

**APPENDIX D. SPECIAL STATUS SPECIES RETAINED AND ELIMINATED
FROM DETAILED ANALYSIS**

Table D-1. Federally Threatened, Endangered, and Candidate Species Identified as Potentially Occurring in Duchesne and Uintah Counties, Utah

Common Name <i>Species Name</i>	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area**	Further Analysis (Yes/No)
Threatened, Endangered and Candidate Plant Species				
Barneby ridgecress <i>Lepidium barnebyanum</i>	Endangered	Duchesne County. Soils that are shallow, fine-textured, and intermixed with rock fragments along semi-barren ridges in pinyon-juniper woodlands. 6,100–6,500 feet.	None. Known locations of and potential habitat for this species occur outside of the project area.	No
White River penstemon <i>Penstemon scariosus</i> var. <i>albifluvis</i>	Candidate	Parachute Creek Member of the Green River Formation on sparsely vegetated shale slopes in mixed desert shrub and pinyon-juniper communities. 5,000–6,000 feet.	None. All known populations occur to the east of the project area near the Utah/Colorado border. Suitable habitat does not exist within project area boundaries.	No
Clay reed-mustard <i>Schoenocrambe argillacea</i>	Threatened	Bookcliffs On the contact zone between the upper Uinta and lower Green River shale formations in mixed desert shrub of Indian ricegrass and pygmy sagebrush. 5,000–5,650 feet.	High. Known populations and potential habitat occurs in the south-central portion of the project area.	Yes
Shrubby reed-mustard <i>Schoenocrambe suffrutescens</i>	Endangered	Parachute Creek Member of the Green River Formation on calcareous shale in pygmy sagebrush, mountain mahogany, juniper and mixed desert shrub communities. 5,400–6,000 feet.	High. Known populations and potential habitat occurs in the southeastern corner of the project area.	Yes
Pariette cactus <i>Sclerocactus brevispinus</i>	Threatened	Fine soils in clay badlands in sparse salt desert shrubland communities from 4,600–4,900 feet.	High. Area of occurrence exists within project area.	Yes
Uinta Basin hookless cactus <i>Sclerocactus wetlandicus</i>	Threatened	Gravelly hills and terraces on Quaternary and tertiary alluvium soils in cold desert shrub communities from 4,300–6,560 feet.	High. At least three known populations and areas of potentially suitable habitat exist within the project area.	Yes

Table D-1. Federally Threatened, Endangered, and Candidate Species Identified as Potentially Occurring in Duchesne and Uintah Counties, Utah

Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area**	Further Analysis (Yes/No)
Graham's beardtongue <i>Penstemon grahamii</i>	Proposed	East Duchesne and Uintah Counties. Lower Parachute Member of the Green River Formation. Shale knolls in sparsely vegetated desert shrub and pinyon-juniper communities. 4,600–6,700 feet.	High. Known individuals occur near Sand Wash in the southeastern corner of the project area.	Yes
Ute ladies'-tresses <i>Spiranthes diluvialis</i>	Threatened	Streams, bogs and open seepages in cottonwood, salt cedar, willow and pinyon-juniper communities on the south and east slope of the Uintah Range, and the Green River and its tributaries from Browns Park to Split mountain. Potentially in the Upper reaches of streams in the Book Cliffs. 4,400–6,810 feet.	Low. No known populations exist in the project area, but potential habitat may occur in association with riparian areas.	Yes
Threatened, Endangered and Candidate Mammal Species				
Black-footed ferret <i>Mustela nigripes</i>	Endangered	This species inhabits semi-arid grasslands and mountain basins. It is found primarily in association with active prairie dog colonies that contain suitable burrow densities and colonies that are of sufficient size (Biggins et al. 1993).	None. Suitable habitat for this species does not exist in the project area.	No
Canada lynx <i>Lynx canadensis</i>	Threatened	Primarily occurs in Douglas-fir, spruce-fir, and subalpine forests at elevations above 7,800 feet. The lynx uses large woody debris such as downed logs and windfalls to provide denning sites for protection and thermal cover for kittens.	None. If extant in Utah, this species most likely occurs in montane forests in the Uinta Mountains.	No
Threatened, Endangered and Candidate Bird Species				
Mexican spotted owl <i>Strix occidentalis lucida</i>	Threatened	This species is found primarily in canyons with mixed conifer forests, pine-oak woodlands and riparian areas. This species nests on platforms and large cavities in trees, on ledges, and in caves. Breeding and nesting season: approximately March through August.	Moderate. Canyon habitat or suitable riparian habitat occurs within the project area.	Yes

