OVERLAND PASS PIPELINE PROJECT

CONSERVATION MEASURE PLAN

DRAFT

Prepared by:

Natural Resource Group, Inc.

January 2007

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1.0 INTRODUCTION

Overland Pass Pipeline Company LLC[1] (Overland Pass) proposes to construct an approximately 751-mile-long, 14- to 18-inch-diameter natural gas liquids (NGL) pipeline that will begin at its existing facilities in Opal, Wyoming and end at its existing facilities in Conway, Kansas. The project is referred to as the Overland Pass Pipeline Project.

Beginning in Wyoming, the proposed Overland Pass Pipeline route will traverse the state in a west-to-east direction across the lower half of the state. To the extent feasible, the pipeline has been routed from Opal to Echo Springs along various existing utility or pipeline corridors. From Williams Field Services Company, LLC's (Williams') existing facilities in Echo Springs, the pipeline route will run in a southeasterly direction, paralleling the existing Southern Star Pipeline, and traverse to the south of Cheyenne, Wyoming before entering Colorado. From the Colorado border, the pipeline route will continue southeasterly into Kansas, where it will continue to run parallel to the Southern Star Pipeline to south of WaKeeney, Kansas. It will then follow an existing right-of-way to an existing BP Amoco (Wattenberg) pipeline to Bushton, Kansas, after which it will follow a new right-of-way to Mitchell, Kansas, and then follow a Williams Pipeline corridor to Conway, Kansas. At Bushton and Conway, the transported NGL will be processed and distributed through the existing transportation infrastructure to consumer markets in the Midwest and Texas Gulf of Mexico coast.

The Bureau of Land Management (BLM) will act as the lead federal agency for the National Environmental Policy Act (NEPA) environmental review of this project. The U.S. Forest Service (FS) will act as a cooperating agency for NEPA review. Natural Resource Group, Inc. (NRG) is conducting special status species assessments for the project on behalf of Overland Pass and will prepare environmental documents. Protected species consultations have been initiated with the BLM, FS, U.S. Fish and Wildlife Service (FWS), Wyoming Game and Fish Department (WGFD), Wyoming Natural Diversity Database (WYNDD), Colorado Division of Wildlife (CDOW), Colorado Natural Heritage Program (CNHP), Kansas Department of Wildlife and Parks (KDWP), and Kansas Natural Heritage Inventory (KSNHI).

General measures to help avoid or minimize impacts on species within the project area will include conducting environmental training for all construction workers, adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan; Stream Crossing and Wetland Protection Plan; Spill Prevention, Containment, and Countermeasure Plan* (*SPCC Plan*); and *Weed Management Plan.* The Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* identify baseline mitigation measures for minimizing erosion and enhancing revegetation, and for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies, respectively. Specifically, the *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* contain certain mitigation measures, such as: ensuring the appropriate cultural and biological surveys have been conducted; having an Environmental Inspector (EI) present on each construction spread; locating most extra workspaces at least 10 feet from the water's edge and limiting the clearing of vegetation between each workspace and associated wetland or waterbody; using slope breakers, energy dissipating devices, and/or dewatering structures when appropriate to prevent or minimize erosion and sedimentation; abiding by fishery construction timing windows; grading the construction work areas to pre-construction contours following construction or to such other profile agreed to by the appropriate natural resource agency(s); conducting restoration activities; and conducting appropriate monitoring and maintenance. The Overland Pass Pipeline *SPCC Plan* describes preventative measures such as personnel training, equipment inspection, and refueling procedures to reduce the likelihood of spills; and mitigative measures, such as containment and cleanup, to minimize potential

[1] Overland Pass Pipeline Company LLC will be a subsidiary LLC of Williams Field Services Company, LLC, which in turn is a subsidiary of Williams Field Services Group, LLC.

impacts should a spill occur. The Overland Pass Pipeline *Weed Management Plan* describes mitigation measures to minimize the introduction and/or spread of noxious and invasive plant species.

This *Conservation Measure Plan* outlines specific conservation measures to be implemented in the event state or federally listed species, BLM sensitive species, or FS sensitive species are identified along the project route during surveys. Measures identified in this *Conservation Measure Plan* are specific to the protection of these species and take priority over measures identified in the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*. Species-specific conservation measures are outlined under the headings of Federally Threatened and Endangered Species, BLM Sensitive Species, and Forest Service Sensitive Species. Species that have more than one designation are discussed under the first relevant heading. Threatened or endangered, BLM sensitive, FS sensitive or state-listed status is given for each species in not only the discussion but also in the table in section 5.0. Specific locations where measures will be implemented are dependent on the results of the field surveys and the implementation of measures will be dependent on the pipeline location in relation to existing land use and disturbance. The conservation measures presented within this plan were largely developed based on accepted practices and procedures, and are intended to reduce impacts to protected species. These conservation measures have, in many cases, supported a "may affect, not likely to adversely affect" determination for federally listed species or a "may adversely impact individuals, but is not likely to result in a loss of viability in the project area, nor cause a trend to federal listing or a loss of species viability rangewide" determination for BLM and FS sensitive species. Additionally, as habitat quality and quantity will change temporarily with implementation of this project, no permanent changes to habitat or population trends are expected forest-wide for Management Indicator Species (MIS). A table of special status species and associated conservation measures is included in section 5.0.

2.0 FEDERALLY THREATENED AND ENDANGERED SPECIES

Through NRG's written correspondence with the FWS, the following federally listed endangered or threatened species that could potentially occur in the project area were identified: black-footed ferret, Preble's meadow jumping mouse, bald eagle, whooping crane, Mexican spotted owl, Wyoming toad, Colorado butterfly plant, Ute ladies'-tresses, and the blowout penstemon. Critical habitat for the Colorado butterfly plant and the Preble's meadow jumping mouse were identified as having the potential to occur within the project area. Two candidate species, the lesser prairie chicken and the yellow-billed cuckoo, were also identified as potentially occurring within the project area. The candidate Arkansas darter found in Kansas does not occur in any portion of the proposed project area according to the FWS and is therefore excluded from further analysis. In addition, the FWS expressed concern regarding the potential downstream impacts on federally listed species due to hydrostatic test water withdrawals from the Upper Colorado River Basin and Platte River Basin Watersheds. Downstream potential effects are discussed in section 2.6. The FWS also is concerned about the BLM sensitive greater sage-grouse, which is discussed in detail in section 3.2.4 of this document, as well as migratory birds, which are discussed in section 3.2.6 of this document. Survey methods to determine the presence or absence of the identified species of concern within the project area are detailed in the Overland Pass Pipeline *Sensitive Species Survey Plan*. Survey reports will be submitted to the FWS as they are completed.

2.1 MAMMALS

2.1.1 Black-Footed Ferret

The black-footed ferret (*Mustela nigripes*) is a federally endangered species that inhabits prairie dog colonies in grasslands or shrublands. The black-footed ferret is also a Colorado endangered species. The black-footed ferret was considered extirpated from the U.S. until a small population was discovered in Wyoming in 1981. A captive breeding and re-introduction program, guided by the FWS, established

experimental/nonessential populations in Wyoming, Montana, South Dakota, and Arizona. Relative to the project area, a nonessential/experimental population occurs within the Shirley Basin/Medicine Bow management area located approximately 40 miles northeast of the project right-of-way in Carbon County, Wyoming.

The potential effects of construction on the black-footed ferret may include loss of shelter due to vegetation clearing, collapsed burrows, and temporary disruption of foraging and resting activities due to disturbance associated with construction equipment. Depending on construction and restoration success, riparian habitat may recover the following growing season; or, it may be a number of years before the habitat is fully recovered. Construction through a prairie dog colony inhabited by black-footed ferrets could result in injury or direct mortality of ferrets if occupied burrows collapse underneath construction equipment.

The black-footed ferret has been identified as having the potential to occur in white-tailed prairie dog towns in Wyoming in colonies greater than 200 acres, and in black-tailed prairie dog towns in Colorado in colonies greater than 80 acres in size within the project area based on consultations with the FWS (FWS, 2005). The black-footed ferret is believed extirpated from Kansas (FWS, 2006). According to the FWS, surveys are required for black-footed ferrets in Wyoming within black-tailed prairie dog towns or white-tailed prairie dog towns, except in locations described in a letter from the FWS dated February 2, 2004, where surveys are no longer required due to extensive past searches. These areas are considered by the FWS to be "block-cleared" , that is, the FWS considers these prairie dog towns to not have the potential to support wild black-footed ferrets; however, these areas could be considered for future ferret reintroductions. In areas of Wyoming identified in the February 2, 2004 letter, and in Colorado where suitable habitat for the black-footed ferret occurs within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan* and the FWS *Black-Footed Ferret Survey Guidelines*. If surveys identify a black-footed ferret, Overland Pass will contact the FWS. Overland Pass will coordinate with the FWS to modify the project to avoid impacting the black-footed ferret. If a black-footed ferret is observed during construction, Overland Pass will stop work and contact the FWS.

2.1.2 Preble's Meadow Jumping Mouse

The federally threatened Preble's meadow jumping mouse (*Zapus hudsonius preblei*) inhabits foothills and plains riparian areas immediately adjacent to perennial streams. Suitable habitat is usually distinguished by woody overstory vegetation, commonly willow, with a dense herbaceous understory. The mouse is also a state threatened species in Colorado. The Preble's meadow jumping mouse is currently being reviewed by the FWS to determine if it is a distinct species. If it is not a distinct species and is subsequently delisted, the following potential impacts and related conservation measures will no longer be applicable.

Potential direct impacts on the Preble's meadow jumping mouse during construction could include displacement, injury, or death of individuals at stream crossings during clearing or trenching, while the trench is open prior to pipe lowering-in and backfilling, or during general vehicle movement along the right-of-way. Temporary loss of riparian and upland habitat and disruption of connectivity of habitat may occur in the project area. Indirect impacts on the Preble's meadow jumping mouse may include the reduction of available forage from clearing, soil compaction limiting revegetation success, and a lack of streamside vegetation to protect the mice from predators after clearing. By adhering to reclamation activities outlined in the Overland Pass Pipeline *Stream Crossing and Wetland Protection Plan* and *Soil Stabilization and Restoration Plan*, no permanent changes should occur to Preble's habitat.

The Preble's meadow jumping mouse has been identified as having the potential to occur in Albany and Laramie Counties, Wyoming, or in Weld County, Colorado within the proposed project area by the FWS (FWS, 2005). Critical habitat for the Preble's meadow jumping mouse occurs in Albany and Laramie Counties, Wyoming; however, the nearest designated critical habitat for the Preble's meadow jumping mouse occurs approximately 6 miles from the proposed pipeline route. No designated critical habitat is crossed by the project area; therefore, the project will have no effect on critical habitat. Potentially suitable habitat for the Preble's meadow jumping mouse will be identified through surveys conducted in spring 2006. Suitable habitat will be recorded using GPS and digital data will be submitted to the BLM and FWS. In areas of suitable habitat for the Preble's meadow jumping mouse occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan*. The results of these surveys will be submitted to the FWS upon completion. Overland Pass will attempt to avoid potential habitat located during surveys. If avoidance of the potential habitat is not feasible, Overland Pass will minimize impacts on the potential habitat and individuals at the potentially suitable habitat crossing locations by implementing the following measures:

- No equipment will be parked closer than 100 meters from the stream crossing.
- If the route is moved for any reason, but still occurs in suitable habitat, surveys will be conducted as necessary and the conservation measures will be implemented.
- Whenever a piece of equipment needs to cross potentially suitable habitat, the biologist will walk in front of the equipment to clear the area of mice. Clearing will involve a biologist conducting a visual inspection of the ground on foot and physically removing mice that are encountered from the right-of-way. These efforts will continue ahead of each piece of equipment until the right-of-way has been cleared of vegetation and silt fences have been installed to prevent mice from returning to the right-of-way.
- Construction through areas of suitable habitat will be conducted as quickly as is practical.
- Following construction, areas of suitable habitat will be restored by broadcast seeding the banks with a seed mix that includes native species and is acceptable to the landowner, local Natural Resource Conservation Service office, or other applicable agencies.
- Overland Pass will replace plugs of willow and/or preexisting shrub species from the riparian area with one plant (willow sprig or bare root stock) every square foot.
- If it is possible for cattle to graze in replanted riparian areas and the landowner provides consent, Overland Pass will fence the area until vegetation is reestablished.
- Overland Pass will allow for the revegetation of native shrub and herbaceous species throughout the permanent ROW, to provide suitable Preble's meadow jumping mouse habitat, and will only remove trees over 15 feet tall as necessary to facilitate long-term maintenance of the pipeline.

2.2 BIRDS

2.2.1 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is listed as a federally threatened species, a Colorado threatened species, and a Kansas threatened species. Breeding habitat for the bald eagle most commonly includes areas close to water, such as large rivers, lakes, reservoirs, coastal areas, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. Bald eagles nest in tall trees near the water, and in Colorado and Wyoming nest tree habitat has been found to vary from old-growth ponderosa pine to narrow strips of riparian vegetation surrounded by rangeland. In

Kansas, nesting birds use tall, mature trees with stout horizontal limbs and open branching patterns near large water impoundments, marshes, and rivers. In winter, bald eagles are often found in communal roosts, and they tend to use the same roosts each year. Communal roosts are defined as areas where six or more eagles spend the night within 100 meters of each other. Winter roost sites typically consist of clusters of large trees associated with food sources that are in areas protected from harsh weather and human disturbance.

Potential direct impacts on bald eagles during construction could include displacement of individuals to adjacent habitats or damage to occupied and/or unoccupied nests. If construction were to occur during the nesting season, impacts could also include abandonment of eggs or nestlings, injury to nestlings, destruction of eggs, or mortality of nestlings. Potential impacts to roosting birds during construction could include flushing birds from historic roost locations and displacement of birds from protective cover. Additionally, construction could potentially affect bald eagles' food resources, thereby indirectly affecting individuals. Overland Pass will adhere to its *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.

The bald eagle has been identified as having the potential to occur along lakes, impoundments, and rivers in Wyoming, Colorado, and Kansas within the proposed project area based on FWS consultation (FWS, 2005). In areas of suitable habitat for the bald eagle occurring within the project area, a raptor nest survey, which includes the bald eagle, will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If the survey identifies an occupied bald eagle nest in the project area, Overland Pass will restrict activities year-round within 0.5 mile of the nest and between February 1 and August 15 within 1.0 mile of the nest, unless otherwise permitted by the FWS. In addition, construction activities will be mitigated to avoid eagle disturbance year-round in one of two larger areas, depending on habitat types: a) 2.5 miles extending in all directions from the nest or b) 0.5 mile from the streambank of all streams within 2.5 miles of the nest. Site-specific habitat types and foraging areas will be evaluated during field surveys and Overland Pass will work with the FWS to establish appropriate buffers.

In areas of suitable habitat for the bald eagle occurring within the project area, field surveys to determine the presence of winter roosts will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. Surveys conducted in the winter of 2005-2006 identified no bald eagle roosts within 1.0 mile of the proposed project area. If known communal roosts are found within 1 mile of the construction right-of-way during future surveys, Overland Pass will avoid or minimize construction activity between November 1 and April 1 and will avoid ground disturbing activities within 0.5 mile of active communal roost sites year round. The above guidelines will be followed unless site specific information (e.g., disturbance sensitivity of individuals, topography, or intensity of activity) and consultations with FWS indicate otherwise.

2.2.2 Interior Least Tern

The interior least tern (*Sterna antillarum athalassos*) is listed as an endangered species by the federal government, the state of Colorado, and the state of Kansas. This species is a rare migrant through central Kansas, with spring migration occurring during May and fall migration occurring during August. The interior least tern is not known to occur within the project area in Wyoming and Colorado, therefore potential project effects in those states are discussed under section 2.6, Downstream Effects on Listed Species. Terns require barren areas near water such as saline flats in salt marshes, sand bars in river beds, and shores of large impoundments.

The FWS identified no known nesting habitat for the least tern within the project area. The least tern migrates through Kansas, so potential effects would apply to migrating individuals. The potential effects of construction on the interior least tern include displacement of individuals into adjacent habitats or

potential disruption of foraging activities if individuals are using waterbodies crossed by the project. Increased sedimentation and turbidity could affect downstream foraging, and construction could cause the temporary loss of migratory habitat. Overland Pass will adhere to its *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.

Overland Pass' biologists conducted initial habitat and vegetation mapping of the project area. The mapping did not identify areas of potential habitat for migrating terns, since the project does not cross any saline wetlands nor rivers containing potential habitat. If a route realignment was to cross potential habitat, Overland Pass would conduct monitoring in potential habitat during the migratory period (i.e., May or August). If monitoring identifies a least tern in the project area, Overland Pass would cease work in the vicinity of the tern until the individual vacates the construction right-of-way.

2.2.3 Piping Plover

The piping plover (*Charadrius melodus*) is listed as a threatened species by the Fish and Wildlife Service, the state of Colorado, and the state of Kansas. This species is a migrant through central Kansas. Spring migration occurs mid-April and fall migration occurs from August into September. The piping plover is not known to occur within the project area in Wyoming and Colorado, therefore potential project effects in those states are discussed under section 2.6, Downstream Effects on Listed Species. Piping plovers require sparsely vegetated shallow wetlands and open beaches and sandbars adjacent to or within streams and impoundments.

The FWS identified no known nesting habitat for the piping plover within the project area. The piping plover migrates through Kansas, so potential effects would apply to migrating individuals. The potential effects of construction on the piping plover include displacement of individuals into adjacent habitats or potential disruption of foraging activities if individuals are using waterbodies crossed by the project. Increased sedimentation and turbidity could affect downstream foraging, and construction could cause the temporary loss of migratory habitat. Overland Pass will adhere to its *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.

Overland Pass' biologists conducted initial habitat and vegetation mapping of the project area. The mapping did not identify areas of potential habitat for migrating plovers that will be crossed by the pipeline. If a route realignment was to cross potential habitat, Overland Pass would conduct monitoring in potential habitat during the migratory period (i.e., mid-April or August to September). If monitoring identifies a piping plover in the project area, Overland Pass would cease work in the vicinity of the plover until the individual vacates the construction right-of-way.

2.2.4 Whooping Crane

The whooping crane (*Grus Americana*) is listed as a federally endangered species, a Colorado endangered species, and a Kansas endangered species. The whooping crane is considered a regular spring and fall migrant through central Kansas and has been recorded in farm ponds, mudflats around reservoirs, and occasionally in agricultural areas. Spring migration for the whooping crane occurs late March through late April and fall migration occurs mid-September through late October. The Kansas Department of Wildlife and Parks designated critical habitat for the whooping crane at the Cheyenne Bottoms Wildlife Area, which is located roughly six miles southwest of the pipeline project. Whooping cranes are not currently known to migrate through Wyoming and Colorado, therefore potential project effects in those states are discussed under section 2.6, Downstream Effects on Listed Species.

