

APPENDIX F

**MIGRATORY BIRD LIST AND THREATENED,
ENDANGERED, AND SENSITIVE SPECIES**

Appendix F
Provo Westside Connector
Migratory Bird List and Threatened, Endangered, and Sensitive Species
Known to Utah County

These lists were prepared by BIO-WEST, Inc. in developing wildlife impact assessments for the Draft Environmental Impact Statement.

Project Area Migratory Bird List

A total of 325 bird species, as defined by the Migratory Bird Treaty Act, are known to occur in Utah County. Of these 325 species, at least 231 are known to occur in or near the Project Area or could be observed in the Project Area during migration. Species that have been recorded in Utah County but are rare enough to require written documentation by the Utah Bird Records Committee are not included on this checklist. Finally, species not protected by the Migratory Bird Treaty including European starling (*Sturnus vulgaris*) and house sparrow (*Passer domesticus*) are not on the list.

Table D-1. Migratory Bird List

SCIENTIFIC NAME	COMMON NAME	COMMENTS
<i>Anser albifrons</i>	greater white-fronted goose	
<i>Chen caerulescens</i>	snow goose	
<i>Chen rossii</i>	Ross's goose	
<i>Branta hutchinsii</i>	cackling goose	
<i>Branta canadensis</i>	Canada goose	
<i>Cygnus buccinator</i>	trumpeter swan	
<i>Cygnus columbianus</i>	tundra Swan	
<i>Aix sponsa</i>	wood duck	
<i>Anas strepera</i>	gadwall	
<i>Anas americana</i>	American wigeon	
<i>Anas platyrhynchos</i>	mallard	
<i>Anas discors</i>	blue-winged teal	
<i>Anas cyanoptera</i>	cinnamon teal	
<i>Anas clypeata</i>	northern shoveler	
<i>Anas acuta</i>	northern pintail	
<i>Anas crecca</i>	green-winged teal	
<i>Aythya valisineria</i>	canvasback	
<i>Aythya americana</i>	redhead	
<i>Aythya collaris</i>	ring-necked duck	
<i>Aythya marila</i>	greater scaup	
<i>Aythya affinis</i>	lesser scaup	
<i>Clangula hyemalis</i>	long-tailed duck	
<i>Bucephala albeola</i>	bufflehead	
<i>Bucephala clangula</i>	common goldeneye	

Table D-1. (Cont.)

<i>Bucephala islandica</i>	Barrow's goldeneye	
<i>Lophodytes cucullatus</i>	hooded merganser	
<i>Mergus merganser</i>	common merganser	
<i>Mergus serrator</i>	red-breasted merganser	
<i>Oxyura jamaicensis</i>	ruddy duck	
<i>Alectoris chukar</i>	chukar	
<i>Phasianus colchicus</i>	ring-necked pheasant	
<i>Callipepla californica</i>	California quail	
<i>Gavia immer</i>	common loon	
<i>Podilymbus podiceps</i>	pied-billed grebe	
<i>Podiceps auritus</i>	horned grebe	
<i>Podiceps nigricollis</i>	eared grebe	Species of Conservation Concern
<i>Aechmophorus occidentalis</i>	western grebe	
<i>Aechmophorus clarkii</i>	Clark's grebe	
<i>Pelecanus erythrorhynchos</i>	American white pelican	
<i>Phalacrocorax auritus</i>	double-crested cormorant	
<i>Botaurus lentiginosus</i>	American bittern	
<i>Ardea herodias</i>	great blue heron	
<i>Ardea alba</i>	great egret	
<i>Egretta thula</i>	snowy egret	
<i>Bubulcus ibis</i>	cattle egret	
<i>Butorides virescens</i>	green heron	
<i>Nycticorax nycticorax</i>	black-crowned night-heron	
<i>Plegadis chihi</i>	white-faced Ibis	
<i>Cathartes aura</i>	turkey vulture	
<i>Pandion haliaetus</i>	osprey	
<i>Haliaeetus leucocephalus</i>	bald eagle	Species of Conservation Concern
<i>Circus cyaneus</i>	northern harrier	
<i>Accipiter striatus</i>	sharp-shinned hawk	
<i>Accipiter cooperii</i>	Cooper's hawk	
<i>Accipiter gentilis</i>	northern goshawk	
<i>Buteo swainsoni</i>	swainson's hawk	
<i>Buteo jamaicensis</i>	red-tailed hawk	
<i>Buteo regalis</i>	ferruginous hawk	Species of Conservation Concern
<i>Buteo lagopus</i>	rough-legged hawk	
<i>Aquila chrysaetos</i>	golden eagle	Species of Conservation Concern
<i>Falco sparverius</i>	American kestrel	
<i>Falco columbarius</i>	merlin	
<i>Falco peregrinus</i>	peregrine falcon	Species of Conservation Concern
<i>Falco mexicanus</i>	prairie falcon	
<i>Rallus limicola</i>	Virginia rail	
<i>Porzana carolina</i>	sora	
<i>Fulica americana</i>	American coot	
<i>Grus canadensis</i>	sandhill crane	
<i>Pluvialis squatarola</i>	black-bellied plover	
<i>Pluvialis dominica</i>	American golden-plover	
<i>Charadrius alexandrinus</i>	snowy plover	Species of Conservation Concern
<i>Charadrius semipalmatus</i>	semipalmated plover	

