13.0 Effect Determination Guidance

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13.0 Effect Determination Guidance

This chapter provides guidance for making overall effect determinations based on the effect determinations and rationale provided in the following three documents:

- *Programmatic Biological Assessment for the Washington State Department of Transportation Eastern Washington Regions – Working Document* (WSDOT 2004b)
- *No Effect and Not Likely to Adversely Affect Programmatic Biological Assessment Working Document for NOAA Fisheries Listed Species* (WSDOT 2002)
- *Biological Opinion and Letter of Concurrence of Effects on Bald Eagles, Marbled Murrelets, Northern Spotted Owls, Bull Trout, and Designated Critical Habitat for Marbled Murrelets and Northern Spotted Owls from Olympic National Forest Program Activities for August 5, 2003 to December 31, 2008* (USFWS 2003, Reference number 1-3-03-F-0833).

All three of the above-mentioned documents are programmatic BAs or relate to programmatic BAs that are used by their respective agencies (WSDOT and Olympic National Forest.) However, the effect determinations included in these documents can be used as guidance for making effect determinations in similar situations. Remember that effect determinations in programmatic BAs tend to be more conservative (i.e., more restrictive or protective) than effect determinations made on a project-by-project basis. Thus, for a given project it may be possible to reach a less conservative effect determination than the one given in the programmatic document, depending on the situation.

The first section of this chapter provides guidance for integrating multiple effect determinations for specific project elements into a single overall effect determination for each species addressed in the BA.

The second section of this chapter provides guidance for making effect determinations for species and critical habitats based on general standards and disturbance thresholds. This guidance is based on the definitions and criteria for *no effect* (NE), *not likely to adversely affect* (NLTAA), and *likely to adversely affect* (LTAA) determinations and the disturbance thresholds for species and critical habitat presented in the three documents listed above. The disturbance thresholds are based upon recent research regarding noise and visual disturbance. These thresholds can also serve as standards for making effect determinations.

It is important to note that the examples provided here apply to a specific suite of projects, species, and habitat types and do not necessarily apply to other WSDOT projects. The rationale and effect determinations provided here have been provided to help inform biologists preparing biological assessments what parameters or characteristics might be taken into consideration when making an effect determination.

13.1 Making Overall Effect Determinations

The biological assessment must provide a single effect determination, reflecting the impacts of the project as a whole, for each species and critical habitat. To do so, the project biologist must systematically consider all of the potential effects associated with various project elements in combination.

To facilitate the effects analysis, each of these project elements may first be evaluated individually, and effect determinations for each element may be developed. However, all of these elements and their associated effect determinations must subsequently be considered in combination to develop an overall effect determination for the project for each species or critical habitat. For a given species, the most stringent effect determination for any of the project elements (i.e LTAA vs. NLTAA) will be the overall project effect determination for the species. For example, if a project will have no effect on gray wolves for stormwater, in-water work and clearing and grading but will have a NLTAA for pile-driving, the overall project effect determination for that species would be NLTAA. In addition, the synergistic effects of an action must also be considered. For example, effects on temperature and dissolved oxygen when viewed separately might be considered minimal, but when viewed in concert, their synergistic effect on the physiological response of a fish may lead to a different overall conclusion.

One technique that can facilitate this process of determining overall project impacts is developing a worksheet that lists all affected species and all project elements, and the effect determinations associated with each. Although the worksheet should not be included in the BA, it can be a useful tool for ensuring that all anticipated project impacts are considered when making the overall effect determination for each species and critical habitat. An example of this type of worksheet is presented in Table 13-1.

13.2 Effect Determinations for Species

13.2.1 Effect Determinations for Listed Species

The following sections provide effect determination guidance for listed fish species under NOAA Fisheries and USFWS jurisdiction, followed by guidance tailored to fish, bird, small mammal, and plant species under USFWS jurisdiction.

13.2.1.1 Fish Species

NOAA Fisheries Listed Fish Species

For all of the fish species listed by NOAA Fisheries, as of 2002, effect determinations are compiled below, based on the nine program descriptions covered in the programmatic BA. Conditions for NE and NLTAA effect determinations are dependent upon the presence of listed fish species, proximity of activity to surface waters, level of disturbance, ability to contain activity within previously developed areas, use of appropriate BMPs, extent of riparian vegetation removal, work during appropriate work windows, and compliance with established

guidelines, agreements, and permits. Although effect determinations are project-specific, the following conditions can serve as guidance in making effect determinations for other projects.

Table 13-1. Worksheet for determining overall effect determination for each affected species and critical habitat.

