ Channel Reconstruction/Relocation
- ☐ Off- and Side-Channel Habitat Restoration
- ☐ Streambank Restoration
- ☐ Set-Back or Removal of Existing Berms, Dikes, and Levees
- ☐ Reduction/Relocation of Recreation Impacts
- ☐ Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering
- ☐ Piling, Marine Debris, and other Structure Removal
- ☐ Shellfish Restoration
- ☐ In-channel Nutrient Enhancement
- ☐ Road and Trail Erosion Control and Decommissioning
- ☐ Juniper Removal
- ☐ Riparian Vegetative Planting
- ☐ Native Fish Protection
- ☐ Beaver Habitat Restoration
- ☐ Wetland Restoration
- ☐ Tide Gate Removal, Replacement, or Retrofit
- ☐ Restore Native Vegetation
- ☐ Upland Silvicultural Treatments

USFWS Species/Critical Habitat Present in Action Area: *Identify the species and critical habitats present in the action area (N/A means not applicable):*

Species	*Critical Habitat*	
		Mammals
☐	☐	Canada lynx
☐	N/A	Columbian white-tailed deer (Columbia River DPS)
☐	N/A	Gray wolf (Coterminous USA DPS – portions of OR and WA, not ID)
☐	N/A	Grizzly bear
☐	☐	Mazama pocket gopher
☐	☐	North American wolverine
☐	N/A	Northern Idaho ground squirrel
☐	N/A	Pygmy rabbit (Columbia Basin DPS)
☐	☐	Southern Selkirk Mountains woodland caribou

Species	*Critical Habitat*	
		Birds
☐	☐	Marbled murrelet
☐	☐	Northern spotted owl
☐	☐	Streaked horned lark
☐	☐	Western snowy (coastal) plover
		Reptiles and Amphibians
☐	☐	Oregon spotted frog
		Fish
☐	☐	Bull trout
☐	N/A	Lahontan cutthroat trout
☐	☐	Warner sucker
		Invertebrates
☐	☐	Fender’s blue butterfly
☐	☐	Oregon silverspot butterfly
☐	☐	Taylor’s checkerspot butterfly
☐	☐	Vernal pool fairy shrimp

Species	*Critical Habitat*	
		Plants
☐	N/A	Bradshaw's desert parsley
☐	☐	Cook's lomatium
☐	N/A	Gentner's fritillary
☐	N/A	Golden paintbrush
☐	N/A	Howell's spectacular thelypody
☐	☐	Kincaid's lupine
☐	☐	Large-flowered woolly meadowfoam
☐	N/A	MacFarlane’s four-o’clock
☐	☐	Malheur wire-lettuce
☐	N/A	Marsh sandwort
☐	N/A	Nelson’s checker mallow
☐	N/A	Spalding’s catchfly
☐	N/A	Water howellia
☐	N/A	Western lily
☐	☐	Willamette daisy

NMFS Species/Critical Habitat Present in Action Area: *Identify the liste-species, critical habitat, and essential fish habitat (EFH) present in the action area (N/A means not applicable):*

Species	*Critical Habitat*	
☐	☐	Lower Columbia River Chinook salmon
☐	☐	Upper Willamette River Chinook salmon
☐	☐	Upper Columbia River spring-run Chinook salmon
☐	☐	Snake River spring/summer-run Chinook salmon
☐	☐	Snake River fall-run Chinook salmon
☐	☐	Puget Sound Chinook salmon
☐	☐	Columbia River chum salmon
☐	☐	Hood Canal summer-run chum salmon
☐	N/A	Lower Columbia River coho salmon
☐	☐	Oregon Coast coho salmon
☐	☐	Southern Oregon/Northern California Coast coho salmon
☐	☐	Lake Ozette sockeye salmon
☐	☐	Snake River sockeye salmon
☐	☐	Lower Columbia River steelhead
☐	☐	Upper Willamette River steelhead
☐	☐	Middle Columbia River steelhead
☐	☐	Upper Columbia River steelhead
☐	☐	Snake River Basin steelhead
☐	N/A	Puget Sound steelhead
☐	☐	Southern DPS eulachon
		EFH Species
☐		Salmon, Chinook
☐		Salmon, Coho
☐		Coastal Pelagics
☐		Groundfish