Table D-1. (Cont.)

<i>Charadrius vociferus</i>	killdeer	
<i>Himantopus mexicanus</i>	black-necked stilt	
<i>Recurvirostra americana</i>	American avocet	
<i>Actitis macularius</i>	spotted sandpiper	
<i>Tringa solitaria</i>	solitary sandpiper	
<i>Tringa melanoleuca</i>	greater yellowlegs	
<i>Tringa semipalmata</i>	willet	
<i>Tringa flavipes</i>	lesser yellowlegs	
<i>Numenius phaeopus</i>	whimbrel	
<i>Numenius americanus</i>	long-billed curlew	Species of Conservation Concern
<i>Limosa fedoa</i>	marbled godwit	Species of Conservation Concern
<i>Calidris canutus</i>	red knot	
<i>Calidris alba</i>	sanderling	
<i>Calidris pusilla</i>	semipalmated sandpiper	
<i>Calidris mauri</i>	western sandpiper	
<i>Calidris minutilla</i>	least sandpiper	
<i>Calidris bairdii</i>	Baird's sandpiper	
<i>Calidris melanotos</i>	pectoral sandpiper	
<i>Calidris alpina</i>	dunlin	
<i>Calidris himantopus</i>	stilt sandpiper	
<i>Limnodromus scolopaceus</i>	long-billed dowitcher	
<i>Gallinago delicata</i>	Wilson's snipe	
<i>Phalaropus tricolor</i>	Wilson's phalarope	
<i>Phalaropus lobatus</i>	red-necked phalarope	
<i>Chroicocephalus philadelphia</i>	Bonaparte's gull	
<i>Leucophaeus pipixcan</i>	Franklin's gull	
<i>Larus canus</i>	mew gull	
<i>Larus delawarensis</i>	ring-billed gull	
<i>Larus californicus</i>	California gull	
<i>Larus argentatus</i>	herring gull	
<i>Larus thayeri</i>	Thayer's gull	
<i>Larus hyperboreus</i>	glaucous gull	
<i>Hydroprogne caspia</i>	Caspian tern	
<i>Chlidonias niger</i>	black tern	
<i>Sterna hirundo</i>	common tern	
<i>Sterna forsteri</i>	Forster's tern	
<i>Columba livia</i>	rock pigeon	
<i>Streptopelia decaocto</i>	Eurasian collared-dove	
<i>Zenaida macroura</i>	mourning dove	
<i>Coccyzus americanus</i>	yellow-billed cuckoo	Species of Conservation Concern
<i>Tyto alba</i>	barn owl	
<i>Megascops kennicottii</i>	western screech-owl	
<i>Bubo virginianus</i>	great horned owl	
<i>Athene cunicularia</i>	burrowing owl	
<i>Asio otus</i>	long-eared owl	
<i>Asio flammeus</i>	short-eared owl	
<i>Aegolius acadicus</i>	northern saw-whet owl	
<i>Chordeiles minor</i>	common nighthawk	

Table D-1. (Cont.)