Regulatory Jurisdiction	Federal Status [a]	Common Name	Effect Determination for Stormwater Runoff	Effect Determination for In-Water Work	Effect Determination for Pile Driving	Effect Determination for Clearing and Grading	Overall Effect Determination for Project
USFWS	E	Gray wolf	NE	NE	NLTAA	NE	NLTAA
	E	Marsh sandwort	NE	NE	NLTAA	NLTAA	NLTAA
	T	Canada lynx	NE	NE	NLTAA	NE	NLTAA
	T	Grizzly bear	NE	NE	NLTAA	NE	NLTAA
	T	Marbled murrelet	NE	NE	LTAA	NLTAA	LTAA
	T	Northern spotted owl	NE	NE	LTAA	NLTAA	LTAA
	T	Coastal/Puget Sound bull trout (DPS)	NLTAA	LTAA	NLTAA	NLTAA	LTAA
	T	Water howellia	NLTAA	NE	NE	NE	NLTAA
	T	Golden paintbrush	NE	NLTAA	NLTAA	NLTAA	NLTAA
NOAA Fisheries	E	Humpback whale	NE	NE	NE	NE	NE
	E	Leatherback sea turtle	NE	NE	NE	NE	NE
	T	Steller sea lion	NE	NE	NE	NE	NE
	T	Puget Sound Chinook salmon (ESU)	NLTAA	LTAA	NLTAA	NLTAA	LTAA
	T	Hood Canal summer chum salmon (ESU)	NLTAA	LTAA	NLTAA	NLTAA	LTAA
	P	Southern resident killer whale (DPS)	NLTAA	NLTAA	NLTAA	NLTAA	LTAA

T = threatened; E = endangered; NE = no effect; LTAA = likely to adversely affect; NLTAA = not likely to adversely affect; DPS = distinct population segment; ESU = evolutionarily significant unit.

Many project types may warrant a determination of *no effect* on listed fish species. Examples of such projects include the following:

- Projects occurring in watersheds or water resource inventory areas (WRIAs) with no listed fish species
- Projects or maintenance activities that: 1) are conducted entirely within the developed transportation system right-of-way, 2) do not remove or modify vegetation in any way, 3) do not alter existing hydrology through modified discharges, and 4) do not discharge materials (such as water, asphalt grindings, or fill material) from the developed portion of the roadway

- Bridges undergoing seismic retrofit, bridge deck repair, or overlay and replacement, provided that they include no in-water work and create no additional impervious surface area.

- Projects where there are no listed species-bearing waters within the action area.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* listed fish species. Examples of such projects include the following:

- Projects that are located within 300 feet of an existing listed fish-bearing water's ordinary high water mark (OHWM) and that do not remove or alter riparian habitat.

- Projects for which best management practices (BMPs) are implemented to prevent sediments or runoff from entering surface water, and that do not permanently remove riparian vegetation greater than 6 inches in diameter at breast height (dbh) from a riparian area of a stream or river system containing listed salmonids.

- Projects in which slide material that has entered a listed fish-bearing water body will be removed within the appropriate work window when listed fish species are not likely to be present in the action area.

- Projects that require work below the OHWM to replace or extend culverts, provided that no ESA-listed salmonid species are present in the system during the approved work window, and that the work does not disturb spawning habitat. (Road crossing replacement culverts are to be designed in accordance with *Design of Road Culverts for Fish Passage* [WDFW 2003]. Tide gate replacement should use guidance in the *Programmatic Biological Opinion: Phase II Fish Passage Restoration, Department of Army Permits* [November 19, 2001].)

- Projects that relocate streams farther from the roadway or separate ditch or stream systems, provided that 1) listed salmonid species are not present in the system during construction, and 2) the activity restores or improves habitat functions that were provided by the original channel, through creation of meanders or vegetated stream banks, or installation of habitat structures.

- Projects that replace existing riprap structures with no expansion of the original footprint, based on the as-built plans, or projects that remove an equivalent amount of riprap within the project area during a period when listed fish species are not likely to be present.

USFWS Listed Fish Species

Bull trout is currently the only fish species listed by USFWS and covered in the WSDOT programmatic BA for eastern Washington. Conditions for NE, NLTAA, and LTAA effect determinations for bull trout depend upon bull trout presence, proximity of project activity to surface waters, bull trout use of the water body (spawning, rearing, or migration), level of disturbance, ability to contain activity within previously developed areas, use of appropriate BMPs, extent of riparian vegetation removal, and work within appropriate work windows. Projects located in bull trout spawning watersheds, which are very small headwater systems, are likely to have greater adverse effects and require more conservative effect determinations than projects located in watersheds used only for migration.

Examples of projects that may warrant a determination of *no effect* on bull trout include the following:

- Projects located in WRIAs that do not contain bull trout
- Projects that 1) are conducted entirely within the developed portion of the roadway, 2) do not remove or modify vegetation in any way, 3) do not alter existing hydrology through modified discharges, and 4) do not discharge materials (such as water or asphalt grinds) from the developed portion of the roadway.

