



Wildlife and Sensitive Species Considerations for Fuel Treatment Projects

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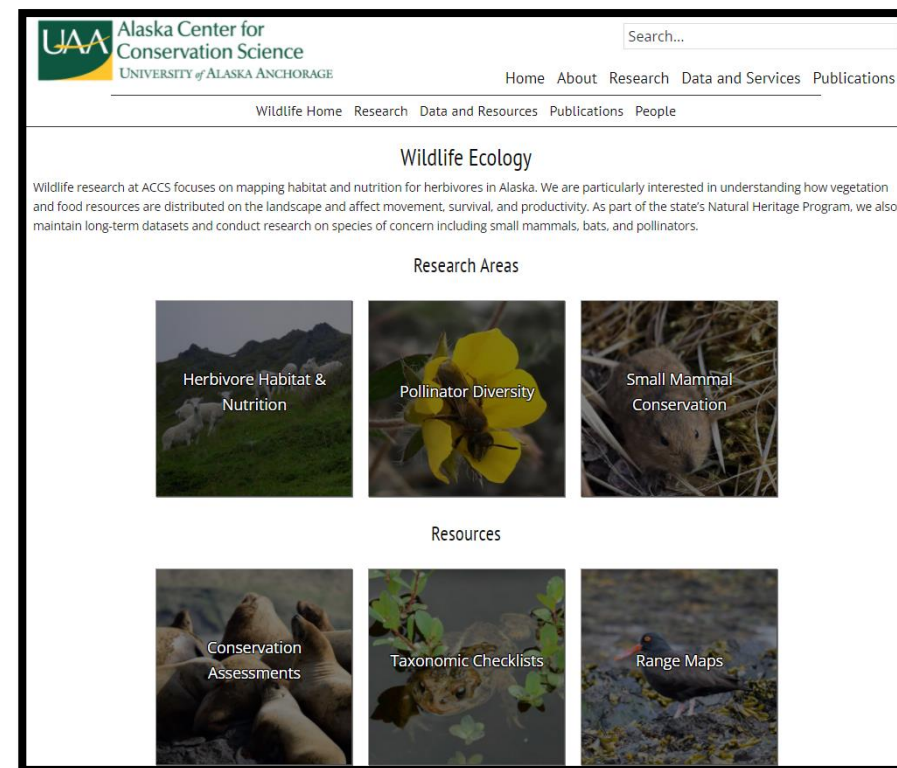
U.S. Department of the Interior
Bureau of Land Management





Wildlife and Fuel Treatment

- Habitat is species-specific
- Scale
- Habitat heterogeneity and early successional habitat
- Habitat connectivity
- Short term versus long term effects
- Timing of fuel treatment
- Info sources: ACCS, ADFG (WAP), FWS
- Who can help?



accs.uaa.alaska.edu/wildlife/



Wildlife and Fuel Treatment

- Climate change = more frequent and severe fires to Alaska
 - a net increase in deciduous forests (e.g., alder, willow, aspen, birch) and a decrease in conifer forests (e.g., black spruce)
- Climate change may shift forest cover to shrublands and grasslands due to shorter fire cycles and spring fires
- Both of these types of landscape-scale habitat changes would lead to changes in the distributions of various species of wildlife

From WAP





Wildlife and Fuel Treatment

- Wildfire and the changes to habitats it causes can affect a diverse range of wildlife, both positively and/or negatively
- Vegetation change caused by fires could reduce the availability of the preferred feed of caribou, but may increase habitat suitability for other species, such as moose
- Wildfires in Alaska are unlikely to have negative population-level effects on wildlife, with the possible exception of severe widespread tundra fires

From WAP





Sensitive Species and Fuel Treatment

- Endangered Species Act (ESA) – Threatened & Endangered Species
- Alaska Wildlife Action Plan – Species of Greatest Conservation Need (SGCNs)
- BLM Sensitive Species
- FWS Birds of Conservation Concern
- Other lists