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area**	Further Analysis (Yes/No)
Greater sage-grouse <i>Centrocercus urophasianus</i>	Candidate	Inhabits upland sagebrush habitat in rolling hills and benches. Breeding occurs on open leks (or strutting grounds) and nesting and brooding occurs in upland areas and meadows in proximity to water and generally within a 1-mile radius of the lek. During winter, sagebrush habitats at sub-montane elevations commonly are used. Breeding season: March 1 through June 30.	High. The species is widespread, but declining, in Utah, with extant populations in Uintah and Duchesne counties. Suitable habitat and known leks occur within the project area boundaries.	Yes
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Candidate	This species is considered to be a riparian obligate and usually occurs in large tracts of cottonwood/willow habitats. However, this species also has been documented in lowland deciduous woodlands, alder thickets, deserted farmlands, and orchards. Breeding season: late June through July.	Moderate to Low Potential. Small patches of potential habitat occur within the northeastern portion of the project area.	Yes. Indirect impacts to riparian habitats and development in floodplains.
Threatened, Endangered and Candidate Fish Species				
Bonytail <i>Gila elegans</i>	Endangered	This species is endemic to the Colorado River system and currently is restricted to the Green River in Utah. They use main channels of large rivers and favor swift currents.	Moderate– Designated Critical Habitat for this species occurs at the segment of the Green River located approximately nine river miles south of the project area.	Yes. Water for well construction and production will be taken from tributaries to the Green River. Wells proposed in Green River Floodplain.

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Common Name <i>Species Name</i>	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area**	Further Analysis (Yes/No)
Colorado pikeminnow <i>Ptychocheilus lucius</i>	Endangered	The range of the Colorado pikeminnow is restricted to the Upper Colorado River basin, upstream of Glen Canyon Dam. Adult Colorado pikeminnow use a variety of habitat types, depending on time of year, but mainly utilize shoreline runs, eddies, backwater habitats, seasonally flooded bottoms, and side canyons. They are most abundant in the upper Green River (between the mouth of the Yampa River and head of Desolation Canyon) and lower Green River (between the Price and San Rafael Rivers). Other concentration areas include the Yampa River, the lower 21 miles of the White River, and the Ruby and Horsethief Canyon area between Westwater, Utah, and Loma, Colorado (USFWS 2002b).	Moderate to High. Designated Critical Habitat for this species occurs within the project area boundary.	Yes. Water for well construction and production will be taken from tributaries to the Green River. Wells proposed in Green River Floodplain.
Humpback chub <i>Gila cypha</i>	Endangered	Suitable habitat for this species is characterized by a wide variety of riverine habitats, especially canyon areas with fast currents, deep pools, and boulder habitat. This species originally inhabited the main stem of the Colorado River from what is now Lake Mead to the canyon areas of the Green and Yampa River Basins. Currently, it appears restricted to the Colorado River at Black Rocks and Westwater Canyon of the Green River, and Yampa Canyon of the Yampa River (USFWS 2002c). Suitable habitat and critical habitat has been designated for this species in the Green River in Uintah County (USFWS 1994a).	Moderate. Designated Critical Habitat for this species occurs along the segment of Green River located approximately nine river miles south of the project area.	Yes. Water for well construction and production will be taken from tributaries to the Green River. Wells proposed in Green River Floodplain.

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Razorback sucker <i>Xyrauchen texanus</i>	Endangered	This fish species is found in a variety of habitats including quiet eddies, pools, and mid-channel runs. They are usually found over sand or silt substrate, but occur over gravel and cobble bars. The largest population is known to occur in the upper Green River between the confluence of the Yampa River and the confluence of the Duchesne River. Adults also occur in the Colorado River near Grand Junction, Colorado, although numbers are very low (USFWS 2002d). Critical habitat has been designated for this species in the Green River in Carbon, Duchesne, Emery, Uintah and Grand Counties (USFWS 1994a).	Moderate to High. Designated Critical Habitat for this species occurs within the project area boundary.	Yes. Water for well construction and production will be taken from tributaries to the Green River. Wells proposed in Green River Floodplain.