Examples of projects that may warrant a determination of *may affect but is not likely to adversely affect* bull trout include the following:

- Activities located within 300 feet of a water body that supports bull trout or drains into a bull-trout-supporting water body and that 1) conduct work off the developed portion of the roadway, 2) do not expose soils, 3) do not create more than 150 square feet of impervious surface area, and 4) do not remove mature riparian vegetation. (This distance can be project-specific depending on factors such as topography, vegetation, habitat, or species use.)
- Activities located more than 300 feet from a water body that supports or drains into a bull-trout-supporting water body and that 1) are conducted within 100 feet of the existing transportation system, and 2) have BMPs implemented to prevent sediments or runoff from entering surface waters.
- Vegetation or ground-disturbing activities located within 100 to 300 feet of a water body that supports or drains into a bull-trout-supporting water body and that 1) are conducted within 100 feet of an existing transportation system, 2) remove no riparian vegetation greater than 6 inches dbh, and 3) implement a temporary erosion and sedimentation control (TESC) plan that is adequate to prevent sediment from entering

surface water. (These distances can be project-specific depending on such factors as topography, vegetation, habitat, and species use.)

- Culvert and bridge widening, extension, repair, and replacement activities that 1) occur in waters where bull trout are unlikely to be present, 2) do not eliminate spawning habitat, 3) avoid constricting the system, 4) place less than 100 cubic yards of riprap, 5) are performed within the appropriate work window for bull trout as agreed upon by USFWS and WDFW, 6) remove less than 300 square feet of riparian vegetation, 7) use appropriate BMPs to control sedimentation, 8) revegetate disturbed vegetation, and 9) do not affect bull trout migration.

Examples of projects that may warrant a determination of *may adversely affect* bull trout include the following:

- Environmental enhancement projects, such as correction of fish barriers, installation of culverts to improve fish passage, and installation of fish habitat enhancement projects.

- In-water work activities in water bodies where listed fishes are present, especially if dewatering or fish-moving activities are likely to occur.

- Bridge and culvert widening, extension, repair, and replacement activities that do not meet the conditions of a NLTAA determination.

13.2.1.2 Marbled Murrelet

Marbled murrelets are sensitive to human disturbance, especially during the nesting season. Loss of suitable nesting habitat is one of the primary threats to marbled murrelet survival. Effect determinations are highly dependent upon the proximity of project activity to potential nesting areas and foraging habitat, activity noise levels, removal of suitable nesting habitat, and project timing in relation to the nesting season.

Many project types may warrant a determination of *no effect* on marbled murrelets. Examples of such projects include the following:

- Any project located more than 55 miles from marine waters.

- Any project or activity (including blasting) conducted within or outside suitable marbled murrelet nesting habitat, but outside the murrelet breeding season (April 1 through September 15), that does not remove suitable nesting habitat.

- Any project or activity conducted more than 60 yards (1 mile for blasting) from suitable marbled murrelet nesting habitat.

- Blasting activities between September 16 and March 30 that do not remove suitable marbled murrelet nesting habitat.
- Blasting activities between August 6 and September 15 occurring more than 1 mile from suitable marbled murrelet habitat.
- Use of impact pile drivers, jackhammers, or rock drills between September 16 and March 30.
- Use of impact pile drivers, jackhammers, or rock drills between August 6 and September 15 occurring more than 60 yards from suitable marbled murrelet habitat.
- Use of large helicopter or aircraft between September 16 and March 30.
- Use of large helicopter or aircraft between August 6 and September 15 more than 1 mile from suitable marbled murrelet habitat.
- Use of helicopter or single-engine aircraft between September 16 and March 30.
- Use of helicopter or single-engine aircraft between August 6 and September 15 more than 120 yards from suitable marbled murrelet habitat.
- Use of heavy equipment or motorized tools between September 16 and March 30 in the vicinity of suitable marbled murrelet habitat without affecting suitable habitat.
- Use of heavy equipment or motorized tools between August 6 and September 15 more than 35 yards from suitable marbled murrelet habitat without affecting suitable habitat.
- Use of chainsaws for felling trees and cutting downed wood between September 16 and March 30 without affecting suitable marbled murrelet habitat.
- Use of chainsaws for felling trees and cutting downed wood between August 6 and September 15 more than 45 yards from suitable marbled murrelet habitat.
- Any prescribed burning activities between September 16 and March 30.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* marbled murrelets. Examples of such projects include the following:

- Activities conducted between April 1 and September 15 within 0.25 miles of suitable marbled murrelet nesting habitat, without producing noise above ambient levels or removing or disturbing suitable habitat.