Sensitive Species

- **ESA Threatened & Endangered (T&E) Species**
 - Purpose: to protect and recover imperiled species and the ecosystems upon which they depend
 - ESA Section 7(a)(1) federal agencies use authorities to implement conservation of T&E species and the ecosystems upon which they depend.
 - ESA Section 7(a)2 applies to all discretionary actions undertaken or authorized by the BLM that may affect a listed or proposed species or designated or proposed critical habitat. “ESA Consultation”
 - Informal – 30 days
 - Formal – 135 days



Sensitive Species

- ESA T&E Species

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Northern Sea Otter <i>Enhydra lutris kenyoni</i>	Final
Polar Bear <i>Ursus maritimus</i>	Final
Spectacled Eider <i>Somateria fischeri</i>	Final
Steller's Eider <i>Polysticta stelleri</i>	Final

Mammals

NAME	STATUS
Northern Sea Otter <i>Enhydra lutris kenyoni</i>	Threatened Marine mammal
Polar Bear <i>Ursus maritimus</i> Wherever found	Threatened Marine mammal
Wood Bison <i>Bison bison athabascaae</i> Wherever found	Threatened

Birds

NAME	STATUS
Short-tailed Albatross <i>Phoebastria (=Diomedea) albatrus</i> Wherever found	Endangered
Spectacled Eider <i>Somateria fischeri</i> Wherever found	Threatened
Steller's Eider <i>Polysticta stelleri</i>	Threatened

Ferns and Allies

NAME	STATUS
Aleutian Shield Fern <i>Polystichum aleuticum</i> Wherever found	Endangered



Sensitive Species

- ESA T&E Species
 - Consultation Handbook: <https://www.fws.gov/media/endangered-species-consultation-handbook>
 - ECOS: <https://ecos.fws.gov/ecp/>
 - IPAC: <https://ipac.ecosphere.fws.gov/>
 - Don't forget marine species covered by NMFS





Sensitive Species

- Alaska Wildlife Action Plan (2015)
 - 10-year revision requirement of the federal State Wildlife Grant
 - Goal of preventing species from becoming listed as threatened or endangered under the ESA
 - 326 vertebrate taxa as Species of Greatest Conservation Need (SGCNs) in Alaska, including:
 - 58 fish
 - 5 amphibians
 - 192 birds
 - 71 mammals
 - Invertebrate - 5 orders of freshwater invertebrates, 4 orders of marine zooplankton, 36 species and one phylum of larger marine invertebrates, and 5 orders of terrestrial arthropods





Sensitive Species

- Alaska Wildlife Action Plan (2015)
 - Identifies priority:
 - Species: small populations, declining populations, populations under threat, or species for which Alaska has high stewardship responsibility
 - Habitats: sea ice; tundra; glacially influenced rivers, streams, and fjords; permafrost associated wetlands, beaches, sea cliffs, temperate rain forest, and marine nearshore and shelf
 - Threats: climate change, oil spills, invasive species
 - Conservation actions: Data acquisition, identification of high use areas, invasive species control
 - SGCNs exclude:
 - Plants, hunted and trapped species, marine aquatic invertebrates, and peripheral species





Sensitive Species

- BLM Sensitive Species (2019)
 - BLM designates and manages sensitive species in part to reduce the need for new ESA listings
 - Species that have threats and/or downward population trends on BLM-managed lands in significant enough populations or have specialized habitat that land management actions can affect the populations and the status of the species
 - Standardized, repeatable formula for inclusion
 - Compiled in conjunction with many partners (ADFG, ACCS, UAF)
 - 37 wildlife/fish species and 51 plant species designated as Sensitive
 - Watchlist: 30 wildlife and 39 plants





Sensitive Species

- BLM Sensitive Species
 - Policy (6840 Manual):
 - 2.C. Implementation. On BLM-administered lands, the BLM shall manage Bureau sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of species habitat...
 - 2.C.8. In the absence of conservation strategies, incorporate best management practices, standard operating procedures, conservation measures, and design criteria to mitigate specific threats to Bureau sensitive species during the planning of activities and projects.

