



APPENDIX G

THREATENED AND ENDANGERED SPECIES

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This appendix discusses the federal and state threatened and endangered species, candidate or sensitive animal species, and plant species of concern potentially found on the Hanford Site. Threatened and endangered species are listed at Title 50, Code of Federal Regulations, Part 17 (50 CFR 17); Washington Natural Heritage Program (2003); and Washington Department of Fish and Wildlife (2003).

ENDANGERED SPECIES ACT OF 1973

The purposes of the *Endangered Species Act of 1973*, as amended, are to (1) provide a means to conserve critical ecosystems, (2) provide a program for the conservation of threatened and endangered species, and (3) assure that appropriate steps are taken to achieve the purposes of the treaties and conventions established in the act. There are several species of plants and animals listed as threatened or endangered by either the federal or state governments that occur or potentially occur on the Hanford Site (Table G.1).

Identification of candidate species (Table G.2) and species at lower listing levels (Table G.3) can assist environmental planning efforts by providing advance notice of potential listing as a threatened or endangered species, allowing resource managers to alleviate threats and thereby possibly remove the need to list species as endangered or threatened. Even if a candidate species is subsequently listed, the early notice could result in fewer restrictions on human activities in the environment by prompting candidate conservation measures to alleviate threats to the species.

HANFORD STATUS

There are, however, one bird species and two fish species on the federal list of threatened and endangered species (Table G.1). No plants or mammals known to occur on the Hanford Site are currently on the federal list of endangered and threatened species (50 CFR 17), but two species of plants, one species of mammal, and one species of bird are currently candidates for listing under the *Endangered Species Act of 1973* (Tables G.1 and G.2). In addition, eleven species of plants and six species of birds have been listed as either threatened or endangered by Washington State. The National Oceanic and Atmospheric Administration Fisheries has the responsibility for the federal listing of anadromous fish (i.e., fish which require both saltwater and freshwater to complete a life cycle). Upper-Columbia River steelhead (*Oncorhynchus mykiss*) and upper-Columbia River spring-run chinook salmon (*Oncorhynchus tshawytscha*) were listed as endangered evolutionary significant units by National Marine Fisheries Service in August 1997 and March 1999, respectively (National Marine Fisheries Service 2003). In March 2003, Pacific Northwest National Laboratory staff found spawning areas of upper-Columbia River steelhead near the 300 Area. Consultation with the National Oceanic and Atmospheric Administration Fisheries regarding this spawning area is currently underway.

Several species of plants and animals are listed at the candidate species or other levels by Washington State. There are 25 state-level candidate species of animals (Table G.2) and 40 plant species of concern (Table G.3).

Table G.1. Federal or Washington State Threatened and Endangered Species on the Hanford Site

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal</u>	<u>State</u>
Plants			
awned halfchaff sedge	<i>Lipocarpa (= Hemicarpha) aristulata</i>		Threatened ^(a)
desert dodder	<i>Cuscuta denticulata</i>		Threatened ^(a)
Geyer's milkvetch	<i>Astragalus geyeri</i>		Threatened ^(a)
grand redstem	<i>Ammannia robusta</i>		Threatened ^(a)
loeflingia	<i>Loeflingia squarrosa var. squarrosa</i>		Threatened ^(a)
lowland toothcup	<i>Rotala ramosior</i>		Threatened ^(a)
persistent sepal yellowcress	<i>Rorippa columbiae</i>	Species of concern ^(b)	Threatened ^(a)
rosy pussypaws	<i>Calyptridium roseum</i>		Threatened ^(a)
Umtanum desert buckwheat	<i>Eriogonum codium</i>	Candidate ^(c)	Endangered ^(d)
White Bluffs bladderpod	<i>Lesquerella tuplashensis</i>	Candidate ^(c)	Threatened ^(a)
white eatonella	<i>Eatonella nivea</i>		Threatened ^(a)
Fish			
spring-run chinook salmon	<i>Oncorhynchus tshawytscha</i>	Endangered ^(d)	Candidate ^(c)
steelhead	<i>Oncorhynchus mykiss</i>	Endangered ^(d)	Candidate ^(c)
Birds			
American white pelican	<i>Pelecanus erythrorhychos</i>		Endangered ^(d)
bald eagle ^(e)	<i>Haliaeetus leucocephalus</i>	Threatened ^(a)	Threatened ^(a)
ferruginous hawk	<i>Buteo regalis</i>	Species of concern ^(b)	Threatened ^(a)
peregrine falcon	<i>Falco peregrinus</i>	Species of concern ^(b)	Endangered ^(d)
sandhill crane	<i>Grus canadensis</i>		Endangered ^(d)
western sage grouse	<i>Centrocercus urophasianus phaios</i>	Candidate ^(c)	Threatened ^(a)

(a) Species likely to become endangered in the foreseeable future.

(b) Species that are not currently listed or candidates under the *Endangered Species Act of 1973*, but are of conservation concern within specific U.S. Fish and Wildlife Service regions (personal communication, Gregg Kurz, U.S. Fish and Wildlife Service, June 9, 2003).

(c) Species that are believed to qualify for threatened or endangered species status, but for which listing proposals have not been prepared.

(d) Species in danger of extinction within all or a significant portion of its range.

(e) Currently under review for change in status.

