

## APPENDIX S—SPECIES-SPECIFIC HABITAT DEFINITIONS

### INTRODUCTION

The primary purpose of this appendix is to reduce confusion on the use of terminology used for various species or habitats. This appendix provides support information and definitions that are applicable to federally listed, proposed, or candidate species, and species specific habitats that occur on BLM-administered lands within the CFO. With new species being designated or delisted (i.e., listed, proposed, or candidate), and/or with updated research, information, monitoring, or survey information, definitions may be added, modified, or deleted. Additional clarification may also be needed in the terminology used for describing species or habitats.

### DEFINITIONS

#### General Definitions Applicable to All Species

Avoid	To the extent possible, do not implement the action indicated. If the action needs to take place, then add stipulations or take additional steps (mitigation) to minimize impacts. Avoidance is the preferred management approach in the identified habitats for species conservation.
Best Management Practices (BMPs)	Generally accepted state-of-the-art techniques and procedures used in project-level operations to avoid or minimize impacts to species and their habitats.
Minimize	To reduce to the smallest possible amount, extent, size, or degree as is feasible from a technical or management standpoint.
Modify	To “modify” a management activity could have a wide range of site-specific actions, ranging from eliminating the activity, to changing seasonal use, to minor operational changes. The goal of modifying an activity is to meet the intent of a specific conservation measure or its implementing action.
Adjacent	The area outside of a mapped habitat area, but within a zone of influence to the habitat area for which a BLM activity may affect the species. Some activities, such as those that can affect watershed conditions and erosion, can have wide zones of influence for aquatic species. Other activities, such as those that do not affect the suitable habitat but can affect use of that habitat, can have a narrower zone of influence. Thus, this adjacent zone of influence will vary among species and land use activities. The species-specific and land use-specific application of this term will be determined at the local level.
Adaptive management	A type of natural resource management that implies making decisions as part of an ongoing process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information.

## Birds

### *Yellow-billed Cuckoo (Coccyzus americanus)*

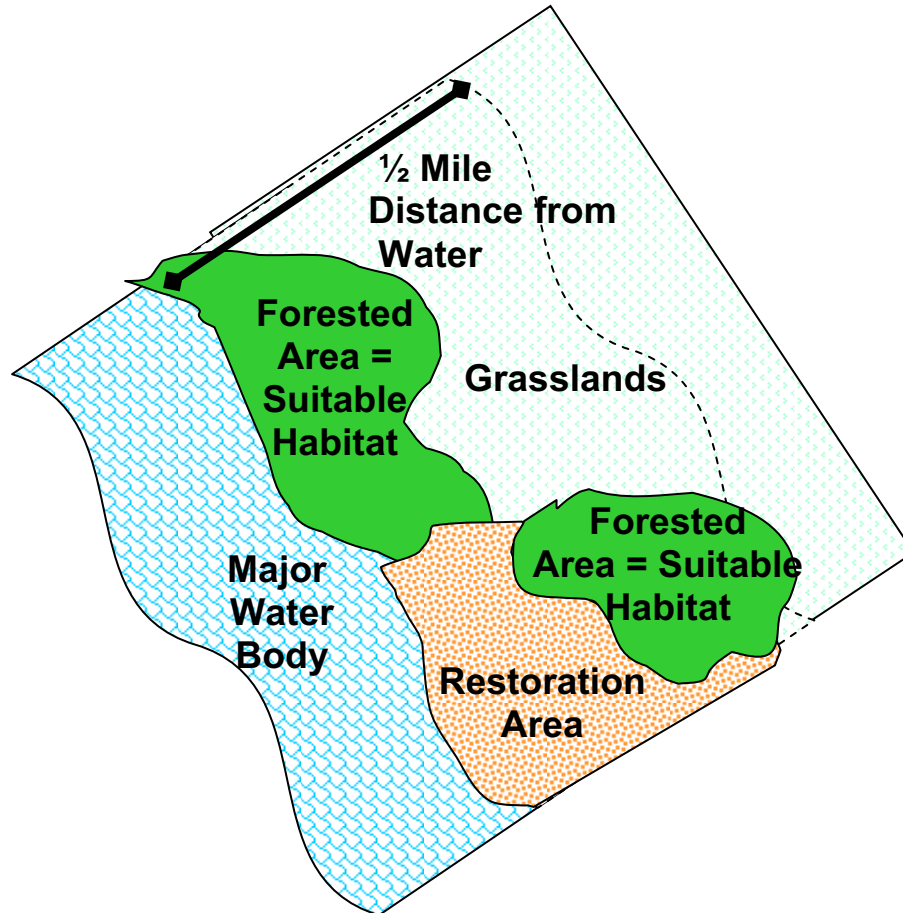
Suitable habitat	This species favors areas along waterways with dense stands of mature cottonwoods and a thick understory, often of willows, although red-osier dogwood is the common understory shrub in occupied habitat along the upper Snake River. The minimum amount of riparian habitat needed for suitable yellow-billed cuckoo nesting habitat is an area 300 feet wide and at least 25 acres in size. The definition of suitable habitat may change as new information concerning the species is gathered.
Restoration areas (for nesting)	Areas identified by the BLM where the riparian vegetative component is currently not meeting the needs of the species. These areas have the site potential for a multitiered, mature riparian forest—at the size described in the definition for “suitable habitat”—through passive or active management. For example, in some cases, a restoration area may be an area where the understory shrub component is missing. In other cases, mature cottonwoods are absent in an area but young cottonwoods and willows are present with the potential to provide suitable habitat in the near future.