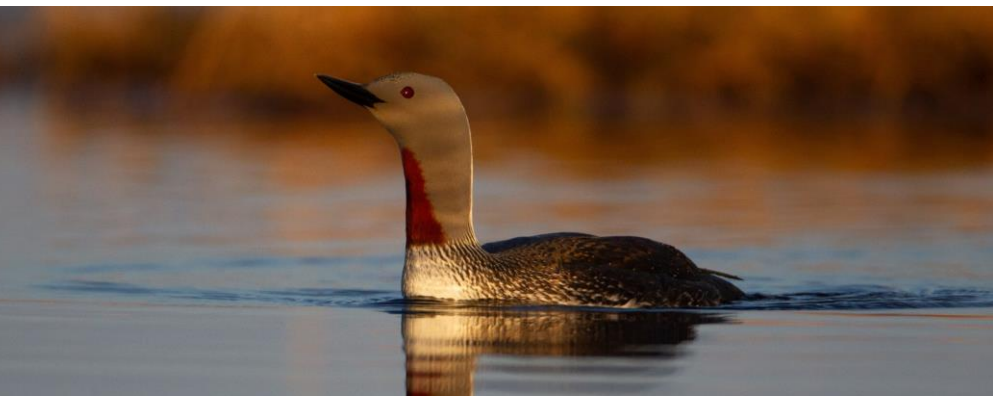




Sensitive Species

- BLM Sensitive Species
 - Birds

BIRDS (22)	
Scientific Name	Common Name
<i>Brachyramphus brevirostris</i>	Kittlitz's Murrelet
<i>Branta canadensis occidentalis</i>	Dusky Canada Goose
<i>Calcarius pictus</i>	Smith's Longspur
<i>Calidris alpina arctica</i>	Dunlin <i>arctica</i>
<i>Calidris canutus roselaari</i>	Red Knot
<i>Calidris ptilocnemis ptilocnemis</i>	Bering Sea (Pribilof Island) Rock Sandpiper
<i>Calidris subruficollis</i>	Buff-breasted Sandpiper
<i>Contopus cooperi</i>	Olive-sided Flycatcher
<i>Euphagus carolinus</i>	Rusty Blackbird
<i>Gavia adamsii</i>	Yellow-billed Loon
<i>Gavia stellata</i>	Red-throated Loon
<i>Limosa fedoa beringiae</i>	Marbled Godwit
<i>Limosa haemastica</i>	Hudsonian Godwit
<i>Limosa lapponica</i>	Bar-tailed Godwit
<i>Numenius phaeopus rufiventris</i>	Whimbrel
<i>Numenius borealis</i>	Eskimo Curlew (ESA E – presumed extinct)
<i>Numenius tahitiensis</i>	Bristle-thighed Curlew
<i>Onychoprion aleuticus</i>	Aleutian Tern
<i>Plectrophenax hyperboreus</i>	McKay's Bunting
<i>Poecile cinctus lathamii</i>	Gray-headed Chickadee
<i>Polysticta stelleri</i>	Steller's Eider (ESA T)
<i>Somateria fischeri</i>	Spectacled Eider (ESA T)





Sensitive Species

- BLM Sensitive Species
 - Mammals
 - Invertebrates
 - Fishes



Confusing
bumble bee
Bombus perplexus
11-14 mm. (M)