Terms and Conditions: *Check the terms and conditions from the biological opinion that will be included as conditions for any action funded or carried out under this opinion.*

Administration

☐ USFWS/NOAARC review
☐ Restoration Review Team review
☐ NMFS fish passage review
☐ Site access
☐ Site assessment for contaminants
☐ Funding conditions
☐ Fish Salvage notice

General Construction Measures

- ☐ Flagging sensitive areas
- ☐ Temporary access roads and paths
- ☐ In-water work period
- ☐ Fish Capture and release
- ☐ Construction water
- ☐ Vehicle staging and use
- ☐ Work from top of bank
- ☐ Staging, Storage, and Stockpile Areas
- ☐ Dust Abatement
- ☐ Surveys
- ☐ Temporary erosion controls
- ☐ Fish passage
- ☐ Work area isolation
- ☐ Electrofishing
- ☐ Fish screens
- ☐ Choice of equipment
- ☐ Stationary power equipment
- ☐ Site restoration
- ☐ Temporary Stream Crossings
- ☐ Revegetation

Invasive and non-native plant control

- ☐ Non-herbicide methods
- ☐ Required herbicide buffer distances
- ☐ Herbicide transportation and safety plan
- ☐ Approved herbicide adjuvants
- ☐ Approved dye
- ☐ Approved herbicide application rates
- ☐ Approved application methods
- ☐ Power equipment
- ☐ Herbicide applicator qualifications
- ☐ Approved herbicides
- ☐ Approved herbicide carriers
- ☐ Herbicide mixing
- ☐ Minimize herbicide drift and leaching

Types of Restoration Actions

Fish Passage Restoration

- ☐ Stream Crossing
- ☐ Stabilize Headcut
- ☐ Irrigation Diversion
- ☐ Fish Ladder
- ☐ Screen Installation/Replacement
- ☐ Grade Stabilization

Large Wood, Boulder, and Gravel Placement

- ☐ Large Wood or Boulders
- ☐ Constructed Riffles
- ☐ Gravel Augmentation
- ☐ Engineered Logjams
- ☐ Porous Boulder Structures and Vanes
- ☐ Tree Removal for LW Projects

Dam and Legacy Structure Removal

- ☐ Dam Removal
- ☐ Legacy Structure Removal

Channel Reconstruction/Relocation

- ☐ Design Guidance
- ☐ Monitoring and adaptive plan
- ☐ Project documentation

Off- and Side Channel Habitat Restoration

- ☐ Review and approve
- ☐ Allowable excavation
- ☐ Data requirements

Streambank Restoration

- ☐ Streambank shaping
- ☐ Large wood
- ☐ Planting or installing vegetation
- ☐ Fencing
- ☐ Soil reinforcement
- ☐ Use of rock in streambank restoration
- ☐ Fertilizer

Set-Back or Removal of Existing Berms, Dikes, and Levees

- ☐ Floodplains and Freshwater Deltas
- ☐ Estuary Restoration

Livestock Stream Crossings and Off-Channel Livestock Watering Facilities

- ☐ Livestock stream crossings
- ☐ Livestock Fencing
- ☐ Off-channel watering facilities

Road and Trail Erosion Control and Decommissioning

- ☐ Road Decommissioning/ Stormproofing
- ☐ Road Relocation

Juniper Tree Removal

- ☐ Approved juniper tree removal methods
- ☐ Management of juniper slash

Beaver Habitat Restoration

- ☐ In-channel structures
- ☐ Habitat Restoration

Wetland Restoration (type)

- ☐ Riparian
- ☐ Vernal pools
- ☐ Wetland meadows
- ☐ Bogs
- ☐ Swamps
- ☐ Ponds

Tide/Flood Gate Removal, Replacement, or Retrofit

- ☐ Removal
- ☐ Retrofit
- ☐ Culvert or bridge
- ☐ Design Approved by NMFS
- ☐ Replacement
- ☐ Dike breach or setback
- ☐ Monitoring/Adaptive Management Plan

Restore Native Vegetation

- ☐ Site Preparation
- ☐ Prescribed Fire
- ☐ Planting and Maintaining Vegetation
- ☐ Control of invasive species (ie. mechanical control or herbicide application)