### *Bald Eagle (Haliaeetus leucocephalus)*

Communal roosts	A forested area where 6 or more eagles traditionally spend the night within 100 meters (328 feet) of each other.
Key foraging areas	Important concentrated use areas where bald eagles congregate; these areas are not nest sites or traditional communal roosts. For example, areas below dams and riffles are often key foraging areas.
Nest site	Most nests are located in large cottonwood, fir, or pine trees. Nest sites within the breeding area may have been built or used by a bald eagle, and are usually as a focus for reproductive behavior and fledgling activity.
Restoration areas	Areas identified by the BLM within 0.5-mile of major water bodies that currently have site potential for riparian forest development to support riparian forest (i.e., cottonwood galleries) through passive or active management. See illustration under the definition of “suitable habitat.”

*Bald Eagle (Haliaeetus leucocephalus) (continued)*

**Suitable habitat** Mature riparian and upland forest communities that currently provide nesting, roosting, and loafing perch sites within 0.5-mile of major waterbodies. Other forested areas outside of the 0.5-mile buffer may be identified by the BLM as suitable habitat, based on occupancy, on a case-by-case basis. General foraging areas are not included, unless identified as a key foraging area. See illustration below for a sample of how suitable habitat is defined. The definition of suitable habitat may change as new information concerning the species is gathered.



## Plants

### *MacFarlane's Four o'Clock (Mirabilis macfarlanei)*

Colony	A group of <i>M. macfarlanei</i> plants generally less than one air mile from other groupings of <i>M. macfarlanei</i> plants that are similarly geographically located. (See definition of “population.”)
High priority habitat area	An area that includes suitable habitat and other BLM lands within 0.5-mile of a population. Other BLM lands identified as essential for recovery efforts may also be included, such as experimental transplant area(s).
Known population	An existing population recorded in the Idaho Department of Fish and Game Conservation Data Center database.
Occupied habitat	Habitat associated with an existing population essential for sustaining that population in the long term.
Population	Refers to all <i>M. macfarlanei</i> plants that occur within a specific geographic area. A population can be made up of scattered plants or one or more colonies, generally within one air mile of each other.
Seed Banks (artificial)	An artificial seed bank is a collection of plant seeds that are housed in a “bank” that is a steel-reinforced concrete seed vault that is temperature and humidity controlled. Seed storage is a way of providing an insurance policy for plants if they become extinct in the wild. If plants disappear in the wild, their unique genetics can be resurrected only if seeds have been stored elsewhere.
Suitable habitat	Low- to mid-elevation canyon grassland habitats in west-central Idaho and northeastern Oregon. Habitat for <i>M. macfarlanei</i> generally consists of Canyon Grassland bunchgrass communities dominated by bluebunch wheatgrass. Plants are found on gravelly to loamy and sandy soils between approximately 1,000 to 4,000 feet. Slopes generally are steep, but plants may also occur on moderate slopes. Plants can be found on all aspects, but most often occur on south and west aspects. The definition of suitable habitat may change as new information concerning the species is gathered.