**Data derived from SWCA surveys (2006) and the UDWR Conservation Data Center (UDWR 2002).

Table D-2. BLM Sensitive Species Identified as Potentially Occurring in Duchesne and Uintah Counties, Utah

Common Name <i>Species Name</i>	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Special Status Plant Species				
<u>Park rock cress</u> <i>Arabis vivariensis</i>	<u>Sensitive</u>	<u>Weber Formation sandstone and limestone outcrops in mixed desert shrub and pinyon-juniper communities. 5,000–6,000 feet.</u>	<u>None. Formation and associated soils do not occur in the project area.</u>	<u>No</u>
<u>Horseshoe milkvetch</u> <i>Astragalus equisolensis</i>	<u>Sensitive</u>	<u>Duchesne River Formation soils in sagebrush, shadscale, horsebrush, and mixed desert shrub communities. 4,790–5,185 feet.</u>	<u>None. The Duchesne River Formation and associated soils do not occur in the project area. Known populations are approximately 20 miles away from the project area.</u>	<u>No</u>
<u>Hamilton milkvetch</u> <i>Astragalus hamiltonii</i>	<u>Sensitive</u>	<u>Lapoint and Dry Gulch members of the Duchesne River Formation, Mowery shale, Dakota and Wasatch Formation soils in pinyon-juniper and desert shrub communities. 5,240–5,800 feet.</u>	<u>None. Formation and associated soils do not occur in the project area.</u>	<u>No</u>
<u>Goodrich's columbine</u> <i>Aquilegia scopulorum</i> var. <i>goodrichii</i>	<u>Sensitive</u>	<u>Green River shale ridges in association with bristle conepine, limber pine, Salina wildrye, mountain mahogany, pinyon, and Douglas-fir communities. 7,400–9,400 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>
<u>Ownbey's thistle</u> <i>Cirsium ownbeyi</i>	<u>Sensitive</u>	<u>East flank Uinta Mountains. In mesic sites within canyons of mixed sagebrush, juniper, and riparian communities. 5,500–6,200 feet.</u>	<u>None. Formation and associated soils do not occur in the project area.</u>	<u>No</u>
<u>Goodrich cleomella</u> <i>Cleomella palmeriana</i>	<u>Sensitive</u>	<u>Associated with charming woody aster (<i>Machaeranthera venusta</i>), Intermountain phacelia, yellow milkvetch, and mat saltbush on eroded slopes of heavy clay in the Morrison Formation at 5,400 feet.</u>	<u>None. Formation and associated soils do not occur in the project area.</u>	<u>No</u>
<u>Barneby's catseye</u> <i>Cryptantha barnebyi</i>	<u>Sensitive</u>	<u>White semi-barren shale knolls of the Green River Formation in shadscale, rabbitbrush, sagebrush, and pinyon-juniper communities. 6,000–7,900 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
<u>Graham's catseye</u> <i>Cryptantha grahamii</i>	<u>Sensitive</u>	<u>Green River Shale in mixed desert shrub, sagebrush, pinyon-juniper, and mountain brush communities. 5,000–7,400 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>
Untermann daisy <i>Erigeron untermanii</i>	Sensitive	Pinyon-juniper communities on calcareous shales and sandstones of the Uinta and Green River formations. Duchesne and Uintah counties; endemic. 7,000–7,800 feet.	Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.	Yes
Alcove bog-orchid <i>Habenaria zothecina</i>	Sensitive	Moist stream banks, seeps, hanging gardens in mixed desert shrub, pinyon-juniper, and oakbrush vegetation communities. 4,000–6,200 feet.	None. Formation and associated soils do not occur in the project area.	No
Rock hymenoxis <i>Hymenoxys lapidicola</i>	Sensitive	Sandy soils on ledges and soil-filled crevices in the Weber Formation associated with Blue Mountain. 5,700–8,100 feet.	None. Formation and associated soils do not occur in the project area.	No
<u>Goodrich's blazingstar</u> <i>Mentzelia goodrichii</i>	<u>Sensitive</u>	<u>Steep, white, marly calciferous shale outcrops of the Green River Formation with scattered limber pine, pinyon pine, Douglas-fir, mountain mahogany, and rabbitbrush. 8,100–8,800 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>
<u>Duchesne greenthread</u> <i>Thelesperma caespitosum</i>	<u>Sensitive</u>	<u>White shale benches and windswept slopes of the Green River and Uinta Formation with pinyon and mountain mahogany. 5,900–8,400 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>
<u>Sterile yucca</u> <i>Yucca sterilis</i>	<u>Sensitive</u>	<u>Salt and mixed desert shrub communities growing in sandy soils. 4,800–5,800 feet.</u>	<u>Moderate. Formation and associated soils occur in the project area. However, little is known about the species' exact habitat requirements.</u>	<u>Yes</u>