MAMMALS¹ (4)	
Scientific Name	Common Name
<i>Bison bison athabasca</i>	Wood Bison (ESA T, 10(j))
<i>Enhydra lutris kenyoni</i>	Northern Sea Otter (ESA T)
<i>Odobenus rosmarus divergens</i>	Pacific Walrus
<i>Ursus maritimus</i>	Polar Bear (ESA T, CH)
INVERTEBRATES (8)	
Scientific Name	Common Name
<i>Acentrella feropagus</i>	Mayfly (no common name)
<i>Alaskaperla ovibovis</i>	Alaska Sallfly
<i>Bombus bohemicus</i>	Ashton Cuckoo Bumble Bee, Gypsy Cuckoo Bumble Bee
<i>Bombus distinguendus</i>	Northern Yellow Bumble Bee, Great Yellow Bumble Bee
<i>Bombus kluanensis</i>	Bumble Bee (no common name)
<i>Bombus perplexus</i>	Confusing Bumble Bee
<i>Bombus suckleyi</i>	Suckley's Cuckoo Bumble Bee
<i>Rhithrogena ingalik</i>	Alaska Endemic Mayfly
FISH (3)	
Scientific Name	Common Name
<i>Lampetra alaskensis</i>	Alaskan Brook Lamprey
<i>Onchorhynchus mykiss</i>	Steelhead (Gulkana River)
<i>Salvelinus alpinus</i>	Arctic Char (Kigluaik Mtns)



Sensitive Species

- BLM Sensitive Species
 - Plants



Phacelia mollis. CYSIP

Scientific Name	Common Name
<i>Rumex beringensis</i>	Bering Sea Dock
<i>Rumex krausei</i>	Krause's Sorrel
<i>Smelowskia johnsonii</i>	no common name
<i>Smelowskia pyriformis</i>	Pearshaped Smelowskias
<i>Symphotrichum pygmaeum</i>	Pygmy Aster
<i>Symphotrichum yukonense</i>	Yukon Aster