The whooping crane does not have the potential to nest in Kansas, as the birds that migrate through Kansas nest at a wildlife refuge in Canada, therefore potential effects would apply to migrating

individuals. The potential effects of construction on the whooping crane include displacement of individuals into adjacent habitats or potential disruption of foraging activities if individuals are using waterbodies crossed by the project. Increased sedimentation and turbidity could affect downstream foraging, and construction may cause the temporary loss of migratory habitat. Overland Pass will adhere to its *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.

The whooping crane has the potential to migrate through the project area in central Kansas within the project area based on their broad habitat preferences and known migration corridors (Austin, 2001). The pipeline is approximately 6 miles north of Cheyenne Bottoms State Wildlife Area at MP 700.0, a known whooping crane migration stopover and designated critical habitat, and cranes may forage a distance from where they roost. Cranes are likely to roost or forage in smaller lakes, ponds, and flooded fields. Overland Pass' current construction schedule will avoid the spring migratory period. If construction during the migratory period (spring or fall) will not be avoided, Overland Pass will conduct monitoring along the proposed pipeline in potential habitat within a 20-mile-wide corridor on either side of the Cheyenne Bottoms State Wildlife Area (from MP 680.0 to MP 720.0) during construction to identify individuals within the project area. If migrating individuals are observed within the project corridor during construction, Overland Pass will cease work in the vicinity of the crane(s) until the individual(s) vacate the construction right-of-way and will contact the FWS to report the occurrence.

2.2.5 Mexican Spotted Owl

The Mexican spotted owl is a federally listed threatened species. Mexican spotted owls inhabit canyon and montane forest habitats, and within the project area may occur in mixed conifer habitats on steep slopes (greater than 40 percent) in Weld County, Colorado. The breeding season for the Mexican spotted owl is from late March to early October. Winter habitat is essentially the same as breeding habitat, though the owls may seek warmer, more open canyons in the winter. Mexican spotted owls forage primarily on the canyon floors and on elevated benches within the canyons. However, they occasionally forage on mesa tops that are covered by pinyon-juniper or shrubland habitats. The primary prey of the Mexican spotted owl is woodrats, but they will also forage on mice, voles, bats, birds, and beetles.

Potential direct impacts on Mexican spotted owls during construction in potential habitat could include displacement of individuals to adjacent habitats or damage to occupied and/or unoccupied nests. If construction were to occur during the nesting season within potential habitat, impacts could also include abandonment of eggs or nestlings, injury to nestlings, destruction of eggs, or mortality of nestlings. Mexican spotted owls are especially sensitive to excessive noise and activity near nest sites.

Overland Pass' biologists conducted initial habitat and vegetation mapping of the project area. The mapping did not identify potential habitat for Mexican spotted owls within the project area, since the project does not cross any canyon or montane forest habitats in northeastern Colorado. If a route realignment was to cross potential habitat, Overland Pass would conduct a field survey in accordance with its *Sensitive Species Survey Plan*. If the surveys identify a Mexican spotted owl nest, Overland Pass would work with the FWS to identify appropriate mitigation measures.

2.3 AMPHIBIANS

2.3.1 Wyoming Toad

The federally endangered Wyoming toad (*Bufo baxteri*) occurs in the vicinity of lakes and adjacent meadows, and may occur in wetlands in the Laramie River Valley. They historically occupied floodplains, ponds, and seepage lakes associated with shortgrass communities occurring between 7,000

and 7,500 feet elevation within the Laramie Basin in Wyoming. The current distribution of Wyoming toad is limited to Mortenson Lake National Wildlife Refuge and possibly Hutton Lake National Wildlife Refuge.

The potential effects of construction on the Wyoming toad include temporary loss of shelter due to vegetation clearing, displacement of individuals into adjacent habitats, and potential injury to or death of individuals unable to leave the area during construction. Additionally, the project could indirectly increase the susceptibility of individuals to predation due to a lack of vegetation cover along the right-of-way.

The closest known locations of the Wyoming toad are Mortenson Lake National Wildlife Refuge (7.2 miles away) and Hutton Lake National Wildlife Refuge (7.1 miles away). If any route realignments were to come within 2 miles of the known locations of the toad, Overland Pass would conduct a field survey in accordance with its *Sensitive Species Survey Plan*. If the surveys identify a Wyoming toad population, Overland Pass would evaluate the potential for a route realignment or change to the right-of-way configuration (e.g., using the opposite side of the right-of-way to operate vehicle traffic or reducing the width of the right-of-way). If a reroute or configuration change is not possible, biological monitors would clear the right-of-way of Wyoming toads prior to construction and install exclusion fencing to a depth of 4 inches into the ground to keep the toads from entering the right-of-way during construction. Following construction, the right-of-way would be restored to preconstruction conditions.

2.4 PLANTS

2.4.1 Blowout Penstemon

The federally endangered blowout penstemon (*Penstemon haydenii*) inhabits sand dune habitat south of the Ferris Mountains, in the northeastern Great Divide Basin in Wyoming (FWS, 2005), and is found on sandy aprons or the lower half of steep sandy slopes deposited at the base of granitic or sedimentary mountains or ridges (between elevations of 6,680 and 7,440 feet). Blowout penstemon primarily reproduces by rhizomes, and naturally occurring seedlings are relatively rare (FWS, 1992). The blowout penstemon appears to bloom in alternate years, which may be tied to moisture cycles, and when it does bloom it produces large quantities of seed.

Potential direct impacts on the blowout penstemon caused by construction of the project include injury to or destruction of the plants and rhizomes, or seed displacement occurring at potential habitat (i.e., sand dunes) during clearing, trenching, or general vehicle movement along the right-of-way. Indirect impacts may include invasion of the habitat by weedy plant species, thus increasing competition for water, sunlight, or other resources. Implementation of the Overland Pass Pipeline *Weed Management Plan* will minimize the introduction and/or spread of invasive plant species.

Overland Pass' biologists conducted initial habitat and vegetation mapping of the project area. The mapping did not identify potential habitat for blowout penstemon within the project area, since the sand dunes crossed by the project in southeastern Wyoming are well vegetated and therefore not potential habitat for the blowout pentstemon. If any route realignments were to cross potential habitat, Overland Pass will conduct a field survey in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If surveys identify plants along the edge of the right-of-way, exclusion fencing will be placed around the plants so they will be avoided by construction activities. If surveys identify plants in the middle or across the right-of-way, Overland Pass will evaluate the potential for a route realignment or change to the right-of-way configuration (e.g., reducing the width of the right-of-way). The potential for a reroute depends on site-specific conditions, such as the slope of the terrain. If avoidance of a known

population of blowout penstemon plants is not possible, Overland Pass will notify the FWS and the BLM before commencing any project construction activity.

2.4.2 Colorado Butterfly Plant

The Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*) is federally listed as threatened. It is found in wet meadows in floodplains; sub irrigated soils on level or slightly sloping floodplains and drainage bottoms at elevations of 5,000 to 6,400 feet; and in low depressions or along bends in wide, meandering stream channels a short distance upslope of the actual channel (FWS, 2005). The flowering season occurs in August, although some temporal variability may exist from site to site due to climatic conditions. The Colorado butterfly plant lives vegetatively for several years before bearing fruit once and then dying (FWS, 2000).

Potential direct impacts on the Colorado butterfly plant caused by construction of the project include injury to or destruction of the plants or seed displacement occurring at stream crossings or other potential habitat (i.e., isolated wetlands) during clearing, trenching, or general vehicle movement along the right-of-way. Indirect impacts could include invasion of the habitat by weedy plant species, thus increasing competition for water, sunlight, or other resources. Implementation of the Overland Pass Pipeline *Weed Management Plan* will minimize the introduction and/or spread of invasive plant species. Altered soil conditions within the right-of-way may also facilitate colonization of the area by rodents, which could increase herbivory on the plant. These impacts are likely to be most apparent immediately following construction and revegetation, and will diminish with time. Changes to water flow and soil characteristics will be minimized by adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*, and they will be temporary because the disturbed areas will be returned to preconstruction conditions following installation of the pipeline. In addition, Overland Pass will separate topsoil in wetland areas in accordance with its *Stream Crossing and Wetland Protection Plan.*

The Colorado butterfly plant has been identified as having the potential to occur in Laramie County, Wyoming, and Weld County, Colorado within the proposed project area based on consultations with the FWS (FWS, 2005). Critical habitat for the Colorado butterfly plant occurs in Laramie County, Wyoming; however, the nearest designated critical habitat for the Colorado butterfly plant occurs approximately 3 miles from the proposed pipeline route. No designated critical habitat is crossed by the project area; therefore, the project will have no effect on critical habitat. In areas of suitable habitat for the Colorado butterfly plant occurring within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If surveys conducted in suitable habitat yield negative results, Overland Pass will segregate topsoil in potential habitat and will return contours to the previous condition immediately following installation of the pipe. If surveys identify plants along the edge of the right-of-way, exclusion fencing will be placed around the plants so they will be avoided by construction activities. If surveys identify plants in the middle or across the right-of-way, Overland Pass will evaluate the potential for a route realignment or change to the right-of-way configuration (e.g., reducing the width of the right-of-way). The potential for a reroute depends on site-specific conditions, such as the slope of the terrain. If avoidance of a known population of Colorado butterfly plants is not possible, Overland Pass will notify the FWS and BLM before commencing any project construction activity.

2.4.3 Ute Ladies'-tresses

Ute ladies'-tresses (*Spiranthes diluvialis*) is a federally threatened species that grows in areas of seasonally moist soils and wet meadows of drainages below 7,000 feet elevation; arid, intermontane valleys with saline soils that are also high in calcium carbonate; or floodplain wetlands that are part of a

meandered wetland complex (FWS, 2005). Ute ladies'-tresses occurs primarily in areas where the vegetation is relatively open and not overly dense or overgrown, and seems to require "permanent sub-irrigation", indicating a close affinity with floodplain areas where the water table is near the surface throughout the growing season and into the late summer or early autumn (FWS, 1995). The Ute ladies'-tresses' flower is required for identification, and blooming occurs from late July through September. The plants can remain dormant for one or more growing seasons. Ute ladies'-tresses have the potential to occur in portions of the project area in Wyoming and Colorado.

Potential direct impacts on the Ute ladies'-tresses caused by construction of the project include injury to or destruction of the plants or seed displacement occurring at stream crossings or other potential habitat (i.e., isolated wetlands) during clearing, trenching, or general vehicle movement along the right-of-way. Indirect impacts could include invasion of suitable habitat by weedy plant species, thus increasing competition for water, sunlight, or other resources. Implementation of the Overland Pass Pipeline *Weed Management Plan* will minimize the introduction and/or spread of invasive plant species. Altered soil conditions within the right-of-way may also facilitate colonization of the area by rodents, which could increase herbivory on the orchid. These impacts are likely to be most apparent immediately following construction and revegetation, and will diminish with time. Changes to water flow and soil characteristics will be minimized by adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*, and they will be temporary because the disturbed areas will be returned to preconstruction conditions following installation of the pipeline. In addition, Overland Pass will separate topsoil in wetland areas in accordance with its *Stream Crossing and Wetland Protection Plan*.

The Ute ladies'-tresses has been identified as having the potential to occur in Wyoming counties, and Weld and Morgan Counties, Colorado within the proposed project area based on consultations with the FWS (FWS, 2005). In areas of suitable habitat for the Ute ladies'-tresses occurring within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If suitable habitat for the Ute ladies'-tresses occurs within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If surveys conducted in suitable habitat yield negative results, Overland Pass will segregate topsoil in potential habitat and will return contours to the previous condition immediately following installation of the pipe. If surveys identify plants along the edge of the right-of-way, exclusion fencing will be placed around the plants so they will be avoided by construction activities. If surveys identify plants in the middle or across the right-of-way, Overland Pass will evaluate the potential for a route realignment or change to the right-of-way configuration (e.g., reducing the width of the right-of-way). The potential for a reroute depends on site-specific conditions, such as the slope of the terrain. If avoidance of a known population of Ute ladies'-tresses plants is not possible, Overland Pass will notify the FWS and BLM before commencing any project construction activity.

2.5 CANDIDATE SPECIES

2.5.1 Lesser Prairie Chicken

The lesser prairie chicken (*Tympanuhchus pallidicinctus*) is a candidate species for federal listing and is a Colorado threatened species. Prairie chickens typically occupy grassland areas associated with sandy soils with an abundance of mid grasses, sand sage, and yucca. Sand sagebrush communities dominated by sand dropseed, sideoats grama, and little bluestem make up the most preferred lesser prairie-chicken habitat in Kansas and Colorado. Within the project area, the lesser prairie chicken potentially occurs in the southcentral and southwestern portion of Kansas. Display grounds, or leks, are established in open areas of low-growing vegetation and generally are located within or close to grassland nesting cover. Adequate cover is among the greatest factors affecting lesser prairie-chicken populations.

Depending on the timing of construction, the project could potentially impact prairie chickens during lekking activities or brood rearing, and could cause displacement, injury, or direct mortality of individuals. Prairie chickens have been known to use human disturbed areas including roads, oil pads, and areas treated with herbicides for lekking grounds, yet human disturbance may also have a detrimental affect on nest site selection. Although the project will not result in a permanent loss of habitat along the pipeline right-of-way, the regeneration of sand sagebrush could possibly be slow. However, potential impacts on prairie chicken habitat will be minimized by locating the right-of-way within previously disturbed areas (i.e., adjacent to existing utilities and/or roads) to the extent possible. Loss of habitat will be temporary in nature and is unlikely to cause a decline in prairie chicken populations in the vicinity of the project.

Prairie chickens are particularly sensitive to disturbances while they gather on lekking grounds each morning and evening from mid-February for males and late March for females, to early May. Construction activities and associated noise occurring in early morning and late afternoon or early evening in the vicinity of lekking grounds could disrupt and potentially displace prairie chickens that have gathered for breeding activities. In addition, once breeding activities have concluded, prairie chicken hens create their nests on the ground underneath sand sagebrush plants or tall bunchgrasses in proximity to the lekking grounds. The project could potentially impact nesting prairie chickens by destroying nests, causing nest abandonment, or causing injury or direct mortality to the young. In addition, brood rearing habitat could potentially be impacted by causing injury or direct mortality to the young.

Prairie chickens could also be indirectly impacted as individuals flushed or otherwise relocated from construction activities may be required to occupy suitable, but lower quality habitat, or may be more susceptible to predation, either while in lower quality habitat or during relocation to that habitat. However, these factors are not anticipated to result in high levels of mortality as disturbance and movements would be temporary and habitat adjacent to the construction corridor will remain intact.

The lesser prairie chicken and known breeding habitat has been identified as having the potential to occur south of I-70 in Trego County, Kansas and in Ellis County, Kansas where the pipeline enters Trego County (approximate MPs 626.0 to 650.0) within the proposed project area based on consultations with the FWS (FWS, 2005). In areas of suitable habitat for the lesser prairie chicken occurring within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. If an active lek is located within the right-of-way or within 0.5 miles of the right-of-way, Overland Pass will minimize impacts to lekking prairie chickens by restricting construction activities to between 9:00 am and 6:00 pm between March 1 and May 1 within 0.5 miles of known or identified active lek sites (Rogers, 2006). Also, Overland Pass will avoid constructing vertical structures, such as communication towers or other appurtenances between MPs 626.0 to 650.0 (KDWP, 2005). Following construction, the project area will be restored to preconstruction contours and areas of suitable habitat will be restored by broadcast seeding with a seed mix that includes native species and is acceptable to the landowner, local Natural Resource Conservation Service office, or other applicable agencies.

2.5.2 Yellow-billed Cuckoo

The yellow-billed cuckoo is considered a candidate species by the FWS and is a BLM-listed sensitive species. Yellow-billed cuckoos are considered to be riparian obligates and are usually found in large tracts of cottonwood/willow habitats with dense sub-canopies within 100 meters of water. Over-story vegetation in these habitats may be either large, gallery-forming trees or developing trees, usually cottonwoods. Nesting habitat is found at low to mid-elevations (2,500 to 6,000 feet above mean sea level). Cuckoos generally require large tracts (100 to 200 acres) of contiguous riparian nesting habitat. The only areas in Wyoming that currently support the large cottonwood-riparian stands that are required by this species occur in isolated stands along the Bighorn, Powder, and North Platte Rivers (WGFD, 2002).

Yellow-billed cuckoo nesting behavior may be closely tied to food abundance. In years of low food abundance, cuckoos may forego nesting; in years when the food supply is abundant, cuckoos may lay a large number of eggs and even parasitize the nests of other species. Potential direct impacts on yellow-billed cuckoos caused by construction could include temporary disruption and/or removal of foraging and nesting habitats during construction, thus displacing individuals into adjacent habitat. Additionally, the proposed project could cause potential injury to or death of individuals unable to leave the area during construction.

The yellow-billed cuckoo has been identified as having the potential to occur in riparian areas west of the Continental Divide in Wyoming within the proposed project area based on consultations with the FWS (FWS, 2005). In areas of suitable habitat for the yellow-billed cuckoo occurring within the project area, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*. Much of the project (90 percent) will be constructed adjacent to or within previously disturbed areas, which do not provide the large, contiguous tracts of riparian nesting habitat required by the yellow-billed cuckoo. However, the yellow-billed cuckoo could potentially occur in suitable habitat in the proposed project area at the Hams Fork River (MP 0.8a). Habitat at this location is not ideal, however, since the Hams Fork River lacks the large cottonwood component. If this species is documented within the project area, Overland Pass will minimize impacts to the species and associated habitat by reducing the width of the right-of-way in the area, as practical, and avoiding construction activities within the nesting season as possible. Following construction, areas of potential habitat will be restored to preconstruction conditions.

2.6 DOWNSTREAM EFFECTS ON LISTED SPECIES

Overland Pass intends to withdraw water for use during construction of the Overland Pass Pipeline Project from multiple surface waters. Water will be used for hydrostatic testing activities, to complete four horizontal directional drills, and for dust control (i.e., dust suppression on the right-of-way and access roads). However, no flowing streams were observed along Spread 4 (MP 438.0 to MP 591.0) or Spread 5 (MP 591.0 to MP 749.0) during a November 2005 field visit. If this is the case during construction and no surface water sources are available during the hydrostatic test, Overland Pass will use water from local private or publicly owned groundwater wells. Water will be obtained from wells through arrangements with well owners. After testing, the water will be discharged to farmer's fields, to drainage ditches, or back to the well in accordance with Overland Pass' state-issued permits and landowner agreements. Tables summarizing the anticipated water volumes and sources for the project are provided in the following sections.