- Activities (with the exception of blasting) conducted within 0.25 miles of suitable marbled murrelet nesting habitat, after August 5 and before September 15 between 2 hours after sunrise and 2 hours before sunset, or between September 15 and April 1, that result in increased human activity, disturbance, and noise above ambient levels but do not affect suitable habitat.

- Blasting activities between April 1 and August 5 occurring more than 1 mile from suitable marbled murrelet habitat.

- Blasting activities between August 6 and September 15 occurring less than 1 mile from suitable marbled murrelet habitat.

- Use of impact pile drivers, jackhammers, or rock drills between April 1 and August 5 more than 60 yards from suitable marbled murrelet habitat.

- Use of impact pile drivers, jackhammers, or rock drills between August 6 and September 15 less than 60 yards from suitable marbled murrelet habitat.

- Use of large helicopter or aircraft between April 1 and August 5 more than 1 mile from suitable marbled murrelet habitat.

- Use of large helicopter or aircraft between August 6 and September 15 less than 1 mile from suitable marbled murrelet habitat.

- Use of helicopter or single-engine aircraft between April 1 and August 5 more than 120 yards from suitable marbled murrelet habitat.

- Use of helicopter or single-engine aircraft between August 6 and September 15 less than 120 yards from suitable marbled murrelet habitat.

- Use of heavy equipment or motorized tools between April 1 and August 5 more than 35 yards from suitable marbled murrelet habitat.

- Use of heavy equipment or motorized tools between August 6 and September 15 less than 35 yards from suitable marbled murrelet habitat without affecting suitable habitat.

- Use of chainsaws for felling trees and cutting downed wood between April 1 and August 5 more than 45 yards from suitable marbled murrelet habitat.

- Use of chainsaws for felling trees and cutting downed wood between August 6 and September 15 less than 45 yards from suitable marbled murrelet habitat without affecting suitable habitat.
- Prescribed burning activities between April 1 and August 5 occurring more than 0.25 miles from suitable marbled murrelet habitat.
- Prescribed burning activities between August 6 and September 15 occurring less than 0.25 miles from suitable marbled murrelet habitat.

Examples of project types that may warrant a determination of *likely to adversely affect* marbled murrelets include the following:

- Blasting activities between April 1 and August 5 occurring less than 1 mile from suitable marbled murrelet habitat.
- Use of impact pile driver, jackhammer, or rock drill between April 1 and August 5 less than 60 yards from suitable marbled murrelet habitat.
- Use of large helicopter or aircraft between April 1 and August 5 less than 1 mile from suitable marbled murrelet habitat.
- Use of helicopter or single-engine aircraft between April 1 and August 5 less than 120 yards from suitable marbled murrelet habitat.
- Use of heavy equipment or motorized tools between April 1 and August 5 less than 35 yards from suitable marbled murrelet habitat.
- Use of chainsaws for felling trees and cutting downed wood between April 1 and August 5 less than 45 yards from suitable marbled murrelet habitat.
- Prescribed burning activities between April 1 and August 5 occurring less than 0.25 miles from suitable marbled murrelet habitat.
- Removal of suitable marbled murrelet nesting habitat, including trees with suitable nesting platforms.

13.2.1.3 Northern Spotted Owl

Projects that involve clearing of mature coniferous forest could adversely affect spotted owl habitat. Loss of suitable nesting habitat is one of the primary threats to spotted owl survival. Conditions for NE and NLTAA effect determinations depend upon proximity of the project activity to nesting habitat, activity noise levels, modification of suitable habitat, and timing of activity in relation to the nesting season.

Many project types may warrant a determination of *no effect* on spotted owls. Examples of such projects include the following:

- Activities conducted in counties that do not contain suitable spotted owl habitat.
- Activities conducted both outside the spotted owl breeding season (March 1 to September 30) and outside suitable habitat.
- Activities conducted at any time within suitable spotted owl habitat that 1) produce noise at or below ambient noise levels, 2) produce human disturbance levels at or below normal, and 3) do not modify suitable habitat.
- Activities that do not modify suitable spotted owl habitat, conducted at any time, where all suitable habitat within 0.25 miles of the project (1 mile for blasting) has been surveyed to protocol and no spotted owl activity centers have been located.
- Any blasting activities between October 1 and February 28.
- Blasting activities between July 16 and September 30 occurring more than 1 mile from suitable spotted owl habitat.
- Use of impact pile drivers, jackhammers, or rock drills between October 1 and February 28.
- Use of impact pile drivers, jackhammers, or rock drills between July 16 and September 30 more than 60 yards from suitable spotted owl habitat.
- Use of large helicopter or aircraft between October 1 and February 28.
- Use of large helicopter or aircraft between July 16 and September 30 more than 1 mile from suitable spotted owl habitat.
- Use of helicopter or single-engine aircraft between October 1 and February 28.
- Use of helicopter or single-engine aircraft between July 16 and September 30 more than 120 yards from suitable spotted owl habitat.
- Use of heavy equipment or motorized tools between October 1 and February 28.