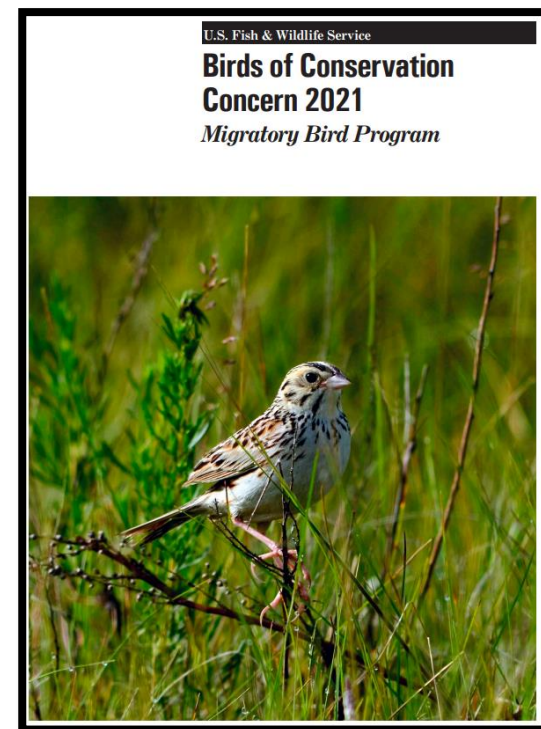


Scientific Name	Common Name
<i>Antennaria densifolia</i>	Denseleaf Pussytoes
<i>Arnica lonchophylla</i> ssp. <i>lonchophylla</i> (<i>A. lonchophylla</i>)	Longleaf Arnica
<i>Artemisia globularia</i> var. <i>lutea</i>	Purple Wormwood
<i>Artemisia senjavinensis</i>	Arctic Wormwood
<i>Botrychium spathulatum</i>	Spoon-leaf Moonwort
<i>Carex laxa</i>	Weak Sedge
<i>Carex parryana</i>	Parry Sedge
<i>Claytonia ogilviensis</i>	Ogilvie Mountain Springbeauty
<i>Cochlearia sessilifolia</i>	Sessileleaf Scurvygrass
<i>Cryptantha shackletteana</i>	Shacklette's Cryptantha
<i>Douglasia arctica</i> (<i>Androsace americana</i>)	Mackenzie's River Douglasia
<i>Douglasia beringensis</i> (<i>Androsace beringensis</i>)	Arctic Dwarf-Primrose
<i>Draba micropetala</i>	Small-flowered Draba
<i>Draba murrayi</i>	Kathul Mountain Draba
<i>Draba ogilviensis</i>	Ogilvie Range Draba
<i>Draba pauciflora</i>	Fewflower Draba
<i>Erigeron muirii</i>	Muir's fleabane
<i>Gentianopsis richardsonii</i>	no common name
<i>Juncus articulatus</i>	Jointed Rush
<i>Mertensia drummondii</i>	Drummond's Bluebells
<i>Micranthes nelsoniana</i> ssp. <i>insularis</i>	no common name
<i>Micranthes porsildiana</i> (<i>M. nelsoniana</i> var. <i>porsildiana</i>)	Porsild's Saxifrage
<i>Montia vassilievii</i> ssp. <i>vassilievii</i>	Bostock's Minerslettuce
<i>Orobanche uniflora</i>	Naked Broom-rape
<i>Oxytropis kokrinensis</i>	Kokrines Locoweed
<i>Papaver gorodkovii</i>	Arctic Poppy
<i>Parrya nauruaq</i>	Naked-stemmed Wallflower
<i>Pedicularis hirsuta</i>	Hairy Lousewort
<i>Phacelia mollis</i>	Soft Phacelia
<i>Physaria calderi</i>	Calder's Bladderpod
<i>Pleuropogon sabinei</i>	False Semaphoregrass
<i>Poa hartzii</i> ssp. <i>alaskana</i>	Alaskan Bluegrass
<i>Poa macrantha</i>	Seashore Bluegrass
<i>Poa porsildii</i>	Porsild's Bluegrass
<i>Poa sublanata</i>	no common name
<i>Podistera yukonensis</i>	Yukon Podistera
<i>Potentilla fragiformis</i>	Strawberry Cinquefoil
<i>Primula tschuktschorum</i>	Chukchi Primrose
<i>Puccinellia banksiensis</i>	no common name
<i>Puccinellia vaginata</i>	Sheathed Alkaligrass
<i>Ranunculus pacificus</i>	Pacific Buttercup
<i>Ranunculus ponojensis</i>	no common name
<i>Ranunculus turneri</i> ssp. <i>turneri</i>	no common name
<i>Romanzoffia unalaschcensis</i>	Alaska Mistmaiden
<i>Rumex aureostigmaticus</i>	no common name



Sensitive Species

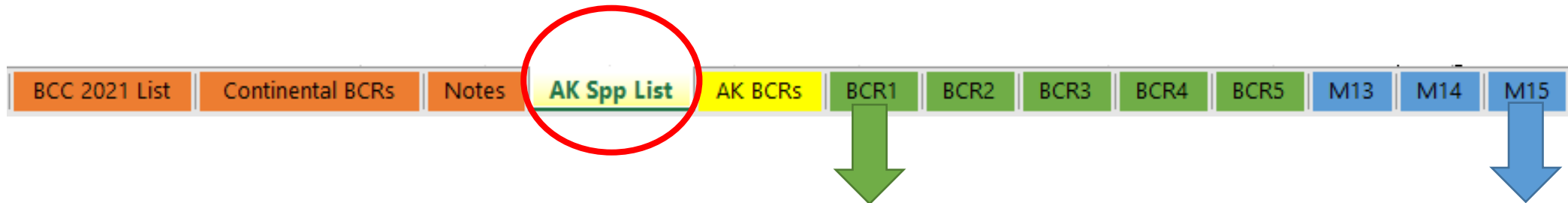
- FWS Birds of Conservation Concern (2021)
 - migratory and non-migratory bird species that represent the highest conservation priorities
 - Based on population abundance and trends, threats on breeding and nonbreeding grounds and size of breeding and nonbreeding ranges
 - Bird species considered for the BCC include:
 - nongame birds gamebirds without hunting seasons
 - subsistence-hunted nongame birds in Alaska
 - ESA candidate, proposed, and recently delisted species
 - but not T&E species