The FWS has expressed concerns for the pipeline project crossing waterbodies in the Upper Colorado River Basin and Platte River Basin watersheds. This concern focuses on potential downstream impacts on federally listed species or their critical habitat due to hydrostatic test or dust abatement water

withdrawals from these two watersheds. The major waterbodies within these systems are the Green River and the North and South Platte Rivers. The Green River will be crossed by the pipeline route at MP 59.3, and is part of the Upper Colorado River Basin watershed. This watershed supports four federally listed fish species: Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), bonytail (*Gila elegans*), and humpback chub (*Gila cypha*). The closest designated critical habitat and known occurrences of the four endangered Colorado River System fish occurs a straight-line distance of approximately 75 miles downstream of the project location at the confluence of the Yampa River with the Green River in northwestern Colorado. The *Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin* was established in 1988 by a coalition of federal, state, and private agencies and organizations to mitigate water depletion impacts in the system. This *Recovery Program* requires a one-time payment to the program for annual average depletions of greater than 100-acre-feet. The North Platte River will be crossed by the pipeline route at MP 195.5 and the South Platte River will be crossed by the pipeline route at MPs 413.2, both of which are part of the Platte River Basin watershed. Downstream of the crossing locations of waterbodies within this watershed, the Platte River system provides habitat for six federally listed species: eskimo curlew (*Numenius borealis*), interior least tern (*Sterna antillarum athalassos*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), and western prairie-fringed orchid (*Platanthera praeclara*). Three of these species (interior least tern, piping plover, and whooping crane) could possibly occur within the project area and were discussed in section 2.2.2, 2.2.3, and 2.2.4, respectively, though due to their rarity it is unlikely that they would occur. One of the primary concerns relating to the listed species within these two systems is water depletions.

Overland Pass will minimize the potential for an accidental spill or discharge of any chemical or petroleum product into surrounding watershed systems by implementing its *SPCC Plan*. Additionally, in accordance with the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*, construction equipment fueling and servicing areas will be located at least 100 feet from surface waters and riparian zones and away from slopes that lead to those zones.

Impacts to fisheries could result from a pipeline rupture beneath a waterbody crossing after pipeline operation begins. If a pipeline rupture were to occur beneath a waterbody crossing during pipeline operation, the natural gas liquids would vaporize once released from pressure and could percolate through the soil and sediments underlying the stream, rise through the water column of the stream, and rapidly dissipate into the atmosphere. The potential outcome would depend on the volume of natural gas liquids released, the proximity of the pipeline to the river bed, and whether an ignition source is available. A pipeline break and subsequent ignition could result in soil, sediment, and debris being thrown from the area of the break, destruction of streambank vegetation, or destruction of nearby individual fish species. For a less severe release, the natural gas liquids could displace oxygen within the interstitial water of the sediments, resulting in temporary hypoxia within the sediments. As natural gas ascended through the water column, it could displace oxygen, possibly producing hypoxia conditions in the immediate vicinity of the release and for some distance downstream. Fish in the vicinity of a natural gas release could also be impacted by temporary hypoxia. Considering the narrow width of the majority of the waterbodies that would be crossed and their relatively shallow depth, most of the natural gas liquids would vaporize once they are no longer under pressure and be rapidly released to the atmosphere. Any change in water chemistry or quality would be minor. Because fish are mobile, they would have the ability to avoid or leave the areas with unfavorable environmental conditions resulting from such a release. Furthermore, to minimize impacts if a pipeline rupture were to occur beneath a waterbody crossing during pipeline operation, Overland Pass will install block and/or check valves on either side of waterbodies 100 feet wide or greater at the normal high water mark.

2.6.1 Hydrostatic Testing

Overland Pass will verify the integrity of the pipeline before placing it into service by conducting a series of hydrostatic tests. These tests involve filling the pipeline with water, pressurizing it, and then verifying that the pipeline maintains pressure for a specified period of time. It is expected that the majority of the water for testing the pipeline will be taken from surface waters, including the Hams Fork River, Blacks Fork River, Green River, Flaming Gorge Reservoir, North Platte River, Medicine Bow River, Laramie River, and the South Platte River. However, if surface waters are not sufficient, water will be obtained from permitted groundwater sources. Table 2.6.1-1 identifies the sources and volumes of water needed to complete hydrostatic testing of the Overland Pass Pipeline.

TABLE 2.6.1-1

Currently Proposed Hydrostatic Test Water Volumes and Sources for the Overland Pass Pipeline Project

Test Section	Start MP	End MP	Volume of Water (approximate gallons) [a]	Potential Water Sources
Spread 1	0.0a	147.0	5,985,000	Hams Fork Blacks Fork Green River / Flaming Gorge Reservoir
Spread 2	147.0	281.0	9,020,000	North Platte River Medicine Bow River Laramie River
Spread 3	281.0	438.0	10,501,000	Laramie River South Platte River
Spread 4	438.0	591.0	10,223,000	Water Wells
Spread 5	591.0	749.4	10,590,000	Storage Ponds
		Total	46,319,000	

[a] The volumes of water identified in this table are preliminary, more defined numbers will be provided upon completion of the *Hydrostatic Test Plan*.

Following completion of the hydrostatic test, surface water will be discharged to the same water source, or another water source with the same water quality designation (e.g., 2AB to 2AB). Hydrostatic test water will be discharged directly to surface waters using an energy dissipating device such as a splash pup, or discharged to an upland location through a filter bag. All hydrostatic test water discharges will be completed in compliance with applicable state hydrostatic test discharge permits and landowner agreements to minimize erosion. Overland Pass is developing a *Hydrostatic Test Plan*, which will address the procedures for hydrostatic test water appropriations and discharges. The *Hydrostatic Test Plan* will be submitted to the FWS upon completion.

The appropriation of large volumes of hydrostatic test water from surface water sources could temporarily affect the biological uses of the resource if the diversions constitute a large percentage of the source's total flow or volume. The diversion of large volumes of water from waterbodies could also result in the temporary loss of habitat, changes in water temperature and dissolved oxygen levels, and entrainment or impingement of fish or other aquatic organisms. Overland Pass will minimize the potential effects of hydrostatic testing on surface water resources by adhering to the measures in its *Stream Crossing and Wetland Protection Plan* and *Hydrostatic Test Plan*. These measures include screening intake hoses to prevent the entrainment of fish and other aquatic organisms and regulating the rate of withdrawal of hydrostatic test water to avoid adverse impact on aquatic resources or downstream flows. Overland Pass will be testing only new pipe and no chemicals will be added to the water during hydrostatic testing, unless the discharge permit stipulates otherwise.

Overland Pass plans to discharge hydrostatic test water withdrawn from surface waters to upland locations using dewatering structures (e.g., lined haybale structure) to minimize erosion. To comply with Department of Transportation safety requirements for NGL pipelines, a block and check valve must be installed on either side of major river crossings (100-foot-wide or larger rivers) to prevent flow of NGLs from the pipeline into the river in the event of a rupture. Therefore, due to the check valve, hydrostatic test water withdrawn from surface water will not be able to flow back to the waterbody from where it was withdrawn. Overland Pass will screen intake water to minimize the possibility of introducing nuisance aquatic species into other watersheds.

Hydrostatic testing for the various test sections is currently planned to occur over a multiple-day period. The actual duration of hydrostatic testing for a given test section will be dependent on the rate of withdrawal and the section length, which will be as short as possible. Overland Pass will provide the FWS with its *Hydrostatic Test Plan.* Although the FWS monitors individual depletions from the Upper Colorado and Platte River systems, depletions are often converted into net annual water depletions from the systems. The FWS generally considers a withdrawal to be a depletion if water removed from the system during a month is not returned to the system during the same month. Since the water will not be returned to the system but will be discharged upland, hydrostatic testing will constitute a consumptive use. Under the ESA, the FWS requires Section 7 consultation be initiated on all water depletions from the Platte River and Colorado River systems. When Overland Pass appropriates surface waters for hydrostatic testing, Overland Pass will not withdraw the hydrostatic test water from waterbodies at a rate that would measurably alter the river's flow. Discharges will be completed as quickly as possible, but will be governed by the volume of water in a test section and the discharge rate.

2.6.2 Horizontal Directional Drills

Overland Pass plans to cross major perennial rivers in Wyoming and Colorado (i.e., Green River, Medicine Bow River, South Platte River) using the horizontal directional drill (HDD) construction technique to avoid in-stream impacts. An HDD may also be used to cross the Cheyenne Hub pipeline corridor in Wyoming at approximate MP 330.0. Geotechnical investigations will help determine whether or not Overland Pass could attempt HDD at the three river crossings and the Cheyenne Hub. The amount of water required for the HDD activities is estimated to be up to 1 million gallons total (3.1 acre-feet) for the duration of each drill, which are each anticipated to last 6 to 8 weeks. An additional 88,000 gallons (0.3 acre-feet) will be required to perform preliminary testing operations prior to and after installation, and this amount is still being finalized. Water for this purpose will be sourced from the rivers and will be used in the drilling mud. There are no anticipated return water discharges from the HDD activities; and therefore these withdrawals will constitute a consumptive use. Table 2.6.2-1 identifies the estimated volumes of water that will be required per HDD.

TABLE 2.6.2-1
Volumes of Water Required for Pre-testing Horizontal Directional Drill Segments for the Overland Pass Pipeline Project

Waterbody	Volume (gallons)	Source
Green River	1,088,000	Green River
Medicine Bow River	1,088,000	Medicine Bow
Cheyenne Hub	1,088,000	To Be Determined
South Platte River	1,088,000	South Platte River
Total:	**4,352,000**	

2.6.3 Dust Control

The total amount of water that will be used for dust control, stabilization of the topsoil pile, and prevention of soil pulverization is yet to be finalized. However, table 2.6.3-1 identifies the preliminary estimates of water volumes per spread that will be required for dust control.

TABLE 2.6.3-1
Volumes of Water Required for Dust Control for the Overland Pass Pipeline Project

Spread	Volume (gallons)	Source
Spread 1	6,920,000	To Be Determined
Spread 2	6,920,000	To Be Determined
Spread 3	3,100,000	To Be Determined
Spread 4	3,100,000	To Be Determined
Spread 5	2,300,000	To Be Determined
Total:	**22,340,000**	

Overland Pass estimates to use two water trucks per spread (with 5 spreads) being utilized 50 percent of the time for these activities during construction.

3.0 BLM SENSITIVE SPECIES

The BLM maintains Sensitive Species Lists that identify rare or protected species of concern to the BLM in a given state. The Kemmerer, Rock Springs, and Rawlins BLM field offices were consulted in order to narrow the lists to species with the potential to occur along the proposed Overland Pass Pipeline route. In addition to the federally listed endangered or threatened species identified by the FWS, consultations with the BLM field offices identified 43 BLM sensitive species with the potential to occur along the proposed route: 7 mammals, 16 birds, 1 reptile, 2 amphibians, 5 fish, and 12 plants.

The 41 sensitive species identified by the BLM as potentially occurring along the proposed Overland Pass pipeline route are described below. In some cases, species are discussed together due to similar habitats or traits.

3.1 MAMMALS

3.1.1 Townsend's Big-eared Bat, Spotted Bat, and Fringed Myotis

The Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), and fringed myotis (*Myotis thysanodes*) are listed as BLM sensitive species in Wyoming. The fringed myotis is also a FS sensitive species. The Townsend's big-eared bat is found in caves or abandoned mines located within salt desert scrub, sagebrush steppe, and pinyon-juniper woodland communities. The spotted bat is found on cliff faces, in canyons, riparian areas, and basin prairie shrub habitats. The fringed myotis is found in ponderosa pine woodlands and salt desert shrub communities at elevations up to 7,500 feet.

The potential effects of construction on these bat species include loss of shelter and roosting habitats due to vegetation clearing. The clearing and removal of vegetation could also reduce cover and forage habitat for the bats. Construction activities and noise could temporarily drive these species away from the construction area and adjacent habitats. Depending on the season, construction activities could disrupt the maternity colonies on or adjacent to the construction right-of-way.

Townsend's big-eared bat, spotted bat, and fringed myotis have been identified as having the potential to occur on federal lands within the project area based on consultations with the BLM and FS. Incidental sightings of the Townsend's big-eared bat, spotted bat, and fringed myotis will be recorded during other survey efforts in accordance with the *Sensitive Species Survey Plan.* Although construction could impact individuals, Overland Pass will limit the extent of potential impacts while constructing by avoiding preferred bat roosting habitats (e.g., caves and abandoned mines) and by implementing best management practices (BMPs) identified in project plans including, but not limited to, the *Soil Stabilization and Restoration Plan* and *Steam Crossing and Wetland Protection Plan.* Only minor impacts on these species in the project area are expected, and no impacts on bats at a community or regional level are anticipated as a result of the project. Much of the project (90 percent) will be constructed adjacent to or within previously disturbed areas. Additionally, because vegetation cover and forage habitats affected by construction are relatively abundant in the areas adjacent to the construction right-of-way, the small numbers of bats displaced during construction will relocate, either temporarily or permanently, to suitable habitat nearby. Following construction, areas of potential foraging habitat will be restored to preconstruction conditions.

3.1.2 Pygmy Rabbit

The pygmy rabbit (*Brachylagus idahoensis*) is a BLM sensitive species in Wyoming. This species is generally found in areas on deep soils with tall, dense sagebrush which they use for cover and food. Extensive, well-used runways interlace the sage thickets and provide travel and escape routes. Dense stands of big sagebrush along streams, roads, and fencerows provide dispersal corridors for pygmy rabbits. The pygmy rabbit is the only native leporid that digs burrows. They use burrows more in the winter for thermal cover than at other times of the year. Burrows are usually located on slopes at the base of sagebrush plants, and face north to east. Pygmy rabbits rarely venture further than 30 meters from their burrows. Pygmy rabbits may be active at anytime of day; however, they are generally most active at dusk and dawn. They usually rest near or inside their burrows during midday.

Potential effects of construction to the pygmy rabbit may include temporary loss of forage and shelter due to vegetation clearing, collapsing of burrows, and temporary disruption of foraging and resting activities due to disturbance associated with construction equipment. Direct mortality of pygmy rabbits could result if active burrows are occupied at the time of construction. The pygmy rabbit's reproductive season occurs from February to May. If construction occurs toward the end of the pygmy rabbit's reproductive season, most pygmy rabbits would be expected to be mobile and able to avoid construction traffic; however, some individual pygmy rabbits could possibly be injured or killed during construction.

The pygmy rabbit has been identified through consultations with the BLM as having the potential to occur on BLM lands throughout the Great Basin within the project area. In areas of suitable habitat for the pygmy rabbit occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan*. The results of these surveys will be submitted to the BLM upon completion. Although construction could disturb individual pygmy rabbits, Overland Pass will limit the extent of potential impacts while constructing through potential habitat by implementing general protection measures and BMPs identified in project plans including, but not limited to, the *Soil Stabilization and Restoration Plan* and *Steam Crossing and Wetland Protection Plan.* Following construction, areas of potential habitat will be restored to preconstruction conditions. Additionally, Overland Pass will conduct monitoring for the pygmy rabbit pre-construction and for 2 years post-construction at selected habitat sites as identified by the BLM and detailed in a species-specific post-construction monitoring plan. Although the project may adversely impact individuals, by implementing these measures it is not likely to result in a loss of viability, nor cause a trend to federal listing or a loss of species viability rangewide.

3.1.3 Swift Fox

The swift fox (*Vulpes velox*) is listed as a BLM sensitive species in Wyoming, and is listed as a sensitive species by the FS. The swift fox is an animal of grasslands and occupies short grass prairies over most of the Great Plains. They use dens or burrows when they are inactive during the winter, either dug by themselves or made by other mammals (i.e., prairie dogs) and enlarged by foxes. The dens are typically located in sandy soil on high ground such as hill tops in open prairies, along fencerows, or in plowed fields. Swift fox breeding occurs in January and February, and young are born in March and April. Young will remain in the parental den until August when they move independently to nearby dens until dispersal in September.

Impacts on the swift fox could include temporary loss of potential habitat, short-term disruption of foraging activity, and permanent loss of dens. Depending on the timing of construction, the project could potentially cause injury or direct mortality to young. If construction occurs after June 1, juveniles would be expected to be emerged from their natal dens and would also be expected to relocate away from dens located on the right-of-way. The area within the construction right-of-way, including temporary extra workspaces, would not be available for burrow excavation or foraging during construction. Dens within the right-of-way, particularly along the trenchline, would likely be permanently lost.

The swift fox has been identified as having the potential to occur on federal lands in southeastern/southcentral Wyoming and eastern Colorado within the project area based on consultations with the BLM and FS. In areas of suitable habitat for the swift fox occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan*. If an active natal den is identified within the construction right-of-way and construction will occur prior to June 1, Overland Pass will evaluate the potential for a change to the right-of-way configuration (e.g., reduce the width of the right-of-way) to avoid the den. If the natal den cannot be avoided, Overland Pass will monitor the den and avoid construction in the area until the juveniles have emerged and are able to relocate from the right-of-way. If an active non-natal den is identified within the construction right-of-way and it cannot be avoided, Overland Pass will contact the BLM or FS, as appropriate, to identify necessary site-specific mitigation measures. For an active natal or non-natal den identified outside of the construction right-of-way, the den will be avoided, and silt fence will be installed along the right-of-way to further protect the area from construction activities. Although construction could impact individuals, Overland Pass will limit the extent of potential impacts while constructing by implementing BMPs identified in project plans including, but not limited to, the *Soil Stabilization and Restoration Plan* and *Steam Crossing and Wetland Protection Plan*. Much of the project (90 percent) will be constructed adjacent to or within previously disturbed areas. Additionally, because vegetation cover and forage habitats affected by construction are relatively abundant in the areas adjacent to the construction right-of-way, the small numbers of foxes displaced during construction will relocate, either temporarily or permanently, to suitable habitat nearby. Following construction, areas of potential foraging habitat will be restored to preconstruction conditions. Although the project may adversely impact individuals, by implementing these measures it is not likely to result in a loss of viability, nor cause a trend to federal listing or a loss of species viability rangewide.

3.1.4 Wyoming Pocket Gopher

The Wyoming pocket gopher (*Thomomys clusius*) is a BLM sensitive species in Wyoming. It is the only species of mammal that occurs exclusively in Wyoming, and is found in southeastern Sweetwater County and southwestern Carbon County. The Wyoming pocket gopher uses upland drier ridge tops, gravelly loose soils, and greasewood habitats. Little is known about the life history of this species, although in general, its habits are probably similar to other species of intermountain pocket gophers.

The potential effects of construction through Wyoming pocket gopher habitat may include temporary loss of forage and shelter due to vegetation clearing, collapsing of burrows, and temporary disruption of foraging and resting activities due to disturbance associated with construction equipment. Direct mortality of gophers could result if active burrows are occupied at the time of construction.

The Wyoming pocket gopher has been identified as having the potential to occur on BLM lands in Carbon and Sweetwater counties based on consultations with the BLM. Incidental sightings of the Wyoming pocket gopher will be recorded during other survey efforts in accordance with the *Sensitive Species Survey Plan.* Although construction could impact individuals, Overland Pass will limit the extent of potential impacts while constructing by implementing BMPs identified in project plans including, but not limited to, the *Soil Stabilization and Restoration Plan* and *Steam Crossing and Wetland Protection Plan*. Much of the project (90 percent) will be constructed adjacent to or within previously disturbed areas. Additionally, because vegetation cover and forage habitats affected by construction are relatively abundant in the areas adjacent to the construction right-of-way, the small numbers of gophers displaced during construction will relocate, either temporarily or permanently, to suitable habitat nearby. Following construction, areas of potential foraging habitat will be restored to preconstruction conditions. Only minor impacts on these species in the project area are expected, and no impacts on the Wyoming pocket gopher at a community or regional level are anticipated as a result of the project.