*Spalding's Catchfly (Silene spaldingii)*

Colony	A group of <i>S. spaldingii</i> plants generally less than one air mile from other groupings of <i>S. spaldingii</i> plants that are similarly geographically located. (See definition of “population.”)
High priority habitat areas	An area that includes suitable habitat and other BLM lands within 0.5-mile of a population. Other BLM lands identified as essential for recovery efforts may also be included, such as experimental transplant area(s).
Population	Refers to all <i>S. spaldingii</i> plants that occur within a specific geographic area. A population can be made up scattered plants or one or more colonies, generally within one air mile of each other.
Known population	An existing population recorded in the Idaho Department of Fish and Game Conservation Data Center database.
Occupied habitat	Habitat associated with an existing population essential for sustaining that population in the long term.
Seed banks	An artificial seed bank is a collection of plant seeds that are housed in a “bank” that is a steel-reinforced concrete seed vault and is temperature and humidity controlled. Seed storage is a way of providing an insurance policy for plants if they become extinct in the wild. If plants disappear in the wild, their unique genetics can be resurrected only if seeds have been stored elsewhere.
Suitable habitat (Specific to Idaho)	Suitable habitat in Idaho includes remaining pieces of Palouse prairie in west-central Idaho and the Canyon Grasslands of the Snake River and Salmon River in Idaho. This habitat includes open, mesic (moist) grassland communities, sometimes with occasional shrubs (such as snowberry and rose) or conifers (such as ponderosa pine and Douglas-fir). These grasslands are comprised of Idaho fescue and bluebunch wheatgrass communities. <i>S. spaldingii</i> is found at elevations ranging from 1,380 feet to 5,100 feet, usually with deep soils and generally on northerly slopes where soil moisture is relatively higher. Suitable habitat in other states may differ slightly from the Idaho habitat. The definition of suitable habitat may change as new information concerning the species is gathered.

## Mammals

### *Gray Wolf (Canis lupus)*

Key habitat areas	Key wolf habitat areas include active den and rendezvous sites and big game crucial winter range within known, established pack territories.
Wolf habitat	Wolf habitat includes key habitat features and lands that are seasonally occupied by prey species in sufficient densities to support wolves. Characteristics of high-quality wolf habitat include low road densities, low human occurrence, and few sources of disturbance.
Den sites	In the Northern Rockies, wolf pups are born any time from late March to late April or possibly early May. Some particular dens or denning areas may receive traditional use by a wolf pack over time. Wolves are particularly sensitive to human activity near den sites and may abandon them if disturbed. Section 7 guidance from USFWS indicates that activities or projects that occur within 1.6 kilometers (1 mile) of an active wolf den site may negatively affect gray wolves.
Rendezvous sites	Sites where wolf packs traditionally congregate. The initial rendezvous site is where wolves appear most sensitive to prolonged or substantial human disturbances. Section 7 guidance from USFWS indicates that activities or projects that occur within 1.6 kilometers (1 mile) of an active wolf rendezvous site may negatively affect gray wolves.
Wolf pack territory	The recovery plan defines territory as the geographic area an organism defends against others of the same species and/or other species by scent marking, vocalizations, fighting and/or other means. Territories are areas occupied by a wolf pack on a regular basis. Summer territories or home ranges are smaller than winter ranges. The annual range may extend up to several hundred square kilometers, but also may be much smaller (less than 50 square kilometers [19 square miles]).