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Huber's pepperplant <i>Lepidium huberi</i>	Sensitive	Black sagebrush, mountain brush, ponderosa pine, lodgepole pine, and spruce-fir communities, in sand or silty sands derived from the Shinarump Member of the Chinle, Park City, and Weber Sandstone. 7,300–9,700 feet.	None. Formation and associated soils do not occur in the project area.	No
Stemless penstemon <i>Penstemon acaulis</i> var. <i>acaulis</i>	Sensitive	Daggett County. Semi-barren Substrates in the Browns Park Geological Formation. Pinyon-juniper and sagebrush-grass communities. 5,840–7,285 feet.	None. Formation and associated soils do not occur in the project area.	No
Gibbens penstemon <i>Penstemon gibbensii</i>	Sensitive	Brown's Park in Daggett County. Sandy and shaley (Green River Shale) bluffs and slopes with juniper, thistle, <i>Eriogonum</i> , <i>Elymus</i> , serviceberry, rabbitbrush, and <i>Thermopsis</i> . 5,500–6,400 feet.	None. Formation and associated soils do not occur in the project area.	No
Goodrich penstemon <i>Penstemon goodrichii</i>	Sensitive	Lapoint-Tridell-Whiterocks area. Lapoint and Dry Gulch members of the Duchesne River Formation on blue gray to reddish bands of clay badlands. 5,590–6,215 ft.	None. Formation and associated soils do not occur in the project area.	No
Special Status Wildlife Species				
Big free-tailed bat <i>Nyctinomops macrotis</i>	Sensitive	The species is rare in Utah, occurring primarily in the southern half of the state, although individuals may rarely occur in northern Utah. Prefers rocky and woodland habitats, where roosting occurs in caves, mines, old buildings, and rock crevices (UDWR 2011).	Low. High cliffs such as bats may use for roosting may occur along the Green River (Oliver 2000).	Yes. Potential roosting and foraging habitat occur within the project area.

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Spotted bat <i>Euderma maculatum</i>	Sensitive	Inhabits desert shrub, sagebrush-rabbitbrush, piñon-juniper woodland, and ponderosa pine and montane forest habitats. In Utah, the species also uses lowland riparian and montane grassland habitats. Suitable cliff habitat typically appears to be necessary for roosts/hibernacula. Spotted bats typically do not migrate and use hibernacula that maintain a constant temperature above freezing from September through May. Hibernation (in caves) and winter activity have been documented in southwestern Utah.	Low. The species potentially occurs throughout Utah; however, no occurrence records exist for the extreme northern or western parts of the state. Known occurrences have been reported in northeastern Uintah County.	Yes. Potential roosting and foraging habitat occur within the project area.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	Sensitive	Inhabits a wide range of habitats from semi desert shrublands and piñon-juniper woodlands to open montane forests. Roosting occurs in mines and caves, in abandoned buildings, on rock cliffs, and occasionally in tree cavities. Foraging occurs well after dark over water, along margins of vegetation, and over sagebrush.	Low to Moderate. The species occurs throughout much of Utah including Duchesne and Uintah counties. Relative to the project area, one individual was collected at the Ouray National Wildlife Refuge in 1980, approximately 12 miles northeast of the project area. Roosting habitat potentially could occur in areas where rock cliffs and caves are present. Utah Division of Wildlife Resources has identified project area as "Limited Value Habitat."	No
Fringed myotis <i>Myotis thysanodes</i>	Sensitive	A small bat that occurs in most of the western United States, as well as in much of Mexico and part of southwestern Canada. The species is widely distributed throughout Utah, but is not very common in the state. The fringed myotis inhabits caves, mines, and buildings, most often in desert and woodland areas.	None. Suitable habitat for this species does not exist in the project area.	No