3.1.5 White-tailed Prairie Dog

The white-tailed prairie dog (*Cynomys leucurus*) is a BLM sensitive species in Wyoming. This species is also of concern to the BLM because prairie dog colonies can support black-footed ferrets (see section 2.1.1). Prairie dogs live in colonies and inhabit dry, flat, open grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle. Fine to medium textured soils are preferred, presumably because burrows tend to retain their shape and strength better than in coarse, loose soils.

The potential effects of construction through a prairie dog colony may include temporary loss of forage and shelter due to vegetation clearing, collapsing of burrows, and temporary disruption of foraging and resting activities due to disturbance associated with construction equipment. Direct mortality of prairie dogs could result if active burrows are occupied at the time of construction. The reproductive season for the white-tailed prairie dog occurs from late March, when females emerge from hibernation, to early June. If construction occurs later in the prairie dog's reproductive season, most prairie dogs would be expected to be mobile and able to avoid construction traffic; however, some individual prairie dogs could possibly be injured or killed during construction.

The white-tailed prairie dog has been identified as having the potential to occur in grassland habitats on BLM lands within the project area based on consultations with the BLM. In areas of suitable habitat for white-tailed prairie dog occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan*. If prairie dog towns over 200 acres in size in non-block cleared areas are identified, surveys will be conducted to determine if sufficient burrow density exists to support federally endangered black-footed ferrets. If so, black-footed ferrets surveys will be done in accordance with FWS protocol (see section 2.1.1). Where active colonies are identified within or adjacent to the project area, flagging or exclusion fencing will be placed along the edge of the right-of-way to minimize impact to the colony. If possible, Overland Pass will avoid siting staging areas, temporary workspaces, or pipeyards within active colonies. Following construction, areas of potential habitat will be restored to preconstruction conditions.

3.2 BIRDS

3.2.1 Raptors

The following BLM-listed sensitive and ESA raptor species have been identified by the BLM as potentially occurring within the proposed project area: the bald eagle (*Haliaeetus leucocephalus*, previously addressed above in section 2.2.1), burrowing owl (*Athene cunicularia*, addressed separately below), ferruginous hawk (*Buteo regalis*), northern goshawk (*Accipiter gentiles*), and peregrine falcon (*Falco peregrinus*). All raptors and their nests are protected from take or disturbance under the Migratory Bird Treaty Act (16 USC, § 703 *et seq.*). Bald eagles and their nests are also protected under the Bald and Golden Eagle Protection Act, amended in 1978 (16 USC, § 668-668d *et seq.*).

Habitat types used by raptors that occur along the project include sagebrush steppe, short grass prairie, mixed grass prairie, juniper woodland, aspen woodland, mountain mahogany, palustrine, palustrine scrub-shrub, desert scrub, wetland, and pine woodland communities. Raptors use various hunting, nesting, migration, and wintering areas within these habitat types. Table 3.2.1-1 provides specific habitat and location information for each special status species.

TABLE 3.2.1-1

Special Status Raptor Species Information

Species	Nesting Habitat	Foraging Habitat	Wintering Habitat	Seasonal occurrence in project area	Potential location in project area
Bald Eagle *Haliaeetus leucocephalus*	Dead limbs of tall trees near water	Shorelines and surface waters; below dams and reservoirs	Rivers, lakes, marshes, semi-deserts, and grasslands near prairie dog towns	Year-round	Throughout project area
Burrowing Owl *Athene cunicularia*	Existing small-mammal burrows in cropland or native pasture; natural cavities in rocks	Areas of tall vegetation, cropland, pasture, prairie dog colonies and fallow fields	N/A – birds migrate to Mexico and Central America	Spring, early fall	Throughout project area
Ferruginous Hawk *Buteo regalis*	Open areas of grasslands and arid shrub country; trees along waterways	Open countryside largely devoid of trees	Open grasslands and arid shrub country	Year-round	Throughout project area
Northern Goshawk *Accipter gentilis*	Tree tops in old growth forests	Forests, open meadows, streams, tundra, estuaries	Tree tops in old growth forests	Unlikely within project area	Mature pinyon-juniper habitats
Peregrine Falcon *Falco peregrinus*	Cliffs	Coniferous and riparian forests adjacent to nesting sites	N/A – birds migrate to east coast of U.S. and South America	Spring, early fall	Throughout project area

Potential impacts on raptors caused by construction of the project could include disruption of foraging and breeding activities and loss of foraging and breeding habitats. Construction activities will limit raptor foraging activities within the construction right-of-way because foraging habitat will be temporarily removed. The greatest potential impact on raptors will be the lowering of reproductive success through the disruption of nesting or breeding activities. Construction near occupied nests along the corridor during brood rearing could result in nest abandonment; overheating, chilling, or desiccation of unattended young causing nestling mortality; premature fledging; and ejection of eggs or young from the nest.

Depending on the timing of construction, the proposed project could also potentially impact raptors during their breeding season by temporarily decreasing the amount of nesting habitat available and destroying nests.

The BLM provided preliminary information for project planning, including time and spatial buffers for occupied raptor nests. As indicated in table 3.2.1-2, seven special status species raptors were identified as having BLM-identified spatial buffers. Associated FS-identified spatial buffers for raptor nests occurring on the PNG are also provided.

TABLE 3.2.1-2

Potentially Occurring Special Status Raptor Species

Species	Wyoming BLM		Pawnee National Grasslands	
	Spatial Buffer (miles)	Constraint Period	Spatial Buffer (miles)	Constraint Period
Bald Eagle	1.00	Feb. 1 to Aug. 15	1.00	Feb. 1 to Aug. 15
Burrowing Owl	0.75	Feb. 1 to July 31	0.25	March 1 to June 30
Ferruginous Hawk	1.00	Feb. 1 to July 31	0.25	March 1 to June 30
Golden Eagle	1.00	Feb. 1 to July 31	0.25	March 1 to June 30
Northern Goshawk	0.75	Feb. 1 to July 31	0.25	March 1 to June 30
Northern Harrier	0.75	Feb. 1 to July 31	0.25	March 1 to June 30
Peregrine Falcon	0.75	Feb. 1 to Aug. 15	0.25	March 1 to June 30
Swainson's Hawk	0.75	Feb. 1 to July 31	0.25	March 1 to June 30

As detailed in the *Sensitive Species Survey Plan*, Overland Pass intends to conduct raptor nest surveys prior to construction in 2007. Overland Pass will adhere to the appropriate measures to protect occupied nest sites identified during the aerial surveys, such as adhering to spatial buffers and seasonal constraints as presented in table 3.2.1-2, unless otherwise permitted by the applicable agencies as determined on a site (nest)-specific basis.

Much of the area that will be impacted by the proposed project has already been disturbed by previous pipeline work; therefore, there will be limited new land disturbance. In general, Overland Pass will minimize impacts on raptors through implementation of BMPs, including but not limited to those in the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*. Along with other applicable measures in the *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* that may minimize potential impacts on raptors, Overland Pass will limit the extent of permanently maintained right-of-way and will restrict vegetation clearing to avoid the nesting season, if possible. Overland Pass has sited the majority of the proposed route adjacent to existing pipeline (90 percent) and roadway corridors to minimize habitat fragmentation and avoid sensitive areas. The project will result in a temporary loss of habitat available to raptors. However, this effect will be mitigated by Overland Pass' proposal to restore disturbed areas following construction and will make them available for use by raptors during the next nesting season following construction. No powerlines associated with aboveground facilities, access roads, or equipment pads will be located within 0.5 mile of occupied raptor nests on federal lands in Wyoming, unless otherwise approved by the appropriate agency. Appropriate protection measures will depend on site-specific variables (e.g., species, nest location, topography, breeding phenology, vegetation).

3.2.2 Burrowing Owl

The burrowing owl (*Athene cunicularia*) is listed as a BLM sensitive species in Wyoming, is listed as a sensitive species and Management Indicator Species by the FS, and is state-listed as threatened in

Colorado. Burrowing owls inhabit open, dry grasslands, deserts, and scrublands characterized by low-growing vegetation. Habitat types used by burrowing owls that occur along the project include sagebrush steppe, sagebrush scrub, and short grass prairie. Burrowing owls are subterranean nesters that typically use burrows made by small mammals, such as prairie dogs.

The potential impacts of the project on burrowing owls may include disturbance of foraging habitat, destruction of occupied burrows, and displacement, injury, or mortality of individuals. Destruction of burrows could result in displacement of owls into less suitable habitats, potentially increasing susceptibility to predation, reducing cover or forage habitat, or reducing reproductive success. Displacement, injury, or direct mortality could result if active burrows are occupied at the time of destruction.

The burrowing owl has been identified as having the potential to occur in grassland habitats on federal lands in Wyoming and Colorado within the project area based on consultations with the BLM and FS. In areas of potential habitat, surveys will be conducted in accordance with the *Sensitive Species Survey Plan*. If occupied burrows are identified during other surveys, the potential for impacts on the burrowing owl will be minimized by adhering to the appropriate spatial and seasonal buffers, unless otherwise permitted by the applicable agencies. The spatial buffer for burrowing owl nests is a 0.75-mile-wide radius and the seasonal buffer is from February 1 to July 31 on BLM lands, and a 0.25-mile-wide buffer from March 1 to June 30 on PNG lands.

3.2.3 Columbian Sharp-tailed Grouse

The Columbia sharp-tailed grouse (*Tympanuchus phasianellus columbianus*) is designated as a sensitive species by the BLM in Wyoming. The year-round range for this species is restricted the Sierra Madre foothills and Washakie Basin of southwest Carbon County. The Columbian sharp-tailed grouse inhabits mid to tall prairie grasslands, upland sagebrush and montane scrub during breeding, and riparian scrub and open coniferous forest in winter.

Potential direct impacts on Columbian sharp-tailed grouse during construction could include displacement of individuals to adjacent habitats or damage to occupied and/or unoccupied nests. If construction were to occur during the nesting season, impacts could also include abandonment of eggs or nestlings, injury to nestlings, destruction of eggs, or mortality of nestlings.

The proposed project does not cross potential habitat for the Columbian sharp-tailed grouse. The nearest potential habitat for the Columbian sharp-tailed grouse occurs over 20 miles south of the proposed project area. Therefore, the proposed project will not impact the Columbian sharp-tailed grouse or its habitat.

3.2.4 Greater Sage Grouse

The greater sage grouse (*Centrocercus urophasianus*) is designated as a sensitive species by the BLM in Wyoming and is also of concern to the FWS. Sagebrush is the primary year-round source of food for the sage grouse. Sagebrush also serves as the critical component in leks (breeding grounds), nesting, feeding sites, brood rearing sites, and wintering grounds. Although the sage grouse typically prefers taller sagebrush plants and stands for nesting and roosting cover, lekking grounds are generally open areas with low, sparse sagebrush, such as swales, meadows, and burned areas. Lekking grounds are generally surrounded by areas of 20 to 50 percent low-height, sagebrush cover. Secondary to sagebrush habitat, sage grouse require wet habitats (i.e., riparian areas, irrigated hay fields, moist wetlands, and wet meadows) to aid in brood rearing.

Potential direct impacts of construction on sage grouse may include the loss of lekking grounds and other sage grouse habitat. Although the project will not result in a permanent loss of habitat along the pipeline right-of-way, based on the condition of the existing right-of-way, the regeneration of sagebrush will likely be slow and could take up to several decades. However, potential impacts on sage grouse habitat will be minimized by locating the right-of-way within previously disturbed areas (i.e., adjacent to existing utility lines and/or roads) to the extent possible. Given the abundant suitable habitat in the general area, it is not likely that the minor, yet long-term loss of habitat along the pipeline right-of-way would affect sage grouse populations in the vicinity of the project.

Depending on the timing of construction, the project could potentially impact sage grouse during lekking activities or brood rearing, and could cause displacement, injury, or direct mortality of individuals. Sage grouse are particularly sensitive to disturbances while they gather on lekking grounds each morning and evening from early March to early May. Construction activities and associated noise occurring in early morning and late afternoon or early evening in the vicinity of lekking grounds could disrupt and potentially displace sage grouse that have gathered for breeding activities. In addition, once breeding activities have concluded, sage grouse hens create their nests on the ground underneath sagebrush plants in proximity to the lekking grounds. The project could potentially impact nesting sage grouse by destroying nests, causing nest abandonment, or causing injury or direct mortality to the young. In addition, brood rearing habitat could potentially be impacted by causing injury or direct mortality to young.

Sage grouse could also be indirectly impacted as individuals flushed or otherwise relocated from construction activities may be required to occupy suitable, but lower quality habitat, or may be more susceptible to predation, either while in lower quality habitat or during relocation to that habitat. However, these factors are not anticipated to result in high levels of mortality as disturbance and movements will be temporary and habitat adjacent to the construction corridor will remain intact.

The greater sage grouse has been identified as having the potential to occur in sagebrush habitats in the following sections of the project area based on consultations with the BLM and historic lek data provided by the WGFD: MPs 0.8a to 4.9a, 10.4 to 12.8, 42.4 to 46.1, 70.0 to 73.4, 90.9 to 95.0, 148.8 to 159.2, and 207.0 to 221.9. In areas of suitable habitat for the greater sage grouse occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan.* Initial comparison to spatial data provided by the WGFD identified 23 leks located within 2 miles of the pipeline route, 3 of which were located within 0.25 mile of the construction right-of-way. The following conservation measures will be implemented based on the location of the active lek identified during the surveys in relation to the project area:

- For an active lek identified by the surveys within 0.25 mile of the construction right-of-way, impacts on the lek and associated nesting habitat will be minimized by avoiding construction between March 1 and July 15, or as otherwise permitted by the appropriate resource agency. No aboveground facilities will be located within 0.25 mile of any identified sage grouse leks. In addition, where the construction right-of-way is within 0.25 mile of a known lek site (active or inactive) impacts on the lek will be minimized by abstaining from blasting activities between March 15 to May 31, unless otherwise permitted by the appropriate resource agency.

- For suitable nesting or brood-rearing habitat associated with an active lek identified by the surveys within 2 miles of the project area, direct impacts on the habitat will be minimized by avoiding construction between March 1 and July 15, or as otherwise permitted by the appropriate resource agency.

- If low-intensity preconstruction (e.g., surveying and staking) work is necessary within 2.0 miles of a known sage grouse lek in Wyoming, activities will only occur between 9:00 a.m. and 6:00 p.m. from March 1 to May 15.

Following construction, the project area will be restored to preconstruction contours and areas of suitable habitat will be restored by broadcast seeding with a seed mix that includes native species and is acceptable to the landowner, local Natural Resource Conservation Service office, or other applicable agencies.

3.2.5 Mountain Plover

The mountain plover (*Charadrius montanus*) is a BLM Sensitive Species in Wyoming and has been identified as a FS Sensitive Species and a MIS by the PNG. The species inhabits prairie grasslands and arid plains and fields, preferring vegetation less than 4 inches in height. The mountain plover most often nests in short grass prairies grazed by prairie dogs, bison, cattle, and pronghorn, overgrazed tallgrass prairies, or fallow fields.

Depending on the timing of construction, the project could potentially impact the mountain plover during its breeding season by temporarily decreasing the amount of nesting habitat available, destroying nests, causing nest abandonment, or causing injury or direct mortality to the young. Mountain plover nesting and brood rearing typically occur between April and July, and based on the *Mountain Plover Survey Guidelines* (FWS, 2002); construction after July 10 will not likely affect mountain plovers. Direct impacts after July 10 will be short-term and associated with habitat disturbance.

Indirect impacts that could occur during construction include the reduction of available forage and shelter due to clearing and the potential increase in the susceptibility of individuals, particularly chicks, to predation due to a lack of vegetation cover along the right-of-way. However, these impacts will be temporary.

The mountain plover has been identified as having the potential to occur in shortgrass habitats on federal lands of Wyoming and Colorado within the project area based on consultations with the BLM and FS. In areas of suitable habitat for the mountain plover occurring within the project area, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan* if construction is planned to begin prior to July 10. If an active mountain plover nest is found, the nest location will be recorded and reassessed immediately before construction if construction is expected to occur between April 10 and July 10. If the nest is still active at that time, construction equipment will be prohibited from working within 0.25 mile of the nest until the young have fledged (7 days post hatching). If a plover family group is identified during surveys or immediately before construction, the group will be monitored by a biologist to determine its use pattern. The area being used by the family group will be marked with signs designating the area as sensitive if the group does not move at least 200 meters from the centerline. Construction equipment will be allowed a one-time pass through the area with the biologist present to monitor plover location and response. Following construction, the project area will be restored to preconstruction conditions. Additionally, Overland Pass will conduct monitoring for the mountain plover for 2 years post-construction at selected sites as identified by the BLM and detailed in a species-specific monitoring plan.

3.2.6 Migratory Birds

The Migratory Bird Treat Act (MBTA), enacted in 1918, and Executive Order 13186 (January 2001) direct federal agencies to consider the effects of agency actions and plans on migratory birds, with emphasis on species of concern. Migratory birds are species that nest in the United States and Canada

during the summer, and migrate south to the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. The MBTA prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulation. The BLM has identified the following migratory bird sensitive species as having the potential to occur along the pipeline route in Wyoming: Baird's Sparrow (*Ammodramus bairdii*), Brewer's sparrow (*Spizella breweri*), loggerhead shrike (*Lanius Iudovicianus*), long-billed curlew (*Numenius americanus*) sage sparrow (*Amphispiza belli*), sage thrasher (*Oreoscoptes montanus*), trumpeter swan (*Cygnus buccinator*), and white-faced ibis (*Plegadis chihi*). The Brewer's sparrow, loggerhead shrike, long-billed curlew, and white-faced ibis are also designated as sensitive species by the FS.

In general, Overland Pass will minimize impacts on migratory birds through implementation of BMPs, including but not limited to those in the Overland Pass Pipeline *Soil Stabilization and Restoration Plan, Stream Crossing and Wetland Protection Plan*, and through appropriate routing and facility siting. Along with other applicable measures in the *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* that may minimize potential impacts on migratory birds, Overland Pass will limit the extent of permanently maintained right-of-way and will restrict vegetation clearing to avoid the nesting season, as possible. Overland Pass has sited the majority of the proposed route adjacent to existing pipeline and roadway corridors to minimize habitat fragmentation and avoid sensitive areas. The project will result in a temporary loss of habitat available to migratory birds. However, this effect will be mitigated by Overland Pass' proposal to restore disturbed areas following construction and will make them available for use by migratory birds during the next nesting season following construction.

3.3 REPTILES

3.3.1 Midget Faded Rattlesnake

The midget faded rattlesnake (*Crotalus viridis concolor*) is listed as a BLM sensitive species in Wyoming. This species is found primarily on the ground, but will occasionally climb into trees and shrubs. When inactive during cold weather, individuals occupy mammal burrows, crevices, or caves where they sometimes congregate in large numbers.