Sensitive Species

- FWS Birds of Conservation Concern (2021)
 - Alaska BCC



Order	Common Name	Scientific Name	Scale	2008 List?
139	Aleutian Tern	<i>Onychoprion aleuticus</i>	CON	Y
124	Ancient Murrelet	<i>Phoebastria nigripes</i>	CON	N
82	Black Oystercatcher	<i>Haematopus bachmani</i>	CON	Y
120	Kittlitz's Murrelet	<i>Brachyramphus brevirostris</i>	CON	Y
119	Marbled Murrelet (Alaska)	<i>Brachyramphus marmoratus</i> (Alaska)	CON	Y
367	McKay's Bunting	<i>Plectrophenax hyperboreus</i>	CON	Y
187	Red-faced Cormorant	<i>Phalacrocorax urile</i>	CON	Y
128	Red-legged Kittiwake	<i>Rissa brevirostris</i>	CON	Y
106	Rock Sandpiper (Pribilof)	<i>Calidris ptilocnemis ptilocnemis</i>	BCR	Y
213	Short-eared Owl	<i>Asio flammeus flammeus</i>	CON	N
206	Snowy Owl	<i>Bubo scandiacus</i>	CON	N
126	Whiskered Auklet	<i>Aethia pygmaea</i>	CON	Y
153	Yellow-billed Loon	<i>Gavia adamsii</i>	CON	N

Order	Common Name	Scientific Name	Scale
124	Ancient Murrelet	<i>Synthliboramphus antiquus</i>	CON
155	Black-footed Albatross	<i>Phoebastria nigripes</i>	CON, HPI
129	Ivory Gull	<i>Pagophila eburnea</i>	CON
120	Kittlitz's Murrelet	<i>Brachyramphus brevirostris</i>	CON
119	Marbled Murrelet (AK)	<i>Brachyramphus marmoratus</i> (AK)	CON
164	Mottled Petrel	<i>Pterodroma inexpectata</i>	CON, HPI
163	Murphy's Petrel	<i>Pterodroma ultima</i>	CON
128	Red-legged Kittiwake	<i>Rissa brevirostris</i>	CON
126	Whiskered Auklet	<i>Aethia pygmaea</i>	CON



Sensitive Species

- FWS Birds of Conservation Concern (2021)

Bird Conservation Regions 1-5 FWS Birds of Conservation Concern (BCC) Alaska Species List (2021) ¹	BCC Cross-Reference with Other Lists (as of Aug 27, 2021) ²							
	AK WAP	DoD Mission		Audubon	AK	Shorebird	ACAD Watch	
	SGCN	BLM SSS	USFS SCC	Sens. Spp.	Watchlist	Cons. Plan	BPIF	List
Aleutian Tern	SGCN	S	TNF-SCC		R			YR
American Golden-Plover	SGCN	W			R	H		YD
Ancient Murrelet	SGCN							
Bar-tailed Godwit	SGCN	S			R	G		YD
Black Oystercatcher	SGCN		TNF-SCC			H		
Black Swift	SGCN						WL	YD
Black Turnstone	SGCN				Y	H		YR
Brandt's Cormorant ³								
Bristle-thighed Curlew	SGCN	S			Y	G		R
Buff-breasted Sandpiper	SGCN				R	H		
California Gull ³								YD
Cassin's Auklet	SGCN							YD
Chestnut-backed Chickadee (Northern)	SGCN						S-Con	
Dunlin (Northern Alaska)	SGCN	S			R	H		CBSD
Gray-headed Chickadee (Alaska)	SGCN	S			R		S-BCR3,4	
Hudsonian Godwit	SGCN	S			Y	H		YR
Kittlitz's Murrelet	SGCN	S	TNF-SCC		R			YR
Lesser Yellowlegs	SGCN				R	H		YD
Marbled Godwit	SGCN	S			Y	H		YD
Marbled Murrelet (Alaska)	SGCN				R			YD
McKay's Bunting	SGCN	S			Y		WL, S-Con	YR
Olive-sided Flycatcher	SGCN	S		Tier 2	R		WL	YD
Pectoral Sandpiper	SGCN				R	H		YD
Red Knot (Pacific)	SGCN	S			R	G		YD
Red-faced Cormorant	SGCN				R			YD
Red-legged Kittiwake	SGCN							YR
Rock Sandpiper (Pribilof)	SGCN	S			Y	H		
Rufous Hummingbird	SGCN	W			R		WL	YD
Short-billed Dowitcher	SGCN	W			Y	H		YD
Short-eared Owl	SGCN	W					CBSD	CBSD
Snowy Owl	SGCN				R		WL	YD
Solitary Sandpiper (Western)	SGCN				Y	L		
Tufted Puffin	SGCN				R			
Varied Thrush (Pacific)	SGCN						CBSD, S-Con	CBSD
Vaux's Swift								
Wandering Tattler	SGCN				Y	L		
Western Grebe ³								YD
Western Screech-Owl (Northern Pacific)	SGCN							
Whiskered Auklet	SGCN				Y			YR
Yellow-billed Loon	SGCN	S			R			R