<i>Aeronautes saxatalis</i>	white-throated swift	Species of Conservation Concern	
<i>Archilochus alexandri</i>	black-chinned hummingbird		
<i>Stellula calliope</i>	Calliope hummingbird		
<i>Selasphorus platycercus</i>	broad-tailed hummingbird	Species of Conservation Concern	
<i>Selasphorus rufus</i>	rufous hummingbird		
<i>Megasceryle alcyon</i>	belted kingfisher		
<i>Melanerpes lewis</i>	Lewis's woodpecker		
<i>Sphyrapicus nuchalis</i>	red-naped sapsucker		
<i>Picoides pubescens</i>	downy woodpecker		
<i>Picoides villosus</i>	hairy woodpecker		
<i>Colaptes auratus</i>	northern flicker		
<i>Contopus cooperi</i>	olive-sided flycatcher		
<i>Contopus sordidulus</i>	western wood-pewee		
<i>Empidonax traillii</i>	willow flycatcher		
<i>Empidonax hammondii</i>	Hammond's flycatcher		
<i>Empidonax wrightii</i>	gray flycatcher		
<i>Empidonax oberholseri</i>	dusky flycatcher		
<i>Empidonax occidentalis</i>	cordilleran flycatcher		
<i>Sayornis saya</i>	say's phoebe		Species of Conservation Concern
<i>Myiarchus cinerascens</i>	ash-throated flycatcher		
<i>Tyrannus verticalis</i>	western kingbird		
<i>Tyrannus tyrannus</i>	eastern kingbird		
<i>Lanius ludovicianus</i>	loggerhead shrike		
<i>Lanius excubitor</i>	northern shrike		
<i>Vireo plumbeus</i>	plumbeous vireo		
<i>Vireo cassinii</i>	Cassin's vireo		
<i>Vireo gilvus</i>	warbling vireo		
<i>Aphelocoma californica</i>	western scrub-jay		
<i>Pica hudsonia</i>	black-billed magpie		
<i>Corvus brachyrhynchos</i>	American crow		
<i>Corvus corax</i>	common raven		
<i>Eremophila alpestris</i>	horned lark		
<i>Progne subis</i>	purple martin		
<i>Tachycineta bicolor</i>	tree swallow		
<i>Tachycineta thalassina</i>	violet-green swallow		
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow		
<i>Riparia riparia</i>	bank swallow		
<i>Petrochelidon pyrrhonota</i>	cliff swallow		
<i>Hirundo rustica</i>	barn swallow		
<i>Poecile atricapillus</i>	black-capped chickadee		
<i>Poecile gambeli</i>	mountain chickadee		
<i>Psaltriparus minimus</i>	bushtit		
<i>Sitta canadensis</i>	red-breasted nuthatch		
<i>Sitta carolinensis</i>	white-breasted nuthatch		
<i>Certhia americana</i>	brown creeper		
<i>Salpinctes obsoletus</i>	rock wren		
<i>Thryomanes bewickii</i>	Bewick's wren		
<i>Troglodytes aedon</i>	house wren		

Table D-1. (Cont.)

<i>Troglodytes troglodytes</i>	winter wren	
<i>Cistothorus palustris</i>	marsh wren	
<i>Regulus satrapa</i>	golden-crowned kinglet	
<i>Regulus calendula</i>	ruby-crowned kinglet	
<i>Polioptila caerulea</i>	blue-gray gnatcatcher	
<i>Sialia currucoides</i>	mountain bluebird	
<i>Myadestes townsendi</i>	Townsend's solitaire	
<i>Catharus ustulatus</i>	swainson's thrush	
<i>Catharus guttatus</i>	hermit thrush	
<i>Turdus migratorius</i>	American robin	
<i>Dumetella carolinensis</i>	gray catbird	
<i>Mimus polyglottos</i>	northern mockingbird	
<i>Oreoscoptes montanus</i>	sage thrasher	Species of Conservation Concern
<i>Anthus rubescens</i>	American pipit	
<i>Bombycilla garrulus</i>	bohemian waxwing	
<i>Bombycilla cedrorum</i>	cedar waxwing	
<i>Vermivora celata</i>	orange-crowned warbler	
<i>Vermivora ruficapilla</i>	Nashville warbler	
<i>Vermivora virginiae</i>	Virginia's warbler	Species of Conservation Concern
<i>Dendroica petechia</i>	yellow warbler	
<i>Dendroica coronata</i>	yellow-rumped warbler	
<i>Dendroica nigrescens</i>	black-throated gray warbler	
<i>Dendroica townsendi</i>	Townsend's warbler	
<i>Seiurus noveboracensis</i>	northern waterthrush	
<i>Oporornis tolmiei</i>	MacGillivray's warbler	
<i>Geothlypis trichas</i>	common yellowthroat	
<i>Wilsonia pusilla</i>	Wilson's warbler	
<i>Icteria virens</i>	yellow-breasted chat	
<i>Piranga ludoviciana</i>	western tanager	
<i>Pipilo chlorurus</i>	green-tailed towhee	Species of Conservation Concern
<i>Pipilo maculatus</i>	spotted towhee	
<i>Spizella arborea</i>	American tree sparrow	
<i>Spizella passerina</i>	chipping sparrow	
<i>Spizella breweri</i>	Brewer's sparrow	Species of Conservation Concern
<i>Poocetes gramineus</i>	vesper sparrow	
<i>Chondestes grammacus</i>	lark sparrow	
<i>Amphispiza belli</i>	sage sparrow	Species of Conservation Concern
<i>Passerculus sandwichensis</i>	savannah sparrow	
<i>Ammodramus savannarum</i>	grasshopper sparrow	
<i>Passerella iliaca</i>	fox sparrow	
<i>Melospiza melodia</i>	song sparrow	
<i>Melospiza lincolni</i>	Lincoln's sparrow	
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	
<i>Junco hyemalis</i>	dark-eyed junco	
<i>Calcarius lapponicus</i>	lapland longspur	
<i>Plectrophenax nivalis</i>	snow bunting	
<i>Pheucticus melanocephalus</i>	black-headed grosbeak	
<i>Passerina caerulea</i>	blue grosbeak	