The potential effects of construction on the midget fades rattlesnake may include temporary loss of shelter due to vegetation clearing, displacement of individuals into adjacent habitats, and potential injury to or death of individuals unable to leave the area during construction. Additionally, the project could indirectly increase the susceptibility of individuals to predation due to a lack of vegetation cover and destruction of burrows along the construction right-of-way.

The midget faded rattlesnake has been identified as having the potential to occur on BLM lands within the project area in sagebrush habitats in the Green River Formation of southwestern Wyoming based on consultations with the BLM. When suitable habitat for the midget faded rattlesnake occurs within the project area, incidental sightings will be recorded during other survey efforts in accordance with the *Sensitive Species Survey Plan*. If this species is documented within the construction right-of-way, biological monitors will clear the construction right-of-way of the midget faded rattlesnake prior to construction and install exclusion fencing to a depth of 4 inches into the ground in the area of suitable habitat containing the population to keep the rattlesnakes from entering the construction right-of-way during construction. Following construction, the right-of-way will be restored to preconstruction conditions.

3.4 AMPHIBIANS

3.4.1 Great Basin Spadefoot Toad

The Great Basin spadefoot toad (*Spea intermontana*) is listed as a BLM sensitive species in Wyoming. The Great Basin spadefoot toad inhabits pinyon-juniper woodlands, sagebrush steppe and scrub communities, and semidesert shrublands. This species ranges from the bottoms of rocky canyons to broad dry basins and stream floodplains and digs burrows in loose soils or uses the burrows of other animals.

The potential effects of construction on the Great Basin spadefoot toad may include temporary loss of shelter due to vegetation clearing, displacement of individuals into adjacent habitats, and potential injury to or death of individuals unable to leave the area during construction. Additionally, the project could indirectly increase the susceptibility of individuals to predation due to a lack of vegetation cover and destruction of burrows along the construction right-of-way.

The Great Basin spadefoot toad has been identified as having the potential to occur in woodland, sagebrush, and shrubland habitats on BLM lands within the project area based on consultations with the BLM. When suitable habitat for the Great Basin spadefoot toad occurs within the project area, incidental sightings will be recorded during other survey efforts in accordance with the *Sensitive Species Survey Plan*. If a population is identified during construction, biological monitors will clear the construction right-of-way of the Great Basin spadefoot toad prior to construction and install exclusion fencing to a depth of 4 inches into the ground in the area of suitable habitat containing the population to keep the toad from entering the construction right-of-way during construction. Following construction, the right-of-way will be restored to preconstruction conditions.

3.4.2 Northern Leopard Frog

The northern leopard frog (*Rana pipiens*) is listed as a BLM sensitive species in Wyoming and a FS sensitive species by Region 2. This species inhabits springs, slow streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes. It usually prefers permanent water with rooted aquatic vegetation. In summer, the northern leopard frog commonly inhabits wet meadows and fields, and takes cover underwater, in damp niches, or in caves when inactive. It is found throughout Wyoming and Colorado, excluding the very southeastern corner of Colorado.

The potential effects of construction on the northern leopard frog include temporary loss of shelter due to vegetation clearing, displacement of individuals into adjacent habitats, and potential injury to or death of individuals unable to leave the area during construction. Additionally, the proposed project could indirectly increase the susceptibility of individuals to predation due to a lack of vegetation cover along the construction right-of-way.

The northern leopard frog has been identified as having the potential to occur near springs, slow streams, and lakes in Wyoming on BLM lands within the project area based on consultations with the BLM. In areas of suitable habitat for northern leopard frog occurring within the project area, incidental sightings will be recorded during other survey efforts in accordance with the *Sensitive Species Survey Plan*. If a population is identified during construction, biological monitors will clear the construction right-of-way of the northern leopard frog prior to construction and install exclusion fencing to a depth of 4 inches into the ground in the area of suitable habitat containing the population to keep the frog from entering the construction right-of-way during construction. Following construction, the right-of-way will be restored to preconstruction conditions.

3.5 FISH

Six BLM sensitive fish species have been identified as potentially occurring within the project area: the bluehead sucker, Colorado River cutthroat trout, flannelmouth sucker, leatherside chub, mountain sucker, and the roundtail chub. The Colorado River cutthroat trout is also a FS sensitive species. Spawning periods and known populations for the six BLM sensitive fish species are identified in table 3.5-1.

TABLE 3.5-1

Bureau of Land Management Sensitive Fish Species and Spawning Periods

	Representative Game Fish Species and Spawning Periods [a]					
Name	Bluehead Sucker mid-late summer	Colorado River Cutthroat Trout late spring – early summer	Flannelmouth Sucker spring – early summer	Leatherside Chub summer	Mountain Sucker late spring – early summer	Roundtail Chub late spring – early summer
Hams Fork River	X		X		X	X
Blacks Fork River	X		X		X	X
Green River	X	X [b]	X	X	X	
Bitter Creek					X	
Bear Creek				X		

[a] Source: NatureServe Explorer – http://www.natureserve.org/explorer

[b] The Colorado River cutthroat trout is a BLM sensitive species and a FS sensitive species. However, the population of Colorado River cutthroat trout in the Green River is stocked by the WGFD as a sport fishery, and therefore is not managed as a native population (WGFD, 2005).

The bluehead sucker (*Catostomus discobolus*) is found in a wide variety of areas from headwater streams to large rivers. It is absent in areas of standing water, as it requires water of moderate to fast velocity. The bluehead sucker prefers a rock substrate, and in areas where the river substrate is composed of sand, bluehead suckers are found where rock shoals created by talus slopes reach into the water. The Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) is found in cool, clear waterbodies with well-vegetated streambanks. These trout are adapted to relatively cold water and thrive at high elevations. The flannelmouth sucker (*Catostomus latipinnis*) occurs only in the Colorado River basin and inhabits a variety of river habitats including riffles, runs, eddies, and backwaters. The leatherside chub (*Gila copei*) is found in clear, cool streams and pools within the Bear Snake and Green River basins. The mountain sucker (*Catostomus platyrynchus*) inhabits smaller rivers and streams with gravel, sand, and mud bottoms. Wyoming specimens are found in areas of undercut banks, eddies, small pools, and in areas of moderate current. The roundtail chub (*Gila robusta*) is restricted to the Colorado River basin in the U.S. and is found in warm streams and larger rivers, usually in habitats with slow-flowing water adjacent to areas of faster water. Adults prefer pools associated with undercut banks while young fish occur in shallower water with lower velocities.

Potential effects of in-stream construction on these fish species include potential displacement of individuals from the construction area due to turbidity and sedimentation, and injury or direct mortality of individuals within the project area. Depending on the timing of construction activities, in-stream construction could adversely affect fish eggs and juvenile fish survival in the immediate area. Construction could further impact the fish habitat by increasing erosion along streambanks and turbidity

levels within the waterbody due to clearing and grading of vegetation during construction, and temporarily altering water temperature and nutrients.

To minimize impacts on these sensitive fish species, waterbody crossings will be completed in accordance with the *Stream Crossing and Wetland Protection Plan*. To minimize impacts associated with sedimentation and turbidity during open-cut waterbody crossings, Overland Pass will try to store trench spoil a minimum of 10 feet from the edge of the waterbody; sediment barriers such as silt fence or strawbales will be installed during clearing to prevent or significantly reduce runoff into a stream; rootstock will be left in the ground where possible; and construction will be completed as quickly as possible to shorten the duration of sedimentation and turbidity. In addition, Overland Pass will adhere to the appropriate construction timing windows to avoid or minimize potential sedimentation and turbidity impacts on aquatic species during spawning seasons.

Overland Pass proposes to evaluate the potential for using the horizontal direction drill (HDD) method to cross the following rivers: Green River, Medicine Bow River, and South Platte River. Typically the HDD method takes longer than open-cut crossing methods. As described in section 1.5.2.3 of EIR 1, the HDD method will involve drilling a hole under the waterbody and installing a prefabricated segment of pipe through the hole. Drilling will be achieved using a powered drill bit. The drilling fluid, commonly referred to as mud, will be a mixture of water and bentonite (a naturally occurring clay mineral), which will be pumped into the drill hole throughout the drilling process. Water, the main ingredient of drilling mud, will be obtained from the waterbody during drilling or will be trucked in from another source. Ideally, horizontal directional drilling involves no disturbance to the bed or bank of the waterbody being crossed. However, if a natural fracture or weak area in the ground is encountered, an unexpected release of drilling mud to the environment could occur (frac-out). A drilling mud release to a waterbody will be difficult to contain because mud is quickly dispersed into the water and carried downstream. In the event of a release to a waterbody, an attempt may be made to plug the fault by adding thickening agents to the drilling mud, such as additional bentonite, cotton seed hulls, or other non-hazardous materials that are compatible with the drill equipment being used. Overland Pass is developing a *Horizontal Directional Drilling Inadvertent Release Control Plan* that describes the prevention, detection, monitoring, notification, and corrective action procedures in the event of an inadvertent release of drilling fluid should the HDD method be used (see section 1.5.3 of EIR 1). In most cases, horizontal directional drilling can still be completed in spite of a drilling mud release. However, in some situations, horizontal directional drilling may entirely fail and the waterbody may not be able to be crossed using this method. In cases where drilling fails, construction will be completed using one of the alternative crossing methods described in section 1.5.2.3 of EIR 1. Overall, despite the potential for frac-out, the HDD crossing method generally involves less of an adverse affect on waterbodies than conventional crossing methods.

Overland Pass will minimize the potential for an accidental spill or discharge of any chemical or petroleum product into surrounding watershed systems by implementing the *SPCC Plan*. In accordance with the *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*, construction equipment fueling and servicing areas will be located at least 100 feet from surface waters. Additionally, hazardous materials, including chemicals, fuels, and lubricating oils, will not be stored within 500 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority.

To minimize impacts associated with streambank erosion during construction, Overland Pass will use mats and pads to support equipment that must cross waterbodies or work in saturated soils adjacent to waterbodies. In accordance with the *Stream Crossing and Wetland Protection Plan* and where topography allows, Overland Pass will attempt to locate temporary extra workspaces at least 10 feet from the edge of flowing waterbodies, and will limit clearing of vegetation between extra workspaces and the edge of each waterbody to the authorized construction right-of-way.

Following completion of construction at waterbodies, Overland Pass will immediately stabilize the construction site, including the streambanks, and return all project areas to preconstruction contours. Additionally, buffer zones of undisturbed vegetation along the waterbodies will be maintained in accordance with the *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*.

Impacts to fisheries could result from a pipeline rupture beneath a waterbody crossing after pipeline operation begins. If a pipeline rupture were to occur beneath a waterbody crossing during pipeline operation, the natural gas liquids would vaporize once released from pressure and could percolate through the soil and sediments underlying the stream, rise through the water column of the stream, and rapidly dissipate into the atmosphere. The potential outcome would depend on the volume of natural gas liquids released, the proximity of the pipeline to the river bed, and whether an ignition source is available. A pipeline break and subsequent ignition could result in soil, sediment, and debris being thrown from the area of the break, destruction of streambank vegetation, or destruction of nearby individual fish species. For a less severe release, the natural gas liquids could displace oxygen within the interstitial water of the sediments, resulting in temporary hypoxia within the sediments. As natural gas ascended through the water column, it could displace oxygen, possibly producing hypoxia conditions in the immediate vicinity of the release and for some distance downstream. Fish in the vicinity of a natural gas release could also be impacted by temporary hypoxia. Considering the narrow width of the majority of the waterbodies that would be crossed and their relatively shallow depth, most of the natural gas liquids would vaporize once they are no longer under pressure and be rapidly released to the atmosphere. Any change in water chemistry or quality would be minor. Because fish are mobile, they would have the ability to avoid or leave the areas with unfavorable environmental conditions resulting from such a release. Furthermore, to minimize impacts if a pipeline rupture were to occur beneath a waterbody crossing during pipeline operation, Overland Pass will install block and/or check valves on either side of waterbodies 100 feet wide or greater at the normal high water mark.

3.5.1 Hydrostatic Testing

Overland Pass will verify the integrity of the pipeline before placing it into service by conducting a series of hydrostatic tests. These tests involve filling the pipeline with water, pressurizing it, and then verifying that the pipeline maintains pressure for a specified period of time. It is expected that the majority of the water for testing the pipeline will be taken from surface waters, including the Hams Fork River, Blacks Fork River, Green River, Flaming Gorge Reservoir, North Platte River, Medicine Bow River, Laramie River, and the South Platte River. However, if surface waters are not sufficient, water will be obtained from permitted groundwater sources. Table 3.5.1-1 identifies the sources and volumes of water needed to complete hydrostatic testing of the Overland Pass Pipeline.

TABLE 3.5.1-1

Currently Proposed Hydrostatic Test Water Volumes and Sources for the Overland Pass Pipeline Project

Test Section	Start MP	End MP	Volume of Water (approximate gallons) [a]	Potential Water Sources
Spread 1	0.0a	147.0	5,985,000	Hams Fork Blacks Fork Green River / Flaming Gorge Reservoir
Spread 2	147.0	281.0	9,020,000	North Platte River Medicine Bow River Laramie River
Spread 3	281.0	438.0	10,501,000	Laramie River South Platte River
Spread 4	438.0	591.0	10,223,000	Water Wells
Spread 5	591.0	749.4	10,590,000	Storage Ponds
		Total	46,319,000	

[a] The volumes of water identified in this table are preliminary, more defined numbers will be provided upon completion of the *Hydrostatic Test Plan*.

Following completion of the hydrostatic test, surface water will be discharged to the same water source, or another water source with the same water quality designation (e.g., 2AB to 2AB). Hydrostatic test water will be discharged directly to surface waters using an energy dissipating device such as a splash pup, or discharged to an upland location through a filter bag. All hydrostatic test water discharges will be completed in compliance with applicable state hydrostatic test discharge permits and landowner agreements to minimize erosion. Overland Pass is developing a *Hydrostatic Test Plan*, which will address the procedures for hydrostatic test water appropriations and discharges.

The appropriation of large volumes of hydrostatic test water from surface water sources could temporarily affect the biological uses of the resource if the diversions constitute a large percentage of the source's total flow or volume. The diversion of large volumes of water from waterbodies could also result in the temporary loss of habitat, changes in water temperature and dissolved oxygen levels, and entrainment or impingement of fish or other aquatic organisms. Overland Pass will minimize the potential effects of hydrostatic testing on surface water resources by adhering to the measures in its *Stream Crossing and Wetland Protection Plan* and *Hydrostatic Test Plan.* These measures include screening intake hoses to prevent the entrainment of fish and other aquatic organisms and regulating the rate of withdrawal of hydrostatic test water to avoid adverse impact on aquatic resources or downstream flows. Overland Pass will be testing only new pipe and no chemicals will be added to the water during hydrostatic testing, unless the discharge permit stipulates otherwise.

Overland Pass plans to discharge hydrostatic test water withdrawn from surface waters to upland locations using dewatering structures (e.g., lined haybale structure) to minimize erosion. To comply with Department of Transportation safety requirements for NGL pipelines, a block and check valve must be installed on either side of major river crossings (100-foot-wide or larger rivers) to prevent flow of NGLs from the pipeline into the river in the event of a rupture. Therefore, due to the check valve, hydrostatic test water withdrawn from surface water will not be able to flow back to the waterbody from where it was withdrawn. Overland Pass will screen intake water to minimize the possibility of introducing nuisance aquatic species into other watersheds.

Hydrostatic testing for the various test sections is currently planned to occur over a multiple-day period. The actual duration of hydrostatic testing for a given test section will be dependent on the rate of

withdrawal and the section length, which will be as short as possible. If the water will not be returned to the system, hydrostatic testing will constitute a consumptive use. When Overland Pass appropriates surface waters for hydrostatic testing, Overland Pass will not withdraw the hydrostatic test water from waterbodies at a rate that would measurably alter the river's flow. Discharges will be completed as quickly as possible, but will be governed by the volume of water in a test section and the discharge rate.

3.6 PLANTS

Twelve BLM sensitive plant species and three federally listed plant species (described individually in section 2.4) have been identified by the BLM field offices as potentially occurring within the proposed project area. Of the 12 BLM sensitive plants, 3 are likely to only occur outside of the project area based on habitat requirements as noted on the table below. Table 3.6-1 lists the plant species and their associated habitat information.

TABLE 3.6-1

Potentially Occurring Special Status Plant Species

Species	Status [a]	Habitat Information
Blowout Penstemon *Penstemon haydenii*	F-E	Found exclusively in shifting, sparsely vegetated sand dunes.
Cedar Rim Thistle [b] *Cirsium aridum*	BLM-S	Found on barren, chalky hills, fine-textured sandy-shaley draws, and gravelly slopes.
Colorado Butterfly Plant *Guara neomexicana spp. Coloradensis*	F-T	Found in wet meadows in floodplains, sub irrigated soils on level or slightly sloping floodplains and drainage bottoms at elevations of 5,000 to 6,400 feet, and in low depressions or along bends in wide, meandering stream channels.
Gibbens' Beardtongue *Penstemon gibbensii*	BLM-S	Found in sparsely vegetated shale or sandy-clay slopes of the Browns Park Formation. Associated vegetation is typically pinyon-juniper woodland, sagebrush communities, or salt desert shrub.
Green River Greenthread *Thelesperma caespitosum*	BLM-S FS-S	Found on white shale slopes and ridges of the Green River Formation at elevations around 6300 feet.
Laramie Columbine [b] *Aquilegia laramiensis*	BLM-S	Found in shady crevices and on ledges in large Precambrian granite boulders or cliffs with thin soils. Typically found within forests of Abies lasiocarpa/Pinus ponderosa or Pinus ponderosa/Populus tremuloides.
Laramie False Sagebrush *Sphaeromeria simplex*	BLM-S	Found in cushion plant communities on rocky limestone ridges.
Nelson's Milkvetch *Astragalus nelsonianus*	BLM-S	Found in gullies and flats on seleniferous soils in sparsely vegetated sagebrush.
Ownbey's Thistle *Cirsium ownbeyi*	BLM-S	Found in sparsely vegetated shaley slopes in juniper, sagebrush and riparian communities.
Persistent Sepal Yellowcress *Rorippa calycina*	BLM-S	Found near riverbanks and shorelines, usually on sand soils near high water line.
Prostrate Bladderpod *Lesquerella prostrate*	BLM-S	Found on plains, hills, and slopes in sagebrush, grass, and juniper communities, from 6000 to 8000 feet.
Trelease's Racemose Milkvetch *Astragalus racemosus var. treleasei*	BLM-S	Found on Eocene-Oligocene outcrops in the basins of Cenozoic lakes (Lake Gosiute and Lake Uinta), as represented in the Wasatch and Bridger Formations. The habitat is highly localized, and is often in badlands outwashes.