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Common Name <i>Species Name</i>	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
White-tailed prairie dog <i>Cynomys leucurus</i>	Sensitive	White-tailed prairie dogs are typically found in open shrublands, semi-desert grasslands, and mountain valleys, where they occur in loosely organized colonies that may occupy hundreds of acres on favorable sites. Similar to other prairie dogs, white-tailed prairie dogs spend much of their time in underground burrows, often hibernating during the winter.	Moderate. Suitable habitat for this species occurs in the project area.	Yes
Kit fox <i>Vulpes macrotis</i>	Sensitive	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 kit fox opportunistically eats small mammals (primarily rabbits and hares), small birds, invertebrates, and plant matter. The species is primarily nocturnal, but individuals may be found outside of their dens during the day. The species most often occurs in open prairie, plains, and desert habitats.	None. Suitable habitat for this species does not exist in the project area.	No
Smooth greensnake <i>Opheodrys vernalis</i>	Sensitive	Typically inhabits meadows, grassy marshes, and moist grassy fields along forest edges. Its distribution ranges from northeastern Utah into central Colorado and northern New Mexico, and into the Northern Plains from the Canadian border south to Kansas and Missouri.	None. No moist meadows or marshes in the project area.	No
Cornsake <i>Elaphe guttata</i>	Sensitive	An isolated population occurs in western Colorado and eastern Utah. Usually found near streams, or in rocky or forest habitats. This species is typically more active at night.	None. This species is not known in Uintah County and there is no suitable habitat in the project area.	No

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Special Status Bird Species				
Bald eagle <i>Haliaeetus leucocephalus</i>	Sensitive	In Utah, breeding occurrences are limited to eight locations within four counties (Daggett, Davis, Grand, Duchesne, Emery, Grand, and Wayne counties; <u>AET and Buys 2006</u>). Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts.	Moderate. Bald eagle winter roosting habitat occurs along the eastern edge of the project area within the Green River riparian corridor.	Yes
American white pelican <i>Pelecanus erythrorhynchos</i>	Sensitive	Inhabits areas of open water including large rivers, lakes, ponds, and reservoirs with surrounding habitats ranging from barren to heavily vegetated sites. Typically nests on isolated islands in lakes or reservoirs; rarely nests on peninsulas (<u>UDWR 2011</u>).	Low. In Utah, the species is known to nest on islands associated with Great Salt and Utah lakes.	No
Black swift <i>Cypseloides niger</i>	Sensitive	This species requires waterfalls for nesting; typically the falls are permanent. Coniferous forests, often mixed conifer or spruce-fir forests, typically surround nesting sites, but this varies depending on elevation and aspect, and nest sites may include mountain shrub, aspen, or even alpine components. Streams that create the waterfalls are typically mountain riparian habitats (<u>UDWR 2011</u>).	None. Suitable habitat for this species does not exist in the project area.	No
Bobolink <i>Dolichonyx oryzivorus</i>	Sensitive	Inhabits mesic and irrigated meadows, riparian woodlands, and subalpine marshes at lower elevations (2,800–5,500 feet). Suitable breeding habitat for this ground nester includes tall grass, flooded meadows, prairies, and agricultural fields; forbs and perch sites also are required.	Low. The species breeds in isolated areas of Utah, primarily in the northern half of the state. No breeding by this species has been documented within the project area.	No