- Use of heavy equipment or motorized tools between July 16 and September 30 more than 35 yards from suitable spotted owl habitat.

- Use of chainsaws for felling trees and cutting downed wood between October 1 and February 28.

- Use of chainsaws for felling trees and cutting downed wood between July 16 and September 30 more than 65 yards from suitable spotted owl habitat.

- Prescribed burning activities between October 1 and February 28 occurring more than 0.25 miles from suitable spotted owl habitat.

It is assumed that suitable spotted owl habitat would not be modified as a result of the conditions listed above.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* spotted owls. Examples of such projects include the following:

- Noise-generating construction activities (excluding blasting) conducted during the spotted owl breeding season (March 1 through September 30) more than 0.25 miles from known spotted owl activity centers without modifying suitable habitat.

- Noise-generating construction activities (excluding blasting) conducted outside the spotted owl breeding season (October 1 to February 28) but within suitable habitat, without modifying suitable habitat.

- Activities that produce noise above ambient levels, conducted during the early breeding season (March 1 to July 15), within 0.25 miles of known spotted owl activity centers that are nonnesting for the year, without modifying suitable habitat.

- Blasting activities between March 1 and July 15 occurring more than 1 mile from suitable spotted owl habitat.

- Blasting activities between July 16 and September 30 occurring less than 1 mile from suitable spotted owl habitat.

- Use of impact pile drivers, jackhammers, or rock drills between March 1 and July 15 more than 60 yards from suitable spotted owl habitat.

- Use of impact pile drivers, jackhammers, or rock drills between July 16 and September 30 less than 60 yards from suitable spotted owl habitat.

- Use of large helicopter or aircraft between March 1 and July 15 more than 1 mile from suitable spotted owl habitat.
- Use of large helicopter or aircraft between July 16 and September 30 less than 1 mile from suitable spotted owl habitat.
- Use of helicopter or single-engine aircraft between March 1 and July 15 more than 120 yards from suitable spotted owl habitat.
- Use of helicopter or single-engine aircraft between July 16 and September 30 less than 120 yards from suitable spotted owl habitat.
- Use of heavy equipment or motorized tools between March 1 and July 15 more than 35 yards from suitable spotted owl habitat.
- Use of heavy equipment or motorized tools between July 16 and September 30 less than 35 yards from suitable spotted owl habitat.
- Use of chainsaws for felling trees and cutting downed wood between March 1 and July 15 more than 65 yards from suitable spotted owl habitat.
- Use of chainsaws for felling trees and cutting downed wood between July 16 and September 30 less than 65 yards from suitable spotted owl habitat.
- Prescribed burning activities between March 1 and July 15 occurring more than 0.25 miles from suitable spotted owl habitat.
- Prescribed burning activities between July 16 and September 30 occurring less than 0.25 miles from suitable spotted owl habitat.

It is assumed that suitable owl habitat would not be modified as a result of most of the conditions listed above.

Examples of project types that may warrant a determination of *likely to adversely affect* northern spotted owls include the following:

- Blasting activities conducted between March 1 and July 15 less than 1 mile from suitable spotted owl habitat.
- Use of impact pile drivers, jackhammers, or rock drills between March 1 and July 15 less than 60 yards from suitable spotted owl habitat.
- Use of large helicopter or aircraft between March 1 and July 15 less than 1 mile from suitable spotted owl habitat.

- Use of helicopter or single-engine aircraft between March 1 and July 15 less than 120 yards from suitable spotted owl habitat.
- Use of heavy equipment or motorized tools between March 1 and July 15 less than 35 yards from suitable spotted owl habitat.
- Use of chainsaws for felling trees and cutting downed wood between March 1 and July 15 less than 65 yards from suitable spotted owl habitat.
- Prescribed burning activities between March 1 and July 15 occurring less than 0.25 miles from suitable spotted owl habitat.

13.2.1.4 Gray Wolf

Wolves are considered most sensitive to disturbance at their den and rendezvous sites. Effect determinations depend upon the proximity of project activities to den and rendezvous sites, activity noise level, modification of suitable habitat, and timing of the activity in relation to critical time periods (e.g., the calving period).

Examples of project types that may warrant a determination of *no effect* on gray wolves include the following:

- All projects located outside suitable gray wolf habitat.
- Projects located within Yakima, Kittitas, Chelan, Okanogan, Ferry, Stevens, Spokane, Asotin, Columbia, Garfield, Walla Walla, and Pend Oreille counties that do not involve clearing of native vegetation and will not produce noise above ambient levels.
- All projects located within the developed limits of a city or town in Kittitas, Yakima, Chelan, Okanogan, Ferry, Stevens, Spokane, Asotin, Columbia, Garfield, Walla Walla, and Pend Oreille counties.