Table G.2. Washington State Candidate Animal Species on the Hanford Site

<u>Common Name</u>	<u>Scientific Name</u>
Molluscs	
giant Columbia River spire snail ^(a)	<i>Fluminicola (= Lithoglyphus) columbiana</i>
giant Columbia River limpet	<i>Fisherola (= Lanx) nuttalli</i>
Fish	
mountain sucker	<i>Catostomus platyrhynchus</i>
leopard dace	<i>Rhinichthys flacatus</i>
river lamprey ^(a)	<i>Lampetra ayresi</i>
spring-run chinook salmon ^(b)	<i>Oncorhynchus tshawytscha</i>
steelhead ^(b)	<i>Oncorhynchus mykiss</i>
Insects	
Columbia River tiger beetle ^(c)	<i>Cicindela columbica</i>
Birds	
burrowing owl ^(a)	<i>Athene cunicularia</i>
common loon ^(d)	<i>Gavia immer</i>
flamulated owl ^(e)	<i>Otus flammeolus</i>
golden eagle	<i>Aquila chrysaetos</i>
Lewis woodpecker ^(e)	<i>Melanerpes lewisii</i>
loggerhead shrike ^(a)	<i>Lanius ludovicianus</i>
merlin	<i>Falco columbarius</i>
northern goshawk ^(a,e)	<i>Accipiter gentilis</i>
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>
sage sparrow	<i>Amphispiza belli</i>
sage thrasher	<i>Oreoscoptes montanus</i>
western grebe	<i>Aechmorus occidentalis</i>
Reptiles	
sagebrush lizard	<i>Sceloporus graciosus</i>
striped whipsnake	<i>Masticophis taeniatus</i>
Mammals	
black-tailed jackrabbit	<i>Lepus californicus</i>
Merriam's shrew	<i>Sorex merriami</i>
Washington ground squirrel ^(e,f)	<i>Spermophilus washingtoni</i>
white-tailed jackrabbit	<i>Lepus townsendii</i>

(a) Federal species of concern.

(b) Federal endangered.

(c) Probable, but not observed, on the Hanford Site.

(d) State sensitive (i.e., taxa vulnerable or declining) and could become endangered or threatened.

(e) Reported, but seldom observed, on the Hanford Site.

(f) Federal candidate.

Table G.3. Washington State Plant Species of Concern on the Hanford Site

<u>Common Name</u>	<u>Scientific Name</u>	<u>State Listing^(a)</u>
annual paintbrush	<i>Castilleja exilis</i>	W
annual sandwort	<i>Minuartia pusilla</i> var. <i>pusilla</i>	R1
basalt milk-vetch	<i>Astragalus conjunctus</i> var. <i>rickardii</i>	W
beaked spike-rush	<i>Eleocharis rostellata</i>	S
bristly combseed	<i>Pectocarya setosa</i>	W
brittle prickly pear	<i>Opuntia fragilis</i>	R1
Canadian St. John's wort	<i>Hypericum majus</i>	S
chaffweed	<i>Centunculus minimus</i>	R1
Columbia milkvetch	<i>Astragalus columbianus</i>	S ^(b)
Columbia River mugwort	<i>Artemisia lindleyana</i>	W
coyote tobacco	<i>Nicotiana attenuata</i>	S
crouching milkvetch	<i>Astragalus succumbens</i>	W
desert evening-primrose	<i>Oenothera caespitosa</i>	S
dwarf evening primrose	<i>Camissonia</i> (= <i>Oenothera</i>) <i>pygmaea</i>	S
false pimpernel	<i>Lindernia dubia anagallidea</i>	W
fuzzytongue penstemon	<i>Penstemon eriantherus whitedii</i>	S
giant helleborine	<i>Epipactis gigantea</i>	S
gray cryptantha	<i>Cryptantha leucophaea</i>	S ^(b)
Great Basin gilia	<i>Gilia leptomeria</i>	S
hedge hog cactus	<i>Pediocactus simpsonii</i> var. <i>robustior</i>	R1
Hoover's desert parsley	<i>Lomatium tuberosum</i>	S ^(b)
Kittitas larkspur	<i>Delphinium multiplex</i>	W
medic milkvetch	<i>Astragalus speirocarpus</i>	W
miner's candle	<i>Cryptantha scoparia</i>	S
mousetail	<i>Myosurus clavicaulis</i>	S
Piper's daisy	<i>Erigeron piperianus</i>	S
porcupine sedge	<i>Carex hystericina</i>	S
Robinson's onion	<i>Allium robinsonii</i>	W
rosy balsamroot	<i>Balsamorhiza rosea</i>	W
scilla onion	<i>Allium scilloides</i>	W
shining flatsedge	<i>Cyperus bipartitus (rivularis)</i>	S
small-flowered evening-primrose	<i>Camissonia</i> (= <i>Oenothera</i>) <i>minor</i>	S
small-flowered nama	<i>Nama densum</i> var. <i>parviflorum</i>	W
smooth cliffbrake	<i>Pellaea glabella simplex</i>	W
Snake River cryptantha	<i>Cryptantha spiculifera</i> (= <i>C. interrupta</i>)	S
southern mudwort	<i>Limosella acaulis</i>	W
stalked pod milkvetch	<i>Astragalus sclerocarpus</i>	W
Suksdorf's monkey flower	<i>Mimulus suksdorfii</i>	S
Thompson's sandwort	<i>Arenaria franklinii thompsonii</i>	R2
winged combseed	<i>Pectocarya penicillata</i>	W

(a) S = Sensitive (i.e., taxa vulnerable or declining) and could become endangered or threatened without active management or removal of threats.

R1 = Review List 1 - Taxa for which there are insufficient data available to support listing as threatened, endangered, or sensitive.

R2 = Review List 2 - Taxa with unresolved taxonomic questions.

W = Watch List - Taxa that are more abundant and/or less threatened than previously assumed.

(b) U.S. Fish and Wildlife Service Columbia Basin federal species of concern

REFERENCES

50 CFR 17. U.S. Fish and Wildlife Service, Department of the Interior. "Endangered and Threatened Wildlife and Plants." *Code of Federal Regulations*.

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