TABLE 3.6-1

Potentially Occurring Special Status Plant Species

Species	Status [a]	Habitat Information
Tufted Twinpod *Physaria condensate*	BLM-S	Found in sparsely vegetated, shaley slopes and ridges from 1980 to 2130 m..
Ute Ladies'-tresses *Spiranthes diluvialis*	F-T	Found in seasonally moist soils and wet meadows of drainages below 7,000 feet elevation, arid, intermontane valleys with saline soils that are also high in calcium carbonate, or floodplain wetlands that are part of a meandered wetland complex.
Weber's Scarlet-Gilia [b] *Ipomopsis aggregata ssp. Weberi*	BLM-S	Found in openings in coniferous forests and scrub oak woodlands.

[a] Status:
F-T = Listed as federally threatened
BLM-S = BLM-designated sensitive species for indicated field office

[b] No potential habitat occurs within the proposed project area.

Potential direct impacts on the BLM sensitive plants caused by construction may include injury to or destruction of the plants; seed displacement occurring within areas of potential habitat during clearing, trenching, or general vehicle movement along the construction right-of-way; or permanent loss of habitat. Indirect impacts may include invasion of the habitat by weedy plant species, thus increasing competition for water, sunlight, or other resources. Implementation of the *Weed Management Plan* will minimize the introduction and/or spread of invasive plant species.

Plants listed by the Kemmerer BLM field office have the potential to occur between MPs 0.0 and 42.5. Plants listed by the Rock Springs BLM field office have the potential to occur between MPs 42.5 and 109.8 and between MPs 112.2 and 117.4. Plants listed by the Rawlins BLM field office have the potential to occur between MPs 109.8 and 112.2 and between MPs 117.4 and 320.9. In areas of suitable habitat for these plants, a field survey will be conducted in accordance with the *Sensitive Species Survey Plan*. If plants are identified during the survey adjacent to the construction right-of-way, exclusion fencing will be placed around the plants so they are avoided by construction activities. If surveys identify plants in the middle or across the right-of-way, Overland Pass will evaluate the potential for a route realignment or change to the right-of-way configuration (e.g., reducing the width of the right-of-way). The potential for a reroute depends on site-specific conditions, such as the slope of the terrain. If avoidance of a known population of BLM sensitive plants is not possible, Overland Pass will notify the BLM before commencing any project construction activity. By implementing these measures the proposed project is not likely to result in a loss of viability, nor cause a trend to federal listing or a loss of species viability rangewide.

4.0 U.S. FOREST SERVICE SENSITIVE SPECIES

Similar to the BLM, the FS maintains a list of sensitive species divided up by FS region. The proposed project will occur in two FS regions: the Intermountain Region (Region 4) for 2.0 miles within Flaming Gorge National Recreation Area (FGNRA) and the Rocky Mountain Region (Region 2) for 39.8 miles on the Pawnee National Grasslands (PNG). Through Overland Pass' correspondence with the FS Region 4 and Region 2 offices, FS sensitive species and MIS that could potentially occur in the project area were identified and are listed in table 4-1. MIS species are defined as " plant and animal communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent"(USDA Forest Service,

2005). Consultations with the FS determined that the proposed pipeline will not cause a long term negative population trend nor cause permanent habitat loss for MIS species (Humphrey, 2006).

Region 4 staff indicated that the BLM sensitive species list will be adequate for addressing FS sensitive species since many species are listed by both agencies and the project crosses the FGNRA for the short distance of 2.0 miles (Stroh, 2006a and 2006b). No additional FS sensitive species will need to be considered in environmental review documents. Region 2 staff identified 21 FS sensitive species or species habitats as possibly occurring within the project area (Humphrey, 2005a and 2005b). Many FS sensitive species will not be affected by the proposed project due to lack of suitable habitat or species absence within the project area. These species are excluded from further discussion, and the reason for exclusion is given in table 4-1. Most FS sensitive species with FWS or BLM status were previously discussed in either section 2.0 or section 3.0 of this document; all others are addressed in the following discussion.

Of the 21 FS sensitive species identified by the PNG, 7 require species-specific surveys by the PNG. Additionally, surveys for raptor nests and one formerly FS sensitive plant species will be required. The PNG will provide survey information to Overland Pass for 2005 and 2006, and recommended that Overland Pass only conduct surveys for the same species the year of construction. Species-specific surveys in appropriate habitat were recommended for two mammals (black-tailed prairie dog and swift fox), two bird species (burrowing owl and mountain plover), raptor nests (e.g., ferruginous hawk, red-tailed hawk, Swainson's hawk, great-horned owl, prairie falcon, and golden eagle), three FS sensitive plant species (dwarf milkweed, prairie moonwort, sandhill goosefoot), and one formerly FS sensitive plant species (Wyoming feverfew). Survey protocols for each species are included in the *Sensitive Species Survey Plan*. Required survey results will be filed with the FS as they are completed. For those FS sensitive species not covered by another federal designation, descriptions of species and mitigation measures are discussed following the table.

TABLE 4-1

Overland Pass Pipeline Project Forest Service Sensitive or Management Indicator Species

Common Name	Status		Habitat	Species Excluded from Further Analysis	Reason for Exclusion	Other Section Where Species is Discussed
	Federal [a]	State [b]				
Mammals						
Black-tailed Prairie Dog *Cynomys ludovicianus*	FS: S, MIS (R2)		Prairie Dog Towns MIS. Grassland and shrub-grass communities, often with loose, sandy soils.	No		4.1.1
Fringed Myotis *Myotis thysanodes pahasapensis*	BLM: S FS: S (R2)	WY: NSS2	Can use deserts, grasslands, and other types of woodlands. Use caves, mines, and buildings as maternity colonies, solitary day and night roosts, and hibernacula. May also use bridges and rock crevices as solitary day and night roosts and can hibernate in crevices.	No	Considered rare on the PNG. No roosts or maternity colonies are known to occur, but roost and foraging habitat exists within the project area.	3.1.1
Mule Deer *Odocoileus hemionus*	FS: MIS (R2)		Prairie Woodlands MIS. Occupy all ecosystems in Colorado from grasslands to alpine tundra. They reach their greatest densities in shrub lands on rough broken terrain which provides abundant browse and cover.	Yes	No prairie woodland habitat was mapped within the project area on the PNG.	
Swift Fox *Vulpes velox*	BLM: S FS: S (R2)		Inhabit open prairies and arid plains, including areas intermixed with agriculture. Often dig burrows in sandy soil on high ground in open prairies, along fencerows, and occasionally in plowed fields. Dens are used throughout the year.	No		3.1.5
Birds						
American Bittern *Botaurus lentiginosus*	FS: S (R2)		Dependent on wetland habitats. It usually inhabits marshes with open water in the center, gradual slopes, a band of emergent vegetation around the periphery, and idle grassland in the adjacent uplands. It prefers large wetlands, at least 7 acres, with tall, dense emergent vegetation such as cattails, bulrushes, and reeds.	Yes	Rare migrant on the PNG, no known species or potential habitat within the project area on the PNG.	

TABLE 4-1

Overland Pass Pipeline Project Forest Service Sensitive or Management Indicator Species

Common Name	Status		Habitat	Species Excluded from Further Analysis	Reason for Exclusion	Other Section Where Species is Discussed
	Federal [a]	State [b]				
Black Tern *Childonias niger*	FS: S (R2)	KS: SINC	Freshwater wetlands or edges of riverine systems within open grassland landscapes. Palustrine emergent semi-permanently flooded wetlands are most commonly used wetland type for nesting. Forage in seasonally-flooded wetlands. Prefer wetlands greater than 20 hectares in size for nesting.	No		4.2
Brewer's Sparrow *Spizella brewerii*	BLM: S FS: S (R2)		Sagebrush foothills and medium height sagebrush in basins, mountain mahogany hills.	No		3.2.6
Burrowing Owl *Athene cunicularia*	BLM: S FS: S, MIS (R2)	CO: T	Prairie Dog Towns MIS. Plains and basins, often associated with prairie dog towns.	No		3.2.2
Cassin's Sparrow *Aimophila cassini*	FS: S (R2)		Inhabit shortgrass prairie with scattered shrubs (including sand sagebrush, yucca, and rabbitbrush), which they use for song perches and nest cover. Breeding birds will accept a wide range of shrub densities as long as grass cover exists.	No		4.2
Chestnut-collared Longspur *Calcarius ornatus*	FS: S (R2)		Breeds in native mixed-grass prairies across the northern Great Plains. Use level to rolling mixed-grass and shortgrass uplands, and in drier habitats, moist lowlands. Prefer open prairie and avoid excessively shrubby areas.	No		4.2
Ferruginous Hawk *Buteo regalis*	BLM: S FS: S, MIS (R2)	KS: SINC	Short Grass and Mid-Grass Prairie MIS. Open country, primarily prairies, plains and badlands; sagebrush, saltbush-greasewood shrubland, periphery of pinyon-juniper and other woodland, desert. In the southern Great Plains, common at black-tailed prairie dog colonies in winter.	No		3.2.1
Grasshopper Sparrow *Ammodramus savannarum*	FS: S (R2)		Habitat is open grassland types, notably area-sensitive, preferring large grassland patches greater than 8 hectares in size. Prefer grasslands habitats of intermediate height with clumped vegetation interspersed with patchy bare ground, and sparse shrub cover. Prefer prairie grasslands that contain some degree of shrubs or tall plants (e.g., rabbitbrush or saltbush).	No		4.2

TABLE 4-1

Overland Pass Pipeline Project Forest Service Sensitive or Management Indicator Species

Common Name	Status		Habitat	Species Excluded from Further Analysis	Reason for Exclusion	Other Section Where Species is Discussed
	Federal [a]	State [b]				
Greater Sage-Grouse *Centrocercus urophasianus*	BLM: S FS: S (R4)		Prefer taller sagebrush plants and stands for nesting and roosting cover, lekking grounds are generally open areas with low, sparse sagebrush, such as swales, meadows, and burned areas. Also require wet habitats (*i.e.*, riparian areas, irrigated hay fields, moist wetlands, and wet meadows) to aid in brood rearing.	No		3.2.4
Lark Bunting *Calamospiza melanocorys*	FS: MIS (R2)		Midgrass Prairie MIS. Breed in open grassland and sagebrush steppe with a mixture of short to tall grasses and scattered shrubs.	No		3.2.6
Lewis' Woodpecker *Melanerpes lewis*	FS: S (R2)		Major breeding habitat is open or park-like ponderosa pine forests, burned-out stands of Douglas-fir, mixed conifer, juniper, and riparian and oak woodlands, may also be found in deciduous forests, especially riparian cottonwoods.	Yes	Incidental occurrence on the PNG, no known species or potential habitat within the project area on the PNG.	
Loggerhead Shrike *Lanius ludovicianus*	BLM: S FS: S (R2)		Open country with scattered trees and shrubs.	No		3.2.6
Long-billed Curlew *Numenius americanus*	BLM: S FS: S ((R2)	KS: SINC	Meadows, pastures, shorelines, and marshes.	No		3.2.6
McCown's Longspur *Calcarius mccownii*	FS: S (R2)		Breeds in short grass, especially where vegetation cover is sparse due to low soil moisture or grazing, or is interspersed with shrubs or taller grasses. Also nest in grazed mixed-grass prairies.	No		4.2
Mountain Plover *Charadrius montanus*	BLM: S FS: S, MIS (R2)	KS: SINC	Short Grass Prairie MIS. Sparse short grass or mixed grass prairie, also in short sagebrush plains, often associated with prairie dog towns.	No		3.2.5, 4.2
Northern Goshawk *Accipter gentilis*	BLM: S FS: S (R4 and R2)		Inhabits mixed coniferous forest habitat, and makes use of a wide variety of forest ages, structural conditions, and successional stages.	Yes	Incidental occurrence on the PNG, no known species or potential habitat within the project area on the PNG.	3.2.1
Northern Harrier *Circus cyaneus*	FS: S (R2)		Found primarily in marshes, fields and prairie habitats.	No		3.2.1

TABLE 4-1

Overland Pass Pipeline Project Forest Service Sensitive or Management Indicator Species

Common Name	Status		Habitat	Species Excluded from Further Analysis	Reason for Exclusion	Other Section Where Species is Discussed
	Federal [a]	State [b]				
Olive-sided Flycatcher *Contopus borealis*	FS: S (R2)		Primarily montane and northern coniferous forests.	Yes	Rare migrant on the PNG, no known species or potential habitat within the project area on the PNG.	
Peregrine Falcon *Falco peregrinus*	BLM: S FS: S (R4 and R2)	CO: E	Mountainous zones or cliffs near large lakes and rivers.	Yes	Rare migrant on the PNG, no known species or potential habitat within the project area on the PNG.	3.2.1
Purple Martin *Progne subis*	FS: S (R2)		In Rocky Mountains, uses natural tree cavities or woodpecker cavities primarily in aspens, east of the Rockies uses man-made nest boxes.	Yes	Rare migrant on the PNG, no known species or potential habitat within the project area on the PNG.	
Yellow-billed Cuckoo *Coccyzus americanus*	BLM: S FS: S (R2)	WY: NSS2	Deciduous woods and thickets, usually along large streams.	Yes	Uncommon summer resident on the PNG, no known species or potential habitat in the project area on the PNG.	
Amphibians						
Northern Leopard Frog *Rana pipiens*	BLM: S FS: S, MIS (R2)		Near permanent water in areas up to about 9,000 feet, at lower elevations near swampy, cattail marshes.	No		3.3.2
Fish						
Plains Killifish *Fundulus zebrinus*	FS: MIS (R2)		Prairie Aquatic Environments MIS. Most commonly associated with shallow areas in streams, but they are also found in lakes and ephemerally-connected pothole habitats.	No		4.3
Plains Topminnow *Fundulus sciadicus*	FS: MIS (R2)		Prairie Aquatic Environments MIS. Most often found in heavily vegetated, shallow, slow water habitats in small, clear streams.	No		4.3
Invertebrates						
Regal Fritillary Butterfly *Speyeria idalia*	FS: S (R2)		Wet meadows and tallgrass prairie, also frequents dry undisturbed prairie areas.	Yes	Incidental occurrence in Colorado. No known species or potential habitat in the project area on the PNG.	

TABLE 4-1

Overland Pass Pipeline Project Forest Service Sensitive or Management Indicator Species

Common Name	Status		Habitat	Species Excluded from Further Analysis	Reason for Exclusion	Other Section Where Species is Discussed
	Federal [a]	State [b]				
Plants						
Dwarf Milkweed *Asclepias uncialis*	FS: S (R2)		Perennial herb found in remote locations in association with shortgrass prairie, often on sandstone-derived soils and gravelly or rocky slopes at elevations ranging from 4,000 to 6,500 feet.	No		4.4
Green River Greenthread *Thelesperma caespitosa*	BLM: S FS: S (R4)		Occupies bluffs with sparsely vegetated cushion plant communities on bleached, white or brownish limey-slate outcrops of the Eocene-age Green River Formation.	Yes	Plants are not known to occur on Forest Service lands at the Flaming Gorge National Recreation Area within the project area.	3.5
Prairie Moonwort *Botrychium campestre*	FS: S (R2)		Found primarily in native, unplowed prairies and in sites with some disturbance, such as grazing. It is commonly associated with loess prairie throughout much of its range.	No		4.4
Sand hill Goosefoot *Chenopodium cycloides*	FS: S (R2)		Found in sandy soil on dunes and in stabilized sand in blowouts, occurring at elevations from 4,000 to 5,500 feet.	No		4.4
Wyoming Alpine Fever-few *Bolophyta (*or *Parthenium*) *alpina*	Formerly FS: S (R2)		Dry areas of plains grasslands, particularly gravelly or barren slopes with little vegetation.	No		4.4

[a] BLM: S=Bureau of Land Management Sensitive Species
FS: S= U.S. Forest Service Sensitive Species
(R2)= U.S. Forest Service Region 2
(R4)= U.S. Forest Service Region 4
C= Fish and Wildlife Service designated candidate species

[b] WY: NSSX= Wyoming Game and Fish Department Native Species Score
CO: T= State-listed in Colorado as threatened
CO: E= State-listed in Colorado as endangered
KS: SINC= Designated as a Species In Need of Conservation in Kansas

4.1 MAMMALS

4.1.1 Black-tailed Prairie Dog

The black-tailed prairie dog (*Cynomys ludovicianus*) is listed as a sensitive species by Region 2 of the FS and a MIS for prairie dog town communities. This species is also of concern because prairie dog colonies can support the federally endangered black-footed ferret (see section 2.1.1), the FS sensitive mountain plover (see section 5.2.2), and the BLM and FS sensitive burrowing owl (see section 3.2.2). Prairie dogs live in colonies and inhabit dry, flat, open grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle. Fine to medium textured soils are preferred, presumably because burrows tend to retain their shape and strength better than in coarse, loose soils.

The potential effects of construction through a prairie dog colony may include temporary loss of forage and shelter due to vegetation clearing, collapsing of burrows, and temporary disruption of foraging and resting activities due to disturbance associated with construction equipment. Direct mortality of prairie dogs could result if active burrows are occupied at the time of construction. If construction occurs later in the prairie dog's reproductive season, in late May to early June, most prairie dogs are expected to be mobile and able to avoid construction traffic; however, some individual prairie dogs may be injured or killed during construction.

The black-tailed prairie dog has been identified as having the potential to occur on the PNG within the proposed project area based on consultations with a PNG staff biologist (Humphrey, 2005). The PNG conducts field surveys for black-tailed prairie dogs annually. Survey results for prairie dog towns from the PNG for the past three years will be obtained and the number of active prairie dog towns and acres of towns crossed by the project area will be analyzed once the data are obtained. In areas of suitable habitat for the black-tailed prairie dog occurring within the project area on the PNG, a field survey will be conducted in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan* to determine if additional prairie dog colonies occur within the project area. If prairie dog towns over 80 acres in non block-cleared areas are found, surveys will be done to determine if sufficient burrow density exists to support federally endangered black-footed ferrets. If so, black-footed ferret surveys will be done in accordance with the FWS protocol (see section 2.1.1). Where active colonies are identified within or adjacent to the project area, flagging or exclusion fencing will be placed along the edge of the right-of-way to minimize impact to the colony. If possible, Overland Pass will avoid siting staging areas, temporary workspaces, or pipeyards within active colonies. Following construction, areas of potential habitat will be restored to preconstruction conditions.

4.2 MIGRATORY BIRDS

The FS identified the following list of FS sensitive migratory birds as having the potential to occur along the pipeline route on FS land in Wyoming and Colorado: black tern (*Childonias niger*), Cassin's sparrow (*Aimophila cassini*), chestnut-collared longspur (*Calcarius ornatus*), grasshopper sparrow (*Ammodramus savannarum*), and McCown's longspur (*Calcarius mccownii*). The MIS lark bunting (*Calamospiza melanocorys*) was also identified as occuring within the proposed project area. This list includes migratory birds not already discussed in section 2.0 or 3.0 of this CMP, and species not excluded from further analysis in table 4.0-1. Impacts on and mitigation for FS migratory birds are the same as those discussed in section 3.2.6. Although the mountain plover is discussed in section 3.2.5, survey requirements specific to the PNG are discussed below. Raptors are discussed in detail under section 3.2.1 of this document, yet PNG specific-requirements are discussed at the end of this section.