Examples of project types that may warrant a determination of *may affect but is not likely to adversely affect* gray wolves include the following:

- Activities generating noise above ambient levels within 0.5 miles of a known gray wolf den or rendezvous site outside the critical denning and rendezvous period (between July 1 and March 14).
- Activities conducted within a known gray wolf territory in occupied ungulate calving, fawning, or kidding grounds, generating noise above ambient levels (or otherwise creating disturbance within occupied ungulate wintering areas), outside the wintering period (between April 16

and November 30) and outside the calving period (between June 16 and November 30).

- Activities conducted within 0.25 miles of an active, developed transportation corridor outside known, occupied wolf territories and occupied ungulate calving, fawning, or kidding grounds.

- Activities that occur within 0.5 miles of a known gray wolf den or rendezvous site without generating noise above ambient levels.

- Activities (excluding blasting and pile driving) that occur within 300 feet of a developed transportation corridor.

13.2.1.5 Woodland Caribou

Habitat loss and fragmentation, mortality associated with human activities, and natural predation are the greatest threats to woodland caribou in Washington. Effect determinations are dependent upon proximity of project activity to the known range of caribou, suitable habitat, or documented habitat.

Examples of project types that may warrant a determination of *no effect* on woodland caribou include the following:

- Projects located outside Pend Oreille and Stevens counties.

- Projects located in Pend Oreille and Stevens counties within the developed limits of a city or town.

- Projects located outside suitable or documented woodland caribou habitat.

13.2.1.6 Pygmy Rabbit

The primary cause of decline of the pygmy rabbit is loss of thick sagebrush habitat. The rabbit's dependency on a long-lived, slow-recovering food source (i.e., sagebrush) limits the potential for its rapid recovery. Effect determinations depend upon proximity of project activity to the known range of the pygmy rabbit and removal of suitable habitat.

Examples of project types that may warrant a determination of *no effect* on the pygmy rabbit include the following:

- Projects occurring outside Douglas County or Grant County.

- Projects occurring within Douglas County or Grant County but outside the present range of the pygmy rabbit.

- Projects occurring within the developed portion of the WSDOT right-of-way.
- Projects that do not involve removal of sagebrush or ground-disturbing activities within native shrub-steppe habitat.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* the pygmy rabbit. An example follows:

- Projects located in Douglas County or Grant County within the WSDOT right-of-way, requiring removal of sagebrush, provided that the habitat outside the right-of-way is agricultural or developed.

13.2.1.7 Grizzly Bear

Projects located in the North Cascades, Okanogan Highlands, and Selkirk Mountains are most likely to encounter grizzly bears. Along existing developed transportation corridors, which are not considered high-quality grizzly bear habitat, project impacts on habitat typically are negligible. Effect determinations depend upon proximity of project activity to the known potential range of grizzly bear, activity noise levels, removal of native vegetation, and proximity of the activity to developed transportation corridors.

Examples of project types that may warrant a determination of *no effect* on grizzly bears include the following:

- Projects located outside counties known to support grizzly bear habitat.
- Projects located in counties containing grizzly bear habitat that do not involve clearing of native vegetation and will not produce noise above ambient levels.
- Projects located within the developed city limits of a town in counties known to support grizzly bear habitat.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* grizzly bears. An example follows:

- Projects located within 0.25 miles of an active, developed transportation corridor within suitable grizzly bear habitat, provided that the habitat is not disturbed.

13.2.1.8 Wenatchee Mountains Checker-Mallow

Projects that involve ground-disturbing activities in wetland and riparian areas located in the Wenatchee Mountains could affect the Wenatchee Mountains checker-mallow. Effect

determinations depend upon proximity of project activity to the known range of the Wenatchee Mountains checker-mallow and to wetlands, riparian areas, and suitable habitat.

Many project types may warrant a determination of *no effect* on Wenatchee Mountains checker-mallow. Examples of such projects include the following:

- Projects located outside Kittitas and Chelan counties.
- Projects located in Chelan and Kittitas counties that involve no ground-disturbing activities or are confined within the developed portion of the roadway.
- Projects located in Chelan and Kittitas counties but not in the Wenatchee Mountains and not between 1,600 and 3,300 feet elevation.
- Projects that do not remove or modify vegetation within 200 feet of wetlands or riparian areas and do not alter wetland hydrology.
- Project areas that do not contain suitable Wenatchee Mountains checker-mallow habitat, as determined by a survey conducted by a qualified biologist between June 15 and July 31.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* Wenatchee Mountains checker-mallow. Examples of such projects include the following:

- Projects located in the Wenatchee Mountains between 1,600 and 3,300 feet elevation that alter vegetation within 61 meters (200 feet) of unsurveyed, potentially suitable Wenatchee Mountains checker-mallow habitat, but do not alter wetland or riparian vegetation or hydrology.
- Projects located in the Wenatchee Mountains between 1,600 and 3,300 feet elevation that alter potentially suitable Wenatchee Mountains checker-mallow habitat not containing Wenatchee Mountain checker-mallow, as documented by a survey conducted by a qualified biologist between June 15 and July 31.