Sensitive Species

- FWS Birds of Conservation Concern (2021)

Bird Conservation Regions 1-5 FWS Birds of Conservation Concern Alaska Species List (2021) ¹	<u>BCC Cross-Reference with Other Lists (as of Aug 27, 2021)²</u>								Total # of lists (including the BCC)
	AK WAP SGCN	BLM SSS	USFS SCC	DoD Mission Sens. Spp.	Audubon AK Watchlist	AK Shorebird Cons. Plan	Boreal Partners in Flight	ACAD Watch List	
Olive-sided Flycatcher	SGCN	S		Tier 2	R		WL	YD	7
Aleutian Tern	SGCN	S	TNF-SCC		R			YR	6
American Golden-Plover	SGCN	W			R	H		YD	6
Bar-tailed Godwit	SGCN	S			R	G		YD	6
Bristle-thighed Curlew	SGCN	S			Y	G		R	6
Dunlin (Northern Alaska)	SGCN	S			R	H		CBSD	6
Hudsonian Godwit	SGCN	S			Y	H		YR	6
Kittlitz's Murrelet	SGCN	S	TNF-SCC		R			YR	6
Marbled Godwit	SGCN	S			Y	H		YD	6
McKay's Bunting	SGCN	S			Y		WL, S-Con	YR	6
Pectoral Sandpiper	SGCN				R	H		YD	6
Red Knot (Pacific)	SGCN	S			R	G		YD	6
Rufous Hummingbird	SGCN	W			R		WL	YD	6
Short-billed Dowitcher	SGCN	W			Y	H		YD	6



Sensitive Species

- Other sources of species status info:

Other List	Designation
US Forest Service - Species of Conservation Concern	TNF-SCC – Tongass National Forest- Species of Conservation Concern
Department of Defense - Mission Sensitive Species	Tier 2
Audubon Alaska Watchlist	R – Red, Y – Yellow
Alaska Shorebird Conservation Plan	G – Greatest Concern, H – High Concern, L – Low Concern
Partners in Flight Landbird Conservation Plan Species	WL – Watch List, CBSD – Common Bird in Steep Decline, S-Con – Continental Stewardship, S-BCR – Regional Stewardship (BCR level)
Avian Conservation Assessment Database Watch List	R- Red, YR – Yellow Restricted, YD – Yellow Decline, CBSD – Common Bird in Steep Decline



Best Practices

- Pre-disturbance surveys
- Do not disturb wildlife during sensitive time periods:
 - Nesting season (Guideline dates: April 15 to July 15 in Boreal Forest)
 - Calving
 - Late winter
- Minimize disturbance footprint
- Buffer sensitive habitats
- Do not spread invasive species
- Treatment patterns to minimize direct mortality
- Burn slash piles at appropriate times
- And species-specific needs





THANKS!

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