Upland Silvicultural Treatments

- ☐ Forest thinning
- ☐ Planting of native species
- ☐ Limb pruning
- ☐ Control of invasive species

2. Action Completion Report

A) AQUATIC (INSTREAM-RIPARIAN) PROJECT ACTIVITIES: Within 60 days of completing all work below ordinary high water (OHW) as part of an action completed under PROJECTS, submit the completed Action Completion Form with the following information to NMFS at usfws.biop.nwr@noaa.gov (USFWS projects) or noaarc.biop.nwr@noaa.gov (NOAARC projects), and/or to USFWS at projects@fws.gov (USFWS & NOAARC).

Actual Start and End Dates for the Completion of In-water Work:	**Start**:	**End**:
Actual Linear-feet of Riparian and/or Channel Modification:		
Actual Acreage of Herbicide Treatment		
Turbidity Monitoring/Sampling Completed	☐ Yes (include details below)	☐ No

Please include the following:

1. Photos of habitat conditions before, during, and after action completion.

2. A summary of the results of pollution and erosion control inspections, including any erosion control failure, contaminant release, and correction effort.

3. Records of turbidity monitoring (visual or by turbidimeter) including dates, times and location of monitoring. Include any exceedances and steps taken to reduce turbidity observed.

Brief Project Summary: Did project go according to plan? Were there any deviations from proposed project?

Any suggestions to improve PROJECTS, BMPs, or Conservation Measures (ie Lessons Learned) from this project:

B) TERRESTRIAL (UPLAND) RESTORATION PROJECT ACTIVITIES: Within 60 days of completing all terrestrial restoration work as part of an action completed under PROJECTS, submit the completed Action Completion Form with the following information to USFWS at projects@fws.gov.

Actual Start and End Dates for the Completion of Work:	**Start**:	**End**:
Amount of actual take observed or "calculated" take (i.e. % of habitat treated): ***Please note species name and amount of take.	**Amount of take:**	

Please include the following:

1. Photos of habitat conditions before, during, and after action completion.
2. A brief summary of the actual treatments undertaken. Please note any other observations or deviations from the proposed action and, if applicable, list any recommendations to minimize take in the future.
3. If applicable, document the amount of herbicide used.
4. Effectiveness of herbicide, if observable.
5. Any non-target impacts of herbicide, if observable.

Brief Project Summary: Did project go according to plan? Were there any deviations from proposed project?

Any suggestions to improve PROJECTS, BMPs, or Conservation Measures (i.e. Lessons Learned) from this project:

3. Fish Salvage Reporting Form

If applicable: Within 60 days of completing a capture and release as part of an action completed under PROJECTS, the applicant or must submit a complete Salvage Reporting Form, with the following information to NMFS at usfws.bio.nwr@noaa.gov (USFWS projects) or noaarc.biop.nwr@noaa.gov (NOAARC projects), or USFWS at projects@fws.gov (USFWS & NOAARC projects).

Date(s) of Fish Salvage Operation(s):	
Supervisory Fish Biologist:	
Address:	
Telephone Number:	
Waterbody/Location:	

Describe methods that were used to isolate the work area and remove fish

Fish Salvage Data

Water Temperature:

Air Temperature:

Time of Day:

ESA-Listed Species	Number Handled		Number Injured		Number Killed	
	Juvenile	Adult	Juvenile	Adult	Juvenile	Adult
Lower Columbia River Chinook salmon						
Upper Willamette River Chinook salmon						
Upper Columbia R. spring-run Chinook salmon						
Snake River spring/summer-run Chinook salmon						
Snake River fall-run Chinook salmon						
Puget Sound Chinook salmon						
Lake Ozette sockeye salmon						
Columbia River chum salmon						
Hood Canal chum salmon						
Lower Columbia River coho salmon						
Oregon Coast coho salmon						
S. Oregon/N. California Coasts coho salmon						
Snake River sockeye salmon						
Lower Columbia River steelhead						
Upper Willamette River steelhead						
Middle Columbia River steelhead						
Upper Columbia River steelhead						
Snake River Basin steelhead						
Puget Sound steelhead						
Eulachon						
Bull trout (FWS)						
Lahontan cutthroat trout (FWS)						
Warner sucker (FWS)						