The PNG will require clearing surveys for nesting mountain plover in appropriate habitat prior to other biological, cultural, and civil surveys spring 2006. Consultations with the PNG identified that the stretch of pipeline within 5 miles of the town of Keota has a high likelihood for nesting mountain plover, though birds could nest along the entire proposed pipeline as it crosses the PNG (Knopf, 2006). For further discussion of mountain plover surveys, potential impacts, and mitigation, see section 3.2.5 of this CMP.

The PNG identified historical raptor nest locations on lands managed by the FS. Raptor nest surveys will be conducted in accordance with the *Sensitive Species Survey Plan*. Overland Pass will limit activities within 0.25 miles of an active raptor nest on PNG land between March 1 and June 30. For further discussion of raptor potential impacts and mitigation, see section 3.2.1 of this CMP.

4.3 FISH

Consultations with the FS identified two FS MIS for Prairie Aquatic Environments that potentially occur in the project area: the plains killifish and the plains topminnow. Spawning periods for the two FS MIS fish species are identified in table 4.3.-1.

TABLE 4.3-1

U.S. Forest Service Management Indicator Fish Species and Spawning Periods

Name	Spawning Period
Plains killifish (*Fundulus zebrinus*)	summer
Plains topminnow (*Fundulus sciadicus*)	late spring

The plains killifish is most commonly associated with shallow areas in streams, but they are also found in lakes and ephemerally-connected pothole habitats. In Colorado, plains killifish are consistently found in shallow (less than 6.0 inches deep), sandy bottom streams or along shallow banks and shoals in larger streams. The plains killifish is considered to be relatively common on the PNG. They are known to occur in perennial drainages and their tributaries including the Lone Tree Creek drainage, Owl Creek drainage, Crow Creek drainage, and Pawnee Creek drainage. The plains topminnow is most often found in heavily vegetated, shallow, slow water habitats in small, clear streams. On the PNG, they are found in Willow Creek, Howard Creek, and South Pawnee Creek. Of these creeks, the proposed pipeline crosses West Fork Willow Creek (MPs 338.8 and 342.8), and South Pawnee Creek (MP 384.8) on the PNG. Potential impacts on and mitigation for FS MIS fish species are the same as those discussed for BLM sensitive fish species in section 3.5.

4.4 PLANTS

Three FS sensitive plant species and one formerly sensitive plant were identified by the PNG as possibly occurring within the project area on FS lands. The three sensitive species are the dwarf milkweed (*Asclepias uncialis*), prairie moonwort (*Botrychium campestre*), sandhill goosefoot (*Chenopodium cycloids*), and the formerly sensitive Wyoming feverfew (*Bolophyta* or *Parthenium alpina*). The dwarf milkweed occurs in shortgrass prairie, often on sandstone-derived soils and gravelly or rocky slopes between 4,000 and 6,500 feet elevation. The dwarf milkweed is known to occur on the PNG. The prairie moonwort occurs on dry, gravelly hillsides, often associated with little bluestem (*Schizachyrium scoparium*) between 3,700 and 10,800 feet elevation. There have been unverified sightings of prairie moonwort on the PNG. The sandhill goosefoot occurs in sandy soil on dunes or stabilized sand in blowouts between 4,000 and 5,500 feet elevation. This species is suspected to occur on the PNG but has

not been reported. Based on initial habitat and vegetation mapping by Overland Pass' biologists, no potential habitat occurs in the project area for the sandhill goosefoot. The Wyoming fever-few occurs along ridges and low hills, in areas devoid of grassy vegetation, usually with other cushion plants between 5,400 and 5,800 feet elevation. Though this species is no longer a FS sensitive species, it is known to occur on the PNG. Surveys for FS sensitive plant species will be conducted in accordance with the *Sensitive Species Survey* Plan. Potential impacts on and mitigation for FS sensitive plant species are the same as those discussed for BLM sensitive plant species in section 3.6.

5.0 SUMMARY TABLE

5.1 THREATENED, ENDANGERED, OR CANDIDATE SPECIES

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Black-footed Ferret	Federally Endangered Colorado Endangered	Within prairie dog colonies, white-tailed in Wyoming, black-tailed in Colorado (MPs to be determined)	Direct Impacts: Temporary loss of forage and shelter; Displacement, injury, or death	• If field surveys identify a black-footed ferret, contacting the FWS and coordinating the modification of the project to avoid impacting the black-footed ferret. • If a black footed ferret is observed during construction, stopping work and contacting the FWS.
Preble's Meadow Jumping Mouse	Federally Threatened Colorado Threatened	Foothill and plains riparian areas adjacent to perennial streams in Albany and Laramie counties, Wyoming and Weld County, Colorado (MP 248.9 to 401.7)	Direct Impacts: Temporary loss of riparian and upland habitat; Disruption of connectivity of habitat	• Revising the project's long-term maintenance plan to allow revegetation of native shrub species in addition to herbaceous species within the permanent right-of-way; therefore only tree species over 15 feet tall will be removed to maintain the permanent right-of-way as necessary.
			Direct Impacts: Displacement, injury, or death during construction at stream crossings	If it is not possible to avoid potential habitat, direct impacts on the Preble's meadow jumping mouse will be minimized through the following measures: • No equipment will be parked closer than 100 meters from the stream crossing; • If the route is moved but still occurs in suitable habitat, surveys will be conducted as necessary; • Whenever a piece of equipment needs to cross potentially suitable habitat, the biologist will walk in front of the equipment to clear the area and physically remove mice encountered within the right-of-way. These efforts will continue ahead of each piece of equipment until the right-of-way has been cleared of vegetation and silt fences have been installed to prevent mice from returning to the right-of-way; and • Construction through areas of suitable habitat will be conducted as quickly as is practical.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
			Indirect Impact: Reduction of available forage and habitat; Soil compaction limiting revegetation success; Increased susceptibility to predators	• Following construction, areas of potential habitat will be restored to preconstruction conditions by broadcast seeding the banks and replacing plugs of willow and/or preexisting shrub species from the riparian area with one plant every square foot. • If it is possible for cattle to graze in replanted riparian areas and the landowner provides consent, Overland Pass will fence the area until vegetation is reestablished; and • Successfully revegetating disturbed areas following construction will mitigate the temporary impact.
Bald Eagle	Federally Threatened Colorado and Kansas Threatened	Primarily at major stream/river crossings, but potentially in any larger trees near open water along the corridor (MP 0.0a to 750.9)	Direct Impacts: Displacement of individuals; Damage to occupied and/or unoccupied nests; Abandonment or destruction of eggs; or Injury or death of nestlings	Unless otherwise permitted by the FWS: • Restrict construction activities year-round within 0.5 mile of the nest; • Restrict construction activities between February 1 and August 15 within 1.0 mile of the nest, unless otherwise permitted by the FWS; and • Restrict construction activities year-round in one of two larger areas, depending on habitat types: a) 2.5 miles extending in all directions from the nest or b) 0.5 mile from the streambank of all streams within 2.5 miles of the nest.
			Direct Impacts: Disturbance of active winter roosts or displacement of birds from protective cover	Unless site specific information (e.g. disturbance sensitivity of individuals, topography, or intensity of activity) and consultations with the FWS indicate otherwise, the following measures will be implemented: • Avoid construction within 1.0 mile of occupied communal roosts trees between November 1 and April 1;and • Avoid ground disturbing activities within 0.5 mile of active communal roost sites year round..
			Indirect Impact: Affecting the bald eagle's food resources	• Adhering to the Overland Pass Pipeline *Stream Crossing and Wetland Protection Plan* when crossing waterbodies.
Interior Least Tern	Federally Endangered Colorado and Kansas Endangered	Central Kansas, barren areas near water including saline flats, sand bars in river beds, or shores of large impoundments (Not Anticipated)	Direct Impact: Displacement of individuals into adjacent habitats, disruption of foraging activities, temporary loss of migratory habitat	• If a route realignment crosses potential habitat, conducting monitoring in potential habitat during the migratory period (i.e. May or August); and • If monitoring identifies a least tern in the project area, ceasing work in the vicinity of the individual(s) until the individual(s) vacate the construction right-of-way.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
			Indirect Impact: Increased sedimentation and turbidity could affect downstream foraging	• Adhering to the Overland Pass Pipeline *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.
Piping Plover	Federally Threatened Colorado and Kansas Threatened	Central Kansas, shallow wetlands and open beaches and sandbars adjacent to or within streams and impoundments (Not Anticipated)	Direct Impact: Displacement of individuals into adjacent habitats, disruption of foraging activities, temporary loss of migratory habitat	• If a route realignment crosses potential habitat, conducting monitoring in potential habitat during the migratory period (i.e. mid-April or August to September); and • If monitoring identifies a piping plover in the project area, ceasing work in the vicinity of the individual(s) until the individual(s) vacate the construction right-of-way.
			Indirect Impact: Increased sedimentation and turbidity could affect downstream foraging	• Adhering to the Overland Pass Pipeline *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.
Whooping Crane	Federally Endangered Colorado and Kansas Endangered	Central Kansas, farm ponds, mudflats, around reservoirs, and occasionally agricultural areas (MP 680.0 to 720.0)	Direct Impact: Displacement of individuals into adjacent habitats, disruption of foraging activities, temporary loss of migratory habitat	If construction during the migratory period (March through April or mid-September through October) will not be avoided: • Monitoring in potential habitat between MP 680.0 to 720.0 during the spring or fall migration; • If monitoring identifies a whooping crane in the project area, ceasing work in the vicinity of the individual(s) until the individual(s) vacate the construction right-of-way.
			Indirect Impact: Increased sedimentation and turbidity could affect downstream foraging	• Adhering to the Overland Pass Pipeline *Stream Crossing and Wetland Protection Plan* to minimize potential impacts on waterbody crossings.
Mexican Spotted Owl	Federally Threatened	Canyon and montane forest habitats, Weld County, Colorado (Not Anticipated)	Direct Impact: Displacement of individuals into adjacent habitats; Damage to occupied and/or unoccupied nests; Abandonment or destruction of eggs; Injury or death of nestlings; Disturbance of individuals due to activity and noise	• If a route realignment crosses potentially suitable habitat, conducting a field survey in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan*; and • If surveys identify a Mexican spotted owl nest, working with the FWS to identify appropriate mitigation measures.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Wyoming Toad	Federally Threatened	Wetlands and riparian areas in the Laramie Basin; Only known locations are Hutton NWR and Mortenson NWR (Not Anticipated)	Direct Impacts: Temporary loss of shelter; Displacement, injury, or death of individuals	• If a reroute comes within 2 miles of a known location, conducting field surveys in accordance with the *Sensitive Species Survey Plan*; • If surveys identify toads within the project area, evaluating the potential for a route realignment of change to the right-of-way configuration; • If avoidance of the Wyoming toad would not be possible, clearing the right-of-way by biologists prior to construction to remove all Wyoming toads; • Installing exclusion fencing to a depth of 4 inches in occupied habitat; and • Restoring the right-of-way to preconstruction conditions.
			Indirect Impact: Increasing the susceptibility of individuals to predation	• Removing toads from the construction right-of-way and placing them in appropriate habitat.
Blowout Penstemon	Federally Endangered	Sand dune habitats (blowouts) in central and south-central Wyoming (Not Anticipated)	Direct Impacts: Injury, destruction, or seed displacement	• If a route realignment crosses potentially suitable habitat, conducting a field survey in accordance with the Overland Pass Pipeline *Sensitive Species Survey Plan;* • If plants are identified along the edge of the right-of-way, fencing and avoiding the population; • If plants are identified within the right-of-way, evaluating the potential for a route re-alignment or reducing the width of the right-of-way; and • If avoidance of blowout penstemon plants would not be possible, notifying the FWS and BLM before commencing any project construction activity.
			Indirect Impact: Invasion of habitat by weedy plant species	• Implementing the Overland Pass Pipeline *Weed Management Plan*.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Colorado Butterfly Plant	Federally Threatened	Drainage bottoms and sub-irrigated soils on floodplains in Laramie County, Wyoming and Weld County, Colorado (MP 301.7 to 401.7)	Direct Impacts: Injury, destruction, or seed displacement;	• Separating topsoil in wetland areas in accordance with the *Stream Crossing and Wetland Protection Plan*; • If surveys conducted in suitable habitat yield negative results , segregating topsoil in potential habitat and returning the contours to the previous condition immediately following installation of the pipe*;* • If plants are identified along the edge of the right-of-way, fencing and avoiding the population; • If plants are identified within the right-of-way, evaluating the potential for a route re-alignment or reducing the width of the right-of-way; and • If avoidance of Colorado butterfly plants would not be possible, notifying the FWS and BLM before commencing any project construction activity.
			Indirect Impact: Invasion of habitat by weedy plant species	• Implementing the Overland Pass Pipeline *Weed Management Plan*.
			Indirect Impact: Changes in water flow and soil characteristics; Increased herbivory due to increased rodent colonization	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*; and • Allowing the disturbed areas to return to preconstruction conditions following installation of the pipeline.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Ute Ladies'-tresses	Federally Threatened	Seasonally moist soils and wet meadows of drainages below 7,000 feet, or floodplain wetlands throughout Wyoming and in Weld and Morgan Counties, Colorado (MP 0 to 409.0)	Direct Impacts: Injury, destruction, or seed displacement	• Separating topsoil in wetland areas in accordance with the *Stream Crossing and Wetland Protection Plan*; • If surveys conducted in suitable habitat yield negative results , segregating topsoil in potential habitat and returning the contours to the previous condition immediately following installation of the pipe*;* • If plants are identified along the edge of the right-of-way, fencing and avoiding the population; • If plants are identified within the right-of-way, evaluating the potential for a route re-alignment or reducing the width of the right-of-way; and • If avoidance of Ute ladies'-tresses plants would not be possible, notifying the FWS and BLM before commencing any project construction activity.
			Indirect Impact: Invasion of habitat by weedy plant species	• Implementing the Overland Pass Pipeline *Weed Management Plan*.
			Indirect Impact: Changes in water flow and soil characteristics; Increased herbivory due to increased rodent colonization	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*; and • Allowing the disturbed areas to return to preconstruction conditions following installation of the pipeline.
Lesser Prairie Chicken	Federal Candidate Colorado Threatened	Grasslands with an abundance of mid grasses, sand sage, and yucca in western Kansas (MP 626.0 to 650.0)	Direct Impacts: Potential disruption of lekking activities or brood rearing; Displacement, injury, or death of individuals; Damage to occupied and/or unoccupied nests; Abandonment or destruction of eggs; Injury or death of nestlings	• If an active lek is located within the right-of-way or within 0.5 mile of the right-of-way, restricting construction activities to between 9:00 am and 6:00 pm between March 1 and May 1; and • Restoring the project area to preconstruction contours and reseeding areas of suitable habitat using broadcast seeding with a seed mix that includes native species and is acceptable to the landowner, NRCS office, or other applicable agency.
			Direct Impacts: Long-term loss of lekking grounds and other prairie chicken habitat	• Locating the right-of-way within previously disturbed areas (i.e. adjacent to existing utilities and/or roads).
			Indirect Impacts: Potentially flushed from project area into lower quality habitat; Potentially more susceptible to predation	• Impacts will be temporary and habitat adjacent to the construction corridor will remain intact, and; • Also, Overland Pass will avoid constructing vertical structures, such as communication towers or other appurtenances between MPs 626.0 to 650.0.

Summary Table of FWS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Yellow-billed Cuckoo	Federal Candidate BLM Sensitive	Large tracts of cottonwood/willow with dense sub-canopies close to water, Hams Fork River crossing (MP 0.8a)	Direct Impacts: Temporary disruption and/or removal of foraging and nesting habitat; Displacement, injury, or death of individuals	• If individuals are identified within the project area, reducing the width of the right-of-way in the area, as practical; • Avoiding construction activities within the nesting season, as possible; and • Restoring the area to preconstruction conditions.
Colorado Pikeminnow, Razorback Sucker, Bonytail Chub, and Humpback Chub	Federally Endangered	Downstream of the Upper Colorado River Basin	Direct Impacts: Temporary loss of habitat; Temporary alterations of stream dissolved oxygen and temperature; Entrainment or impingement of fish or other aquatic species; Temporary increased sedimentation and turbidity; Introduction of aquatic nuisance species; Potential water depletion; Accidental spill or discharge	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*; • Adhering to the Overland Pass Pipeline *Hydrostatic Test Plan;* • Using energy dissipating methods to discharge test water and prevent erosion; • Screening intake water to minimize the introduction of aquatic nuisance species; • Providing the FWS with the *Hydrostatic Test Plan*; • Regulating the water withdrawal rate of hydrostatic test water from waterbodies at a rate that will not alter the river's flow; • Testing only new pipe and not chemically treating the water, unless the discharge permit stipulates otherwise; and • Implementing the Overland Pass *SPCC Plan*.
Eskimo Curlew, Interior Least Tern, Piping Plover, Whooping Crane, Pallid Sturgeon, and Western Prairie-fringed Orchid	Endangered or Threatened	Downstream in the Platte River Basin	Direct Impacts: Temporary loss of habitat; Temporary alterations of stream dissolved oxygen and temperature; Entrainment or impingement of fish or other aquatic species; Temporary increased sedimentation and turbidity; Introduction of aquatic nuisance species; Potential water depletion; Accidental spill or discharge	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan*; • Adhering to the Overland Pass Pipeline *Hydrostatic Test Plan;* • Using energy dissipating methods to discharge test water and prevent erosion; • Screening intake water to minimize the introduction of aquatic nuisance species; • Providing the FWS with the *Hydrostatic Test Plan*; • Regulating the water withdrawal rate of hydrostatic test water from waterbodies at a rate that will not alter the river's flow; • Testing only new pipe and not chemically treating the water, unless the discharge permit stipulates otherwise; and • Implementing the Overland Pass *SPCC Plan*.