Table D-1. (Cont.)

<i>Passerina amoena</i>	lazuli bunting	
<i>Dolichonyx oryzivorus</i>	bobolink	
<i>Agelaius phoeniceus</i>	red-winged blackbird	
<i>Sturnella neglecta</i>	western meadowlark	
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	
<i>Quiscalus quiscula</i>	common grackle	
<i>Quiscalus mexicanus</i>	great-tailed grackle	
<i>Molothrus ater</i>	brown-headed cowbird	
<i>Icterus bullockii</i>	Bullock's oriole	
<i>Carpodacus cassinii</i>	Cassin's finch	
<i>Carpodacus mexicanus</i>	house finch	
<i>Carduelis pinus</i>	pine siskin	
<i>Carduelis psaltria</i>	lesser goldfinch	
<i>Carduelis tristis</i>	American goldfinch	

Threatened, Endangered, and Sensitive Species Known to Utah County and Potential Habitat in the Project Area

Federally-listed status for Utah County was obtained from the US Fish and Wildlife Service website (available at: <http://www.fws.gov/mountain-prairie/endspp/>, updated: December 2006). Status designations for Federal status species listed in Table D-1 are:

- T – threatened
- E – endangered
- C – candidate

For additional information regarding status designations, contact: U.S. Fish and Wildlife Service, Utah Field Office, 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119, telephone 801-975-3330.

Information on State of Utah status was obtained from the Utah Conservation Database (available at: <http://dwrcdc.nr.utah.gov/ucdc/>, updated: February 10, 2009). State status designations indicated in Table D-1 are:

- CS – Conservation agreement species
- SPC – Wildlife species of concern
- S-ESA – Federally-listed or candidate species under the Endangered Species Act

Table D-2. Threatened, Endangered, and Sensitive Species known to Utah County and presence of potential habitat in the Project Area

Common Name	Scientific Name	Federal Status	State Status	Habitat Requirements	Potential Habitat Present?
Vertebrates - Mammals					
Brown (Grizzly) Bear	<i>Ursus arctos</i>	T	S-ESA	Since 1800, the species has been extirpated from more than 99% of their historic range south of the Canadian border including Utah. Listed under the Endangered Species act in 1975 (Biotics Database 2005, Miller and Waits 2003).	No
Canada Lynx	<i>Lynx canadensis</i>	T	S-ESA	Although sightings of the Canada lynx in Utah over the past twenty years are exceedingly rare, the U.S.D.A. Forest Service announced that Canada lynx hair was found in the Mani-La Sal National Forest during 2002. The preferred habitat of the species in montane coniferous (Biotics Database 2005)	No
Fringed Myotis	<i>Myotis thysanodes</i>	---	SPC	Although the species is widely distributed throughout Utah, it is not very common in the state. The fringed myotis inhabits caves, mines, and buildings, most often in woodland and desert environments (Biotics Database 2005)	No
Kit Fox	<i>Vulpes macrotis</i>	---	SPC	The kit fox is native to much of the western United States and northern Mexico. Although the species is not overly abundant in Utah, it does occur in the western, east-central, and southeastern areas of the state. The species most often occurs in open prairies and desert habitats (Biotics Database 2005).	No
Spotted Bat	<i>Euderma maculatum</i>	---	SPC	Spotted bats occur state-wide in Utah, but are not considered abundant and may be declining. The species may be found in a variety of habitats ranging from deserts to forested mountains, where they roost and hibernate in caves and rock crevices (Biotics Database 2005).	No
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	---	SPC	The Townsend's big-eared bat is known to occur statewide in Utah at elevations below 9000 feet. The Utah population of the this species is thought to be in decline. Although found in many habitat types, the species is most frequently found near forested areas and utilizes caves, mines, and buildings for roosting and hibernation (Biotics Database 2005).	No

Table D-2. (Cont.)