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Burrowing owl <i>Athene cunicularia</i>	Sensitive	Inhabits desert, semi-desert shrubland, grasslands, and agricultural areas. Nesting habitat primarily consists of flat, dry, and relatively open terrain; short vegetation; and abandoned mammal burrows for nesting and shelter. Breeding season: April through July 15.	High. Suitable habitat and known nests occur within the project area.	Yes
Ferruginous hawk <i>Buteo regalis</i>	Sensitive	In Utah, this species resides mainly in lowland open desert terrain characterized by barren cliffs and bluffs, piñon-juniper woodlands, sagebrush-rabbit brush, and cold desert shrub. Nesting habitat includes promontory points and rocky outcrops.	High. This species is known to nest within the project area.	Yes
Lewis' woodpecker <i>Melanerpes lewis</i>	Sensitive	Inhabits open habitats including pine forests, riparian areas, and piñon-juniper woodlands. Breeding habitat typically includes ponderosa pines and cottonwoods in stream bottoms and farm areas. In Utah, the species inhabits agricultural lands and urban parks, montane and desert riparian woodlands, and submontane shrub habitats. Breeding season: mid-May through mid-August.	Low. In Utah, the species is widespread, but is an uncommon nester along the Green River. Breeding by this species has been observed in Ouray and Uintah counties, and along Pariette Wash.	Yes. Potential habitat occurs within the project area.
Long-billed curlew <i>Numenius americanus</i>	Sensitive	Inhabits shortgrass prairies, alpine meadows, riparian woodlands, and reservoir habitats. Breeding habitat includes upland areas of shortgrass prairie or grassy meadows with bare ground components, usually near water.	Low. Widespread migrant in Utah. Breeding birds are fairly common but localized, primarily in central and northwestern Utah. Potential nesting has been reported in Uintah County, but has not been confirmed.	No
Mountain plover <i>Charadrius montanus</i>	Sensitive	<u>One known breeding population exists in Utah, and is located on Myton Bench. The Utah population breeds in shrub-steppe habitat among white-tailed prairie dogs and near roadways or oil well pads.</u>	<u>Moderate. The breeding population on Myton Bench is suspected to have drastically declined in recent years. There have been no new breeding bird sightings since 2002.</u>	<u>Yes</u>

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Common Name Species Name	Status	Habitat Association	Potential for Occurrence Within the Proposed Project Area	Further Analysis (Yes/No)
Northern goshawk <i>Accipiter gentilis</i>	Sensitive	Mature mountain forest and riparian zone habitats. The northern goshawk is a neotropical migrant that occurs across the northern regions of North America in scattered populations primarily in mature mountain forest and valley cottonwood habitats.	None. There is no suitable habitat for this species in the project area. Populations of northern goshawk have been identified in the mid elevations of the VPA in the Uinta Mountains and the Book Cliffs.	No
Short-eared owl <i>Asio flammeus</i>	Sensitive	Inhabits arid grasslands, agricultural areas, marshes, and occasionally open woodlands. In Utah, cold desert shrub and sagebrush-rabbit brush habitats also are utilized. Typically a ground nester. Typical breeding season: April 10 through June 15.	Low. The species breeds in northern Utah and occurs as a migrant potentially throughout the state. Known to occur in Uintah County, with occurrence probable in Duchesne County. Historically, juvenile owls were observed within the project area. Consequently, it is possible that breeding short-eared owls could occur within the project area.	Yes
Special Status Fish Species				
Roundtail chub <i>Gila robusta</i>	Sensitive	Adults inhabit low to high flow areas in the Green River; young occur in shallow areas with minimal flow.	Moderate. This species has potential to occur in the Green River below the Pariette Draw confluence. It is most often found in murky pools near strong currents in the main-stem Colorado River and its large tributaries.	Yes
Flannelmouth sucker <i>Catostomus latipinnis</i>	Sensitive	Adults occur in riffles, runs, and pools in streams and large rivers, with the highest densities usually in pool habitat. Young live in slow to moderately swift waters near the shoreline areas.	Moderate. This species occurs in the main-stem Colorado and its large tributaries.	Yes
Bluehead sucker <i>Catostomus discobolus</i>	Sensitive	Occupies a wide range of aquatic habitats ranging from cold, clear mountain streams to warm, turbid rivers. This species occurs in the lower portion of Pariette Draw and in the Green River below the Pariette Draw confluence. Fast flowing streams have been identified as important habitat for this species.	Moderate. Suitable habitat for this species occurs in the project area.	Yes