5.2 BLM SENSITIVE SPECIES

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Townsend's Big-Eared Bat	BLM Sensitive	Caves or abandoned mines located within salt desert scrub, sagebrush steppe, and pinyon-juniper woodland communities, on federal lands in Wyoming	Direct Impacts: Permanent loss of shelter and roosting habitat; Disruption of maternity colonies	• Avoiding preferred bat roosting habitats (e.g. caves and abandoned mines) and implementing BMPs identified in project plans.
			Direct Impacts: Displacement during construction	• Successfully revegetating disturbed areas following construction will mitigate the temporary impact.
			Indirect Impact: Reduction of available forage and habitat	• Following construction, restoring areas of potential habitat to preconstruction conditions.
Spotted Bat	BLM Sensitive	Cliff faces, canyons, riparian areas, basin prairie shrub, on federal lands in Wyoming	Direct Impacts: Permanent loss of shelter and roosting habitat; Disruption of maternity colonies	• Avoiding preferred bat roosting habitats (e.g. caves and abandoned mines) and implementing BMPs identified in project plans.
			Direct Impacts: Displacement during construction	• Successfully revegetating disturbed areas following construction will mitigate the temporary impact.
			Indirect Impact: Reduction of available forage and habitat	• Following construction, restoring areas of potential habitat to preconstruction conditions.
Fringed Myotis	BLM Sensitive FS Sensitive	Ponderosa pine woodlands and salt desert shrub communities at elevations up to 7,500 feet, on federal lands in Wyoming and Colorado	Direct Impacts: Permanent loss of shelter and roosting habitat; Disruption of maternity colonies	• Avoiding preferred bat roosting habitats (e.g. caves and abandoned mines) and implementing BMPs identified in project plans.
			Direct Impacts: Displacement during construction	• Successfully revegetating disturbed areas following construction will mitigate the temporary impact.
			Indirect Impact: Reduction of available forage and habitat	• Following construction, restoring areas of potential habitat to preconstruction conditions.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Pygmy Rabbit	BLM Sensitive	Deep soils with tall, dense sagebrush which they use for cover and food, BLM lands throughout the Great Basin in Wyoming	Direct Impacts: Displacement, injury, or death	• Implementing general protection measures and BMPs identified in project plans; and • Conducting post-construction monitoring for 2 years at selected sites as identified by the BLM.
			Indirect Impact: Temporary loss of forage and shelter	• Restoring and revegetating the right-of-way to preconstruction conditions.
Swift Fox	BLM Sensitive BS Sensitive	Short grass prairies over most of the Great Plains, federal lands in south central/southeastern Wyoming and eastern Colorado	Direct Impacts: Temporary loss of habitat; Permanent loss of dens; Injury or direct mortality to young	• For active natal dens identified within the construction right-of-way where construction will occur prior to June 1, evaluating the potential for a change to the right-of-way configuration (i.e. reduce the width of the right-of-way); • If a natal den cannot be avoided, monitoring the den and avoiding construction until the juveniles have emerged and are able to relocate from the right-of-way; • For active non-natal den identified within the construction right-of-way that cannot be avoided, contacting the BLM or FS as appropriate; • For active natal or non-natal den identified outside of the construction right-of-way, avoiding the den, installing silt fence along the right-of-way; and • Implementing general protection measures and BMPs as identified in project plans.
			Indirect Impact: Disruption of foraging activity	• Restoring and revegetating the right-of-way to preconstruction conditions.
Wyoming Pocket Gopher	BLM Sensitive	Upland drier ridge tops, gravelly loose soils, and greasewood habitats, on federal lands in southeastern Sweetwater County and southwestern Carbon County, Wyoming	Direct Impacts: Temporary loss of habitat; Disruption of foraging activity; Permanent loss of dens; Injury or direct mortality to young	• Implementing general protection measures and BMPs identified in project plans.
			Indirect Impact: Temporary loss of forage and shelter habitat	• Restoring and revegetating the right-of-way to preconstruction conditions.
White-tailed Prairie Dog	BLM Sensitive	Dry, flat, open grasslands with low, relatively sparse vegetation; Generally west of the Laramie Range (MPs to be determined)	Direct Impacts: Displacement, injury, or death	The area affected will be minimized by: • Flagging or fencing the edge of the right-of-way where active colonies occur within or adjacent to the project area; • Siting staging areas, temporary workspaces, or pipeyards outside of active colonies, if possible; and • Restoring areas of potential habitat to preconstruction conditions following construction.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
			Indirect Impact: Temporary loss of forage and shelter habitat	• Restoring and revegetating the right-of-way to preconstruction conditions.
Raptors Ferruginous Hawk Northern Goshawk Peregrine Falcon	BLM Sensitive FS Sensitive BLM Sensitive FS Sensitive BLM Sensitive FS Sensitive	Open areas of grasslands and arid shrub country; trees along waterways Tree tops in old growth forests Cliffs (MP 0.0 to 750.9)	Direct Impacts: Lowering of reproductive success through disruption of nesting or breeding activities; Displacement, injury, or death of individuals and eggs/young if during the breeding season	• Adhering to spatial and timing buffers for active raptor nests identified (within 1.0 mile of the construction right-of-way for ferruginous hawks, or within 0.75 mile of the construction right-of-way for northern goshawk or peregrine falcon) from Feb. 1 to July 31 (except peregrine falcon timing restrictions, from Feb. 1 to Aug. 15) on BLM lands, and within 0.25 mile of the construction right-of-way from March 1 to June 30 on PNG lands. • Restricting vegetation clearing of the right-of-way to avoid the nesting season; and • Placing new powerlines outside of 0.5 miles of occupied nests on federal land in Wyoming, unless otherwise approved by the appropriate agency.
			Indirect Impact: Temporary reduction of available nesting habitat	• Implementing BMPs as outlined in project plans; • Locating the majority of the proposed pipeline route adjacent to existing utility and road corridors to minimize habitat fragmentation and avoid sensitive areas; and • Restoring and revegetating the right-of-way to increase the amount of habitat that is available to raptors.
			Indirect Impact: Potential temporary increase in the susceptibility of individuals to predation	• Successfully revegetating disturbed areas following construction will mitigate the temporary impact.
Burrowing Owl	BLM Sensitive FS Sensitive	Open, dry grasslands, deserts, and scrublands characterized by low-growing vegetation, federal lands in Wyoming and Colorado	Direct Impacts: Destruction of active burrows; Displacement, injury, or mortality of individuals.	• Adhering to the appropriate spatial and seasonal buffers, unless otherwise permitted by the applicable agencies. The spatial buffer for burrowing owl nests is 0.75 miles and the seasonal buffer is from Feb. 1 to July 31 on BLM lands, and 0.25 miles from March 1 to June 30 on PNG lands.
			Indirect Impact: Disturbance of foraging habitat; Potential temporary increase in the susceptibility of individuals to predation	• Successfully revegetating disturbed areas following construction will mitigate temporary impacts.
Columbian Sharp-Tailed Grouse	BLM Sensitive	Sierra Madres foothills and Washakie Basin of southwest Carbon	Direct Impact: Displacement; destruction of habitat; mortality to young	The nearest potential habitat for this species occurs over 20 miles south of the proposed project area, therefore no impacts will result from the project.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
		County; over 20 miles from the project area (Not Anticipated)	Indirect Impact: Potentially flushed from project area into lower quality habitat; Potentially increased susceptibility to predation	The nearest potential habitat for this species occurs over 20 miles south of the proposed project area, therefore no impacts will result from the project.
Greater Sage Grouse	BLM Sensitive FS Sensitive	Sagebrush habitat, federal lands in Wyoming (MP 40 to 237)	Direct Impacts: Long-term loss of lekking grounds and other sage grouse habitat	• Locating the right-of-way within previously disturbed areas (i.e., adjacent to existing pipelines and/or roads) to the extent possible.
			Direct Impacts: Potential disruption of lekking activities or brood rearing; displacement, injury, or death of individuals; Destroying or causing abandonment of nests; Injury or direct mortality of young	• If an active lek is located within 0.25 mile of the project area, avoiding construction between March 1 and July 15, unless otherwise permitted by the appropriate resource agency; • Not locating aboveground facilities within 0.25-mile of a known sage grouse lek; • Avoiding blasting activities between March 15 and May 31 within 0.25-mile of a known sage grouse lek, unless otherwise permitted by the appropriate resource agency; • If suitable nesting or brood-rearing habitat associated with an active lek is located within 2 miles of the project area, avoiding construction between March 1 and July 15, unless otherwise permitted by the appropriate resource agency; • If low-intensity preconstruction (e.g., surveying and staking) work is necessary within 2.0 miles of a known sage grouse lek in Wyoming, activities will only occur between 9:00 a.m. and 6:00 p.m. from March 1 to May 15; and • Following construction, the project area will be restored to preconstruction conditions and seeded by broadcast seeding with a seed mix that includes native species and is acceptable by the affected landowners and agencies.
			Indirect Impact: Potentially flushed from project area into lower quality habitat; Potentially more susceptible to predation	• Successfully revegetating disturbed areas following construction to mitigate temporary impacts.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Mountain Plover	BLM Sensitive	Shortgrass areas throughout the project corridor (federal lands between MP 46 and 327)	Direct Impacts: Displacement, injury, or death of individuals and eggs/young if during the breeding season	• If an active mountain plover nest is found and construction is expected to occur between April 10 and July 10, recording the nest location and reassessing immediately before construction. If the nest is still active at that time, prohibiting construction equipment from working within 0.25 mile of the nest until the young have fledged; • If a plover family group is identified during surveys or immediately before construction, monitoring the group to determine its use pattern. Marking the area being used by the family group with signs designating the area as sensitive if the group does not move at least 200 meters from the centerline; • Allowing construction equipment a one-time pass through the area with a biologist present to monitor plover location and response; and • Following construction, restoring the project area to preconstruction conditions.
			Indirect Impact: Temporary reduction of available habitat	• Restoring and revegetating the right-of-way to preconstruction conditions.
			Indirect Impact: Potential temporary increase in the susceptibility of individuals to predation	• Successfully revegetating disturbed areas following construction to mitigate temporary impacts.
Migratory Birds (Baird's Sparrow, Brewer's Sparrow, Loggerhead Shrike, Long-billed Curlew, Sage Sparrow, Sage Thrasher, Trumpeter Swan, White-faced Ibis)	BLM Sensitive (Brewer's Sparrow, Loggerhead Shrike, Long-billed Curlew, and White-faced Ibis are also FS Sensitive)	Various habitats on BLM and FS lands	Direct Impacts: Temporary loss of habitat; Injury, mortality, or displacement of individuals	• Adhering to measures in the Overland Pass Pipeline *Soil Stabilization and Restoration Plan, Stream Crossing and Wetland Protection Plan,* and through appropriate routing and facility siting; • Siting the majority of the proposed route adjacent to existing pipeline and roadway corridors to minimize habitat fragmentation and avoid sensitive areas; • Limiting the extent of permanently maintained right-of-way and restricting vegetation clearing to avoid the nesting season, as possible; and • Restoring disturbed areas following construction.
Midget Faded Rattlesnake	BLM Sensitive	Found on ground and occasionally in shrubs and trees, federal lands in southwestern Wyoming	Direct Impact: Direct mortality due to crushing by construction equipment; Reduction of suitable habitat; Temporary disturbance and displacement	If avoidance of the midget faded rattlesnake would not be possible, impacts would be minimized by: • Clearing of the right-of-way by biologists prior to construction to remove all individuals; and • Installing exclusion fencing to a depth of 4 inches in occupied habitat.
			Indirect Impact: Temporary reduction of available habitat	• Removing individuals from the construction right-of-way and relocating them to appropriate habitat.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Great Basin Spadefoot Toad	BLM Sensitive	Pinyon-juniper woodlands, sagebrush steppe and scrub communities, and semidesert shrublands, federal lands in Wyoming	Direct Impacts: Displacement, injury, or death of individuals; Temporary loss of shelter	If avoidance of the Great Basin spadefoot would not be possible, impacts would be minimized by: • Clearing of the right-of-way by biologists prior to construction to remove all individuals; and • Installing exclusion fencing to a depth of 4 inches in occupied habitat.
			Indirect Impact: Increasing the susceptibility of individuals to predation	• Removing individuals from the construction right-of-way and relocating them to appropriate habitat.
Northern Leopard Frog	BLM Sensitive FS Sensitive	Wet meadows and banks and shallows of marshes, and ponds, federal lands in Wyoming	Direct Impacts: Displacement, injury, or death of individuals; Temporary loss of shelter	If avoidance of the Northern leopard frog would not be possible, impacts would be minimized by: • Clearing of the right-of-way by biologists prior to construction to remove all individuals; and • Installing exclusion fencing to a depth of 4 inches in occupied habitat.
			Indirect Impact: Increasing the susceptibility of individuals to predation	• Removing individuals from the construction right-of-way and relocating them to appropriate habitat.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Bluehead sucker, Flannelmouth Sucker, Leatherside Chub, Mounatin Sucker, Roundtail Chub	BLM Sensitive	Colorado River drainage and Bitter Creek drainage, Wyoming	Direct Impacts: Displacement, injury or direct mortality of individuals; Destruction of fish eggs and juvenile fish ; Increased erosion along streambanks; Increased turbidity levels; Localized changes in water temperature and light penetration	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* for waterbody crossings; • Storing trench spoil 10 feet from the edge of the waterbody, if possible; • Installing sediment barriers such as silt fence or strawbales prior to vegetation removal to prevent or significantly reduce runoff into a stream; • Leaving rootstock in the ground where possible; • Completing construction as quickly as possible to shorten the duration of sedimentation and turbidity; • Adhering to the appropriate construction timing windows to avoid or minimize potential sedimentation and turbidity impacts on aquatic species during spawning seasons; • Locating construction equipment fueling and servicing areas at least 100 feet from surface waters; • Storing hazardous materials, including chemicals, fuels, and lubricating oils at least 500 feet from a wetland, waterbody, or designated municipal watershed area; • Using mats and pads to support equipment that must cross waterbodies or work in saturated soils adjacent to waterbodies; • Locating temporary extra workspaces at least 10 feet from the edge of flowing waterbodies, and limiting clearing of vegetation between extra workspaces and the edge of each waterbody to the authorized construction right-of-way, where possible; • Stabilizing the construction site, including the streambanks, and returning all project areas to preconstruction contours; • Maintaining buffer zones of undisturbed vegetation along the waterbodies; and • Implementing the Overland Pass *SPCC Plan*.
BLM Sensitive Plants (Cedar Rim Thistle, Gibbens' Beardtongue, Green River Greenthread, Laramie Columbine, Laramie False Sagebrush, Nelson's Milkvetch, Ownbey's Thistle, Persistent Sepal Yellowcress,	BLM Sensitive (Green River greenthread is also FS Sensitive)	See table in text, federal lands in Wyoming	Direct Impacts: Injury, destruction, or seed displacement	• If plants are identified during survey adjacent to the construction right-of-way, placing exclusion fencing around the plants so they are avoided by construction activities; • If plants are identified within the right-of-way, evaluating a potential change to the right-of-way configuration; and • If avoidance of sensitive plants is not possible, contact the BLM; and • monitoring topsoil segregation for ditchline and spoil storage areas containing sensitive plants to ensure adequate topsoil is segregated and replacing the topsoil to ensure the seed bank is returned to the affected area.

Summary Table of BLM Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Prostrate Bladderpod, Trelease's Racemose Milkvetch, Tufted twinpod, Weber's Scarlet-Gilia)			Indirect Impact: Invasion of habitat by weedy plant species	• Implementing the Overland Pass Pipeline *Weed and Pest Management Plan*.

5.3 FOREST SERVICE SENSITIVE SPECIES

Summary Table of FS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Black-tailed Prairie Dog	FS Sensitive	Dry, flat, open grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle on the PNG (MP to be determined)	Direct Impacts: Displacement, injury, or death	The area affected will be minimized by: • Flagging or fencing the edge of the right-of-way where active colonies occur within or adjacent to the project area; • Siting staging areas, temporary workspaces, or pipeyards outside of active colonies, if possible; and • Restoring areas of potential habitat to preconstruction conditions following construction.
			Indirect Impact: Temporary loss of forage and shelter habitat	• Restoring and revegetating the right-of-way to preconstruction conditions.
Migratory Birds including Black Tern, Cassin's Sparrow, Chestnut-Collared Longspur, Grasshopper Sparrow, and McCown's Longspur	FS Sensitive	Various habitats on the PNG including grasslands and wetlands (MPs 336.7 to 356.0 and 371.5 to 387.1)	Direct Impacts: Temporary loss of habitat; Injury, mortality, or displacement of individuals	• Adhering to measures in the Overland Pass Pipeline *Soil Stabilization and Restoration Plan, Stream Crossing and Wetland Protection Plan,* and through appropriate routing and facility siting; • Siting the majority of the proposed route adjacent to existing pipeline and roadway corridors to minimize habitat fragmentation and avoid sensitive areas; • Limiting the extent of permanently maintained right-of-way and restricting vegetation clearing to avoid the nesting season, as possible; and • Restoring disturbed areas following construction.

Summary Table of FS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
Fish Species including the Plains Killifish and Plains Topminnow	FS Management Indicator Species	Prairie aquatic habitat on the PNG (MPs 336.7 to 356.0 and 371.5 to 387.1)	Direct Impacts: Displacement, injury or direct mortality of individuals; Destruction of fish eggs and juvenile fish ; Increased erosion along streambanks; Increased turbidity levels; Localized changes in water temperature and light penetration	• Adhering to the Overland Pass Pipeline *Soil Stabilization and Restoration Plan* and *Stream Crossing and Wetland Protection Plan* for waterbody crossings; • Storing trench spoil 10 feet from the edge of the waterbody, if possible; • Installing sediment barriers such as silt fence or strawbales prior to vegetation removal to prevent or significantly reduce runoff into a stream; • Leaving rootstock in the ground where possible; • Completing construction as quickly as possible to shorten the duration of sedimentation and turbidity; • Adhering to the appropriate construction timing windows to avoid or minimize potential sedimentation and turbidity impacts on aquatic species during spawning seasons; • Locating construction equipment fueling and servicing areas at least 100 feet from surface waters; • Storing hazardous materials, including chemicals, fuels, and lubricating oils at least 500 feet from a wetland, waterbody, or designated municipal watershed area; • Using mats and pads to support equipment that must cross waterbodies or work in saturated soils adjacent to waterbodies; • Locating temporary extra workspaces at least 10 feet from the edge of flowing waterbodies, and limiting clearing of vegetation between extra workspaces and the edge of each waterbody to the authorized construction right-of-way, where possible; • Stabilizing the construction site, including the streambanks, and returning all project areas to preconstruction contours; • Maintaining buffer zones of undisturbed vegetation along the waterbodies; and • Implementing the Overland Pass *SPCC Plan*.
Plants including the Dwarf Milkweed, Prairie Moonwort, Sandhill Goosefoot, and the formerly sensitive Wyoming Feverfew	FS Sensitive	Short grass prairie or dune habitat on the PNG (MPs 336.7 to 356.0 and 371.5 to 387.1)	Direct Impacts: Injury, destruction, or seed displacement	• If plants are identified during survey adjacent to the construction right-of-way, placing exclusion fencing around the plants so they are avoided by construction activities; • If plants are identified within the right-of-way, evaluating a potential change to the right-of-way configuration; and • If avoidance of sensitive plants is not possible, monitoring topsoil segregation for ditchline and spoil storage areas containing sensitive plants to ensure adequate topsoil is segregated and replacing the topsoil to ensure the seed bank is returned to the affected area.

Summary Table of FS Special Status Species and Associated Conservation Measures				
Species	Status	Potential Location	Potential Impacts	Conservation Measures
			Indirect Impact: Invasion of habitat by weedy plant species	• Implementing the Overland Pass Pipeline *Weed and Pest Management Plan*.

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