Western Red Bat	<i>Lasiurus blossevillii</i>	---	SPC	Although distributed across much of the western United States, the western red bat is extremely rare in Utah. The species is often found near water, frequently in wooded areas. Generally migratory, some individuals may hibernate during the winter. Usually roosts in trees (Biotics Database 2005).	No
White-tailed Prairie Dog	<i>Cynomys leucurus</i>	---	SPC	The white-tailed prairie dog is one of three prairie dog species found in Utah and is known to occur in the northeastern part of the state. The species is most frequently found in underground burrows and usually hibernates during the winter (Biotics Database 2005).	No
Vertebrates - Birds					
American White Pelican	<i>Pelecanus erythrorhynchos</i>	---	SPC	Gunnison Island is the only colonial nesting site for American white pelicans in Utah and currently ranks as one of the largest breeding colonies in North America. During spring migration, the breeding season, and fall staging and migration periods, American white pelicans can be observed at many reservoirs, including Utah Lake, throughout the state (Parrish et al. 1999).	Yes
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted	SPC	Typically breeds in forested areas adjacent to large bodies of water. Nests in trees, rarely on cliff faces and ground nests in treeless areas. At the macro scale, nests occur in mature and old-growth forest with some habitat edge, relatively close (usually <2 km) to water with suitable foraging opportunities. Quality of foraging areas defined by diversity, abundance, and vulnerability of the prey base, structure of aquatic habitat, such as the presence of shallow water, and absence of human development and disturbance (Buehler 2000). The Bald Eagle has been Federally delisted (72 FR 37345, July 9, 2007)	Yes

Table D-2. (Cont.)

Black swift	<i>Cypseloides niger</i>	---	SPC	Occurs in mountainous regions of the western United States and Canada. Only 2 confirmed breeding locations are known in Utah: the Bridal Veil Falls area and the Aspen Grove area (Knorr 1962 cited in Parrish, Howe, and Norvell 1999).	No
Bobolink	<i>Dolichonyx oryzivorus</i>	---	SPC	Bobolinks in the Western US nest and forage in wet meadow (grasses and sedges), wet grassland, and irrigated agricultural (primarily pasture and hay fields) areas. These habitats, particularly wet meadows, tend to be associated with riparian or wetland areas. Precise habitat characteristics have not been well studied in the West. Old hay fields typically have high proportions of grass (or grass and forbs) and low proportions of alfalfa; pure alfalfa fields were not considered suitable breeding habitats. Nest sites tend to be in wet habitats, but also occur in transitional areas between wet and dry areas. Nests are almost always built on the ground and are often located at the base of large forbs. Although grass usually makes up a large portion of the general nesting area, nests are rarely located in grass, but are instead located in forbs and sedges (Parrish, Howe, and Norvell 1999).	Yes
Burrowing owl	<i>Athene cunicularia</i>	---	SPC	Habitats are open grassland and prairies, but it also utilizes other open situations, such as golf courses, cemeteries, and airports. It eats mainly terrestrial invertebrates, but also consumes a variety of small vertebrates, including small mammals, birds, frogs, toads, lizards, and snakes. The nest is in a mammal burrow, usually that of a prairie dog, ground squirrel, badger, or armadillo; if a mammal burrow is not available the owls will sometimes excavate their own nest burrow (Haug, Millsap and Martell 1993).	Yes

Table D-2. (Cont.)