Table D-3. Methodology for Determining the Acres of Direct and Indirect Disturbance* for Federally Endangered, Threatened, and Candidate Plant Species, and BLM Sensitive Plant Species Retained for Analysis

<u>Common Name Species Name</u>	<u>Status</u>	<u>Methodology for Calculation of Acres of Direct and Indirect Impact Areas</u>	<u>Data Source</u>
<u>Clay reed-mustard <i>Schoenocrambe argillacea</i></u>	<u>Threatened</u>	<u>Direct impacts were calculated as the intersection of the most current habitat polygon for <i>Schoenocrambe argillacea</i> and areas proposed for direct disturbance under each alternative. Indirect impacts were calculated as the intersection of the most current habitat polygon for <i>Schoenocrambe argillacea</i> and a 300-foot buffer around all areas proposed for direct disturbance under each alternative.</u>	<u>USFWS 1994b; USFWS 2011b habitat polygon</u>
<u>Shrubby reed-mustard <i>Schoenocrambe suffrutescens</i></u>	<u>Endangered</u>	<u>Direct impacts were calculated as the intersection of the most current habitat polygon for <i>Schoenocrambe suffrutescens</i> and areas proposed for direct disturbance under each alternative. Indirect impacts were calculated as the intersection of the most current habitat polygon for <i>Schoenocrambe suffrutescens</i> and a 300-foot buffer around all areas proposed for direct disturbance under each alternative.</u>	<u>USFWS 2010d updated habitat polygon, of the Badland cliffs habitat area delineated in the 1994 recovery plan (USFWS 1994b)</u>
<u>Pariette cactus <i>Sclerocactus brevispinus</i></u>	<u>Threatened</u>	<u>Direct impacts were calculated as the intersection of the most current habitat polygon for <i>Sclerocactus brevispinus</i> and areas proposed for direct disturbance under each alternative. Indirect impacts were calculated as the intersection of the most current habitat polygon for <i>Sclerocactus brevispinus</i> and a 300-foot buffer around all areas proposed for direct disturbance under each alternative.</u>	<u>USFWS 2011a updated potential habitat polygon; 2009 core conservation areas developed through Castle Peak-Eightmile Flat EIS consultation</u>
<u>Uinta Basin hookless cactus <i>Sclerocactus wetlandicus</i></u>	<u>Threatened</u>	<u>Direct impacts were calculated as the intersection of the most current habitat polygon for <i>Sclerocactus wetlandicus</i> and areas proposed for direct disturbance under each alternative. Indirect impacts were calculated as the intersection of the most current habitat polygon for <i>Sclerocactus wetlandicus</i> and a 300-foot buffer around all areas proposed for direct disturbance under each alternative.</u>	<u>USFWS 2011a updated potential habitat polygon</u>

Table D-3. Methodology for Determining the Acres of Direct and Indirect Disturbance* for Federally Endangered, Threatened, and Candidate Plant Species, and BLM Sensitive Plant Species Retained for Analysis

<u>Common Name</u> <u>Species Name</u>	<u>Status</u>	<u>Methodology for Calculation of Acres of Direct and Indirect Impact Areas</u>	<u>Data Source</u>
<u>Graham's beardtongue</u> <u><i>Penstemon grahamii</i></u>	<u>Proposed</u>	<u>Direct impacts were calculated as the intersection of the most current habitat polygon for <i>Penstemon grahamii</i> and areas proposed for direct disturbance under each alternative. Indirect impacts were calculated as the intersection of the most current habitat polygon for <i>Penstemon grahamii</i> and a 300-foot buffer around all areas proposed for direct disturbance under each alternative.</u>	<u>USFWS 2011a survey areas</u>
<u>Ute ladies'-tresses</u> <u><i>Spiranthes diluvialis</i></u>	<u>Threatened</u>	<u>Direct and indirect impacts were calculated as the intersection of riparian corridors along the Green River and Nine Mile Canyon and the project area.</u>	<u>BLM GIS layer of riparian areas</u>

* See Chapter 2, Table 2-9, and Chapter 4, Section 4.12 for the total acre of direct and indirect impacts to special status plant species under the management alternatives.

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