13.2.1.9 Ute Ladies'-Tresses

Projects that involve ground-disturbing activities in wetland and riparian areas located in transition zones could affect Ute ladies'-tresses (*Spiranthes diluvialis*). Effect determinations depend upon proximity of project activity to wetlands, riparian areas, and suitable habitat.

Many project types may warrant a determination of *no effect* on Ute ladies'-tresses. Examples of such projects include the following:

- Projects that do not involve ground-disturbing activities.
- Projects that do not alter wetland hydrology and that do not remove or modify vegetation within 200 feet of wetlands or riparian areas suitable for supporting Ute ladies'-tresses, as identified by the project biologist.
- Projects located above 7,000 feet elevation.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* Ute ladies'-tresses. Examples of such projects include the following:

- Project areas that do not contain Ute ladies'-tresses, as determined by a survey conducted by a qualified biologist between July 15 and September 15.
- Project areas that do not contain Ute ladies'-tresses, as determined by a survey conducted by a qualified biologist between July 1 and September 15.
- Projects located between sea level and 7,000 feet elevation that alter vegetation within 200 feet of unsurveyed, potentially suitable Ute ladies'-tresses habitat, but do not alter wetland or riparian vegetation or hydrology.

13.2.1.10 Water Howellia

The most significant threats to water howellia (*Howellia aquatilis*) include changes in wetland hydrology, increases in weedy species, livestock grazing, and timber harvest on adjacent uplands (WDNR and USDI BLM 1999). Effect determinations depend upon proximity of project activity to the known range of water howellia and suitable wetland habitat.

Many project types may warrant a determination of *no effect* on water howellia. Examples of such projects include the following:

- Projects that do not involve ground-disturbing activities.
- Projects conducted entirely within the developed portion of the roadway that do not modify vegetation or hydrology in adjacent wetlands.
- Projects located above 2,300 feet elevation.
- Projects or activities involving the alteration of habitat not suitable to water howellia, as identified by the project biologist.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* water howellia. An example follows:

- Projects that disturb suitable habitat that does not contain water howellia, as determined by a survey conducted between May 25 and July 15 by a qualified biologist.

13.2.1.11 Spalding's Catchfly

Projects that involve ground-disturbing activities in native grasslands could affect Spalding's catchfly (*Silene spaldingii*). Effect determinations depend upon proximity of project activity to the known range of Spalding's catchfly and its suitable habitat.

Many project types may warrant a determination of *no effect* on Spalding's catchfly. Examples of such projects include the following:

- Projects that occur outside Adams, Asotin, Garfield, Lincoln, Spokane, and Whitman counties.
- Projects located within Adams, Asotin, Garfield, Lincoln, Spokane, and Whitman counties that do not involve ground-disturbing activities.
- Projects that do not remove or modify native grassland habitat located in Adams, Asotin, Garfield, Lincoln, Spokane, and Whitman counties.
- Project areas that do not contain Spalding's catchfly, as determined by a survey conducted by a qualified biologist between July 15 and August 31.

13.2.2 Effect Determinations for Proposed Species

Effect determinations for proposed species are addressed briefly in the previous chapter.

13.3 Effect Determinations for Critical Habitat

The following sections provide guidance for making effect determinations for critical habitat of NOAA Fisheries listed fish species and critical habitat of USFWS listed Wenatchee Mountain checker-mallow and northern spotted owl.

Effect determinations for critical habitat should provide information on the primary constituent elements (PCEs) affected, briefly describe how they will be affected, and explain how these impacts influence the overall effect determination for critical habitat.

13.3.1 NOAA Fisheries Listed Fish Species Critical Habitat

The following compilation of conditions for effect determinations was generated from all of the program descriptions in the NOAA Fisheries programmatic BA. Many of the conditions apply to more than one program description. Most of the conditions are identical to the conditions used to make effect determinations for listed fish species. Conditions for effect determinations depend upon numerous factors, including presence of critical habitat, presence of listed fish species, proximity of project activity to surface waters, level of disturbance, ability to contain project activity within previously developed areas, use of appropriate BMPs, extent of riparian vegetation removal, restriction of work to appropriate work windows, and compliance with established guidelines, agreements, and permits.