Ferruginous Hawk	<i>Buteo regalis</i>	---	SPC	Flat and rolling terrain in grassland or shrubsteppe regions. Avoids high elevation, forest interior, and narrow canyons. Occurs in grasslands, sagebrush (<i>Artemisia</i> spp.) country, saltbush (<i>Atriplex</i>)-greasewood (<i>Sarcobatus vermiculatus</i>) shrublands, and the periphery of western pinyon (<i>Pinus</i>)-juniper (<i>Juniperus</i>) and other forests. Sparse riparian forests, canyon areas with features such as cliffs and rock outcrops, and isolated trees and small groves of trees in grassland and shrubsteppe areas are sought for nesting. Becomes locally abundant at interface between pinyon-juniper and shrubsteppe habitats (Bechard and Schmutz 1995).	No
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	---	SPC	Sage Grouse are adapted to a mosaic of sagebrush habitats throughout their range, including (1) relatively tall sagebrush (big sagebrush, three-tip sagebrush [<i>Artemisia tripartita</i>], silver sagebrush [<i>A. cana</i>]); (2) relatively low sagebrush (low sagebrush [<i>A. arbuscula</i>], black sagebrush [<i>A. nova</i>]); (3) forb-rich mosaics of low and tall sagebrush; (4) riparian meadows; (5) steppe dominated by native grasses and forbs; (6) scrub-willow (<i>Salix</i> spp.); and (7) sagebrush savannas with juniper (<i>Juniperus</i> spp.), ponderosa pine (<i>Pinus ponderosa</i>), or quaking aspen (<i>Populus tremuloides</i>). Although Sage Grouse have adjusted to altered habitats, including alfalfa (<i>Medicago sativa</i>), wheat (<i>Triticum</i> spp.), and crested wheatgrass (<i>Agropyron cristatum</i>), the usefulness of altered habitats often depends on their configuration with native habitats (Schroeder et al. 1999).	No
Lewis's Woodpecker	<i>Melanerpes lewis</i>	---	SPC	Important aspects of breeding habitat include an open canopy, a brushy understory offering ground cover, dead or downed woody material, available perches, and abundant insects. Three principal habitats are open ponderosa pine forest, open riparian woodland dominated by cottonwood, and logged or burned pine (<i>Pinus</i> spp.) forest; however, breeding birds are also found in oak (<i>Quercus</i> spp.) woodland, nut and fruit orchards, piñon pine-juniper (<i>Pinus cembroides</i>).	No
Long-billed Curlew	<i>Numenius americanus</i>	---	SPC	Nests primarily in short-grass or mixed-prairie habitat with flat to rolling topography. Habitats with trees, high density of shrubs (e.g., sagebrush [<i>Artemisia</i> spp.]), and tall, dense grass generally avoided. Around the Great Salt Lake, nesting habitat is best characterized by pickle-weed (<i>Salicornia europaea</i>), <i>Bassia</i> spp., <i>Suaeda</i> spp., saltgrass, and pigweed (<i>Chenopodium album</i> ; Dugger and Dugger 2002).	Yes

Table D-2. (Cont.)

Northern Goshawk	<i>Accipiter gentilis</i>	---	CS	Although considered a habit generalist at large spatial scales, goshawks tend to nest in a relatively narrow range of vegetation structural conditions. Nests are typically in mature to old-growth forests composed primarily of large trees, with high (60–90%) canopy closure, near the bottom of moderate hill slopes, with sparse ground cover (Squires and Reynolds 1997).	No
Short-eared Owl	<i>Asio flammeus</i>	---	SPC	Almost always associated with open country supporting cyclic small mammals, also agricultural areas. Nests usually located on dry sites with enough vegetation to conceal incubating female. Will nest on slight ridges, mounds if present. Usually nest on dry sites, often small knolls, ridges, or hummocks; wet areas used less frequently. Of 63 nests in North America, 55.0% in grasslands; 24.0% grain stubble; 14.0% hayland; 6.0% low perennials (Wiggins et al. 2006).	Yes
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	---	SPC	Boreal and montane coniferous forests, from 1,300 m to 2,750 m in w. North America and 360 m to 1,250 m in e. North America. Mature or old-growth coniferous forests with an abundance of insect-infested snags or dying trees. Often inhabits moist to swampy areas, especially in e. North America.. Wet forests may best mimic the preferred micro-climate of this boreal species. Although closely associated with spruce forests, species composition of its forest habitat varies geographically (Leonard 2001).	No
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C	S-ESA	Prefers open woodland with clearings and low, dense, scrubby vegetation; often associated with watercourses. Generally absent from heavily forested areas and large urban areas. In Utah, prefers desert riparian woodlands comprised of willow Fremont cottonwood (<i>Populus fremontii</i>), and dense mesquite (<i>Prosopis</i> spp.; Hughes 1999).	No
Vertebrates – Reptiles					
Smooth Greensnake	<i>Opheodrys vernalis</i>	---	SPC	In Utah, the smooth greensnake is uncommonly found and is known to occur in the Wasatch, Uinta, Abajo, and La Sal Mountains. The species prefers moist grassy areas and meadows (Biotics Database 2005)	No

Table D-2. (Cont.)