*Northern Idaho Ground Squirrel (Spermophilus brunneus brunneus)*

Connectivity corridor	<p>For species that are habitat specific, metapopulation persistence may also depend on the existence of corridors of suitable vegetation linking the otherwise isolated habitat patches in which these animal subpopulations live. Beier and Loe (1992) provided a definition of how corridors should function:</p> <p>“Corridors provide avenues along which (1) wide ranging animals can travel, migrate, and meet mates... (2) plants can propagate... (3) genetic interchange can occur... (4) populations can respond to environmental change... [and] (5) locally extirpated populations can be replaced from other areas.”</p> <p>For the northern Idaho ground squirrel, connectivity corridors include the lands between two squirrel populations or a population and other patches of suitable habitat. It is assumed that corridors will have protective vegetative cover (e.g., forested, riparian, shrub plant communities) so that it may be used during dispersal. Soils in connectivity corridors do not need to be suitable for burrowing.</p>
Suitable habitat	<p>The northern Idaho ground squirrel occupies dry, rocky, sparsely vegetated meadows surrounded by forests of ponderosa pine or Douglas-fir at elevations of 3,800 to 5,200 feet. Nearly all the meadow sites used by the Northern Idaho ground squirrel are on dry, shallow soils with no young tree invasion. Nest burrows are located in adjacent small patches of well-drained deeper soils. Surface features, such as logs or rocks, make a site more attractive to this species. Ponderosa pine-shrub steppe habitat associations on south-facing slopes at less than 30 percent and at elevations below 1,830 meters (6,000 feet) are considered by USFWS to be potentially suitable habitat and is included in this definition of suitable habitat. Suitable habitat is found in Adams and Valley Counties in Idaho. Suitable habitat also includes connectivity corridors among known populations. The definition of suitable habitat may change as new information concerning the species is gathered.</p>
Restoration Area	<p>Areas where active management could restore suitable habitat conditions. For northern Idaho ground squirrel, these areas would be located in association with known populations with the site potential for suitable habitat but lacking appropriate open meadows and native vegetation (such as grasses and forbs). Forest encroachment limits suitable habitat and population connectivity among meadow areas. When restoration objectives are met, the habitat becomes suitable.</p>

*Canada Lynx (Lynx Canadensis)*

Lynx Analysis Unit	An area of at least the size used by an individual lynx, from about 25 to 50 square miles. A Lynx Analysis Unit is a unit for which the effects of a project would be analyzed; its boundaries should remain constant.
Suitable denning habitat	<p>Denning habitat is the environment lynx use when giving birth and rearing kittens until they are mobile. The most common component is large amounts of coarse woody debris to provide escape and thermal cover for kittens. Denning habitat must be within daily travel distance of winter snowshoe hare habitat; the typical maximum daily distance for females is about 3 to 6 miles.</p> <p>Denning habitat includes mature and old growth forests with plenty of coarse woody debris. It also can include young regenerating forests with piles of coarse woody debris, or areas where down trees are jack-strawed.</p>
Suitable foraging habitat	<p>Foraging habitat is habitat that supports lynx primary prey (snowshoe hare) and alternate prey, especially red squirrels.</p> <p>The highest quality snowshoe hare habitat contains a high density of young trees or shrubs that are tall enough to protrude above the snow in winter. Red squirrel densities tend to be highest in mature cone-bearing forest with substantial quantities of coarse woody debris.</p>
Unsuitable lynx habitat	<p>Lynx habitat in an unsuitable condition consists of lynx habitat in the stand initiation structural stage where the trees are generally less than 10 to 30 years old and have not grown tall enough to protrude above the snow during winter.</p> <p>Stand-replacing fires or certain vegetation management techniques can create unsuitable lynx habitat. Vegetation management projects that can result in unsuitable habitat include clearcuts and seed tree harvest, and sometimes shelterwood cuts and commercial thinning depending on the resulting stand composition and structure.</p>
Travel habitat and Travel corridors	<p><u>Travel Habitat:</u> Lynx move through a wide range of forested conditions, containing very dense to very sparse vegetation, including forage and denning habitat. Travel Habitat provides connectivity between suitable lynx habitats within Lynx Analysis Units and between Lynx Analysis Units. On a landscape scale, travel habitat allows lynx to move between forage and denning habitats. Travel habitat consists of forests that will be used by lynx, but provide limited habitat for snowshoe hare and no or limited habitat for denning.</p> <p><u>Travel Corridors:</u> Lynx often move along physical features of landscapes, such as major ridges, saddles, and streams. Such travel routes are called “travel corridors” where they are covered by lynx habitat. Travel corridors are similar to travel habitat; they both function to facilitate lynx movement. However, travel corridors differ from travel habitat because of their specified, preferred location and because travel corridors can also be forage or denning habitat. Travel corridors should form a continuous network across the landscape and be associated with as many foraging opportunities for lynx as possible.</p>