Many project types may warrant a determination of *no effect* on critical habitat. Examples of such projects include the following:

- Projects with action areas located outside critical habitat.
- Projects located within critical habitat that 1) are conducted entirely within the developed portion of the roadway, 2) do not remove or modify vegetation in any way, 3) do not alter existing hydrology through modified discharges, and 4) do not discharge materials (such as water, asphalt grindings, or fill material) from the developed portion of the roadway.
- Bridges undergoing seismic retrofit, bridge deck repair, overlays, or replacements, provided that they involve no in-water work and create no additional impervious surface area.
- Projects located where there are no listed species-bearing waters within the action area.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* critical habitat. Examples of such projects include the following:

- Projects located within 300 feet of the ordinary high water mark (OHWM) of a listed fish-bearing water that do not remove or alter riparian habitat.
- Projects in which slide material has entered a listed fish-bearing water body and, if removal is necessary, will be conducted within the appropriate work window when listed fishes are not likely to be present in the action area.
- Activities that involve work below the OHWM to replace or extend culverts, provided that there are no ESA-listed salmonid species present in the system during the approved work window. (Road crossing replacement culverts will be designed in accordance with *Fish Passage Design at Road*

Culverts: A Design Manual for Fish Passage at Road Crossings (WDFW 1999). Tide gate replacement projects should follow the guidance in the programmatic biological opinion: *Phase II Fish Passage Restoration, Department of Army Permits* [11/19/01]).

- Projects that relocate streams farther away from the roadway or separate ditch/stream systems, provided that listed salmonid species are not present in the system during construction, and the activity restores or improves habitat functions provided by the original channel through creation of meanders, vegetated stream banks, or installation of habitat structures.

- Projects that replace existing riprap structures with no expansion of the original footprint based on the as-built plans, or projects that remove an equivalent amount of riprap within the project area during a period when listed fish species are not likely to be present.

- Projects that use blasting as a method of removing slide materials, with the blast and the fallout of materials occurring outside the aquatic system, provided that the blasting occurs within the designated work windows if listed fishes are known to be present in the immediate vicinity (one-quarter mile) upstream and downstream.

- Floating bridge maintenance projects consisting of the repair or replacement of floating bridge cables or the removal of derelict fishing nets.

13.3.2 Wenatchee Mountains Checker-Mallow

Many project types may warrant a determination *of no effect* on designated critical habitat for the Wenatchee Mountains checker-mallow (*Sidalcea oregana* var. *calva*). Examples of such projects include the following:

- Projects located entirely within WSDOT right-of-way that do not alter the hydrology of critical habitat for the Wenatchee Mountains checker-mallow.

- Projects located outside WSDOT right-of-way and critical habitat that do not alter the hydrology of critical habitat for the Wenatchee Mountains checker-mallow.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* designated critical habitat for the Wenatchee Mountains checker-mallow. Examples of such projects include the following:

- Projects that may alter the hydrology of critical habitat for the Wenatchee Mountains checker-mallow but will not adversely affect primary constituent elements.

13.3.3 Northern Spotted Owl

Many project types may warrant a determination of *no effect* on spotted owl suitable or critical habitat. Examples of such projects include the following:

- Activities conducted in counties that are outside the range of the Northern Spotted Owl.

- Activities that occur outside designated spotted owl critical habitat or suitable habitat.

- Activities conducted within spotted owl critical habitat that do not modify or remove suitable owl habitat, habitat components, or constituent elements of the stand.

Many project types may warrant a determination of *may affect but is not likely to adversely affect* spotted owl suitable or critical habitat. Examples of such projects include the following:

- Activities that modify younger stands within areas designated as critical habitat and that are not likely to impede development of constituent elements. Habitat areas located on federal land (e.g., national forest or national park lands) or state or private lands covered by a HCP may be modified only if the removal is consistent with the requirements of those lands.

- Activities that result in short-term degradation of dispersal habitat but are not likely to adversely degrade its suitability as dispersal habitat. Habitat areas located on federal land (e.g., national forest or national park lands) or state or private lands covered by a HCP may be modified only if the removal is consistent with the requirements of those lands.

- Activities that involve minimal modification of less than 5 acres per region per year of dispersal habitat located within areas designated as critical habitat. Habitat areas located on federal land (e.g., national forest or national park lands) or state or private lands covered by a HCP may be modified only if the removal is consistent with the requirements of those lands.

Many project types may warrant a determination of *may adversely affect* spotted owl suitable or critical habitat. Examples of such projects include the following:

- Activities involving moderate modification of less than 5 acres per region, per year, of currently suitable habitat located within 100 feet of an existing developed transportation corridor, that may degrade the constituent elements, provided that such activity does not occur within 0.25 miles of known spotted owl activity centers or is conducted outside the breeding season (October 1 to February 28). Habitat areas located on federal land (e.g., national forest or national park lands) or state or private lands covered by a HCP may be modified only if the removal is consistent with the requirements of those lands.