Vertebrates - Amphibians					
Columbia Spotted Frog	<i>Rana luteiventris</i>	---	CS	Range-wide, spotted frogs use a variety of habitat types including cold water ponds, streams, lakes, and springs adjacent to mixed coniferous and subalpine forest, grassland, and brush land. On the Wasatch Front, they are usually found in emergent wetlands associated with riparian or isolated spring-fed habitat with cool and organic substrates. Habitat usually consists of a small spring, pond, or slough with a variety of herbaceous emergent, floating, and submergent vegetation. Spring vegetation most commonly associated with the spotted frog on the Wasatch Front includes: bullrush (<i>Scirpus</i> sp.), sedges (<i>Carex</i> spp), cattails (<i>Typha</i> sp.), duckweed (Lemnaceae), rushes (<i>Juncus</i> spp.), watercress (<i>Nasturtium officinale</i>), grasses (Graminae), and algae (USFWS 2002).	Yes
Western (Boreal) Toad	<i>Bufo boreas</i>	---	SPC	The western toad inhabits western Canada and much of the western (especially northwestern) United States. It occurs throughout most of Utah, and can be found in a variety of habitats, including slow moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands. The western toad, which is inactive during cold winter months, may either dig its own burrow in loose soil or use the burrows of other small animals (Biotics Database 2005, Stebbins 1985).	Yes
Vertebrates - Fish					
Bluehead sucker	<i>Catostomus discobolus</i>	---	CS	Native to parts of Utah, Idaho, Arizona, New Mexico, and Wyoming. Species occurs in the upper Colorado River system, the Snake River system, and the Lake Bonneville basin. The bluehead sucker is a benthic (bottom dwelling) species with a mouth modified to scrape algae (the primary food of the bluehead sucker) from the surface of rocks (Biotics Database 2005; Sigler and Sigler 1996).	No
Bonneville cutthroat trout	<i>Oncorhynchus clarkii Utah</i>	---	CS	A race, or subspecies, of the cutthroat trout native to the Bonneville Basin of Utah, Wyoming, Idaho, and Nevada. Pure Bonneville cutthroat trout are rare throughout their historic range, but several Utah populations exist, including populations in Bear Lake and Strawberry Reservoir (Biotics Database 2005; Sigler and Sigler 1996).	No

Table D-2. (Cont.)

Colorado river cutthroat trout	<i>Oncorhynchus clarkii pleuriticus</i>	--	CS	A race, or subspecies, of the cutthroat trout that is native to the upper Colorado River drainage of Utah, Wyoming, Colorado, Arizona, and New Mexico. Pure Colorado River cutthroat trout now naturally occur only in isolated high-elevation headwater streams (Biotics Database 2005; Sigler and Sigler 1996).	No
June sucker	<i>Chasmistes liorus</i>	E	S-ESA	The June sucker is found only in Utah Lake and its tributaries and was federally listed as an endangered species in April 1986 (USFWS 1986). The lower 4.9 miles (7.8 kilometers) of the Provo River have been defined as critical habitat. Provo Bay has been subsequently identified as an important post-spawn habitat for June sucker because of its proximity to the Provo and Spanish Fork Rivers and the diverse, productive habitat at higher water levels (Radant and Shirley 1987; Lentsch et al. 1995).	Yes
Least chub	<i>Lotichthys phlegethontis</i>	---	SPC	A small minnow native to the Bonneville Basin. Although the species formerly occurred in many areas of the Bonneville Basin, including ponds and streams near Salt Lake City and the Great Salt Lake, it now occurs only in scattered springs and streams in western Utah. Much of the least chub's decline can be attributed to the introductions of nonnative fishes (Biotics Database 2005; Sigler and Sigler 1996).	No
Roundtail chub	<i>Gila robusta</i>	---	CS	A fairly large minnow native to the Colorado River system of the western United States. The species prefers large rivers, and is most often found in murky pools near strong currents in the main-stem Colorado River, and in the Colorado River's large tributaries (Biotics Database 2005; Sigler and Sigler 1996).	No
Southern Leatherside Chub	<i>Lepidomeda aliciae</i>	---	SPC	A small minnow native to streams and rivers of the southeastern portion of the Bonneville Basin. It was once common throughout its native range, but presently is listed as a state sensitive species due to substantial decreases in population levels. (Biotics Database 2005; Sigler and Sigler 1996; Johnson, Dowling and Belk 2004).	No

Table D-2. (Cont.)

Invertebrates					
California Floater	<i>Anodonta californiensis</i>	---	SPC	This species was historically reported from Utah and Millard counties. There has been a relatively recent report of fresh shells from Rich and Tooele counties and shells of unspecified age (and thus not mapped) from northwestern Box Elder County. This species is apparently declining in Utah; historical populations in the Raft River (Box Elder County), Utah Lake (Utah County), and Bear Lake (Rich County) are possibly extirpated. The species has been found occupying very different habitat profiles at two localities. At one, the species was found at depths of about 6 to 12 inches, among watercress, on a muddy bottom in two small ponds joined together by a ditch. The other locality was a creek 5 to 15 feet wide, up to 18 inches deep, with a bottom of gravel and sand in flowing areas and mud in pools, and with abundant Myriophyllum and Spirogyra (Oliver et al. 1999).	Yes
Desert (Utah) Valvata	<i>Valvata utahensis</i>	E	S-ESA	Historically found in Utah Lake, the species is now thought to be extirpated. In Utah, this species occurred historically in Utah Lake, a large, shallow, and slightly alkaline freshwater lake. Fossil material indicates that it occurred prehistorically in other lakes including Bear Lake and perhaps rivers including the Bear river (Oliver et al. 1999).	No
Eureka Mountainsnail	<i>Oreohelix eurekaensis</i>	---	SPC	Endemic to Utah, this species has been reported from about 6 localities representing 4 widely separated populations scattered across northern Utah roughly in an east-west band. These 4 populations are in the northern part of the East Tintic Mountains (Mammoth Peak, Godiva Mountain, and Lime Peak), on the Juab-Tooele county line; on Hominy Creek on the south slope of the Uinta Mountains, near the Duchesne-Uintah county line; in the Deep Creek Mountains, near the Juab-Tooele county line and the Utah-Nevada boundary; and on the East Tavaputs Plateau, Grand County. The species has been found at elevations of approximately 8000 feet under pygmy sagebrush (<i>Artemisia pygmaea</i>) and in aspen (<i>Populus tremuloides</i>)-Douglas Fir (<i>Pseudotsuga</i> spp.) forests. Substrates have been described as sandstone for some areas (Oliver et al. 1999)	No

Table D-2. (Cont.)

Southern Bonneville Springsnail	<i>Pyrgulopsis transversa</i>	---	SPC	This species is known from six springs, all being in north-central Utah. Four of these localities are in Tooele County, and there is one locality each in Utah County and in Sanpete County. The species has been documented at small mineralized springs at approximately 5800 feet in elevation (Oliver et al. 1999).	No
Utah Physa	<i>Physella utahensis</i>	---	SPC	Although originally described from Utah Lake, there only two known occurrences in Utah. Both of which are located in northeastern Box Elder County. Historically, the species occupied Utah Lake and associated springs, where it is now extirpated. Habitat at sites known to be occupied by the species is best described as small, shallow, spring feed pools between 1/4 and 3/4 acre in size. The sites are well vegetated and the substrate consists of mud, sand, gravel, and/or rocks (Oliver et al. 1999)	No
Flowering Plants					
Clay phacelia	<i>Phacelia argillacea</i>	E	---	Federally listed endangered plant that occurs only in Spanish Fork Canyon, Utah County, Utah (Callister and Van Pelt 1992; Welsh et. al 1993).	No
Deseret Milkvetch	<i>Astragalus desereticus</i>	T	---	Habitat is narrowly restricted to steep, sandy bluffs (Barneby 1989) associated with south and west facing slopes (Franklin 1990) within the Moroni Formation at elevations between 5,400 and 5,600 feet (1,646 and 1,707 meters (m)) (Franklin 1990). USFWS has proposed delisting because threats to the species as identified in the final listing rule are not as significant as earlier believed and are managed such that the species is not likely to become in danger of extinction throughout all or a significant portion of its range in the foreseeable future (72 FR 3379, January 25, 2007).	No
Ute Ladies'-Tresses	<i>Spiranthes diluvialis</i>	T	---	The Ute ladies'-tresses (ULT) is a small, terrestrial, insect-pollinated orchid. There has been no critical habitat designated for ULT by the U.S. Fish and Wildlife Service. All populations of ULT have been found on wetland sites that remain moist throughout the growing season (USFWS 1992). In Utah the ULT is most often found along old stream channels and on recently deposited material within the floodplain of adjacent rivers (UNHP 1994). Both groundwater and river water contribute to the wetland hydrology of such sites. The ULT plants have been observed in inundated conditions and in merely moist conditions (Gecy 1994, Riedel et al. 1994).	Yes

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