

APPENDIX D: BIOLOGICAL OPINION



United States Department of the Interior

FISH AND WILDLIFE SERVICE

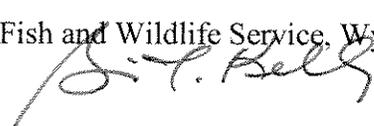
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SEP 25 2007

Memorandum

To: Dennis Carpenter, Acting Field Manager, Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming

From: Brian T. Kelly, Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming 

Subject: Formal Section 7 Consultation for the Overland Pass Pipeline

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion (BO) based on our review of the proposed Overland Pass Pipeline Project (Project). The proposed action is issuance of a Right-of-Way (ROW) allowing the Overland Pass Pipeline Company LLC, (Overland Pass) to construct and operate a 760-mile natural gas liquids pipeline extending from Opal, Wyoming, to Conway, Kansas. This BO addresses potential effects of the proposed action on Preble's meadow jumping mouse (Preble's; *Zapus hudsonius preblei*), Colorado River fish species, and Platte River species in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act) (50 CFR § 402.14).

Your May 3, 2007, request to initiate formal consultation for this Project was received in the Wyoming Field Office on May 4. The Service did not receive all the information needed to initiate formal consultation at that time; therefore, on June 1, 2007, we requested a receipt of payment to the South Platte Water Related Activities Program (SPWRAP) and a copy of a signed Wyoming Platte River Recovery Agreement. On June 11, 2007, the Service received a copy of a June 1, 2007, letter that confirmed payment of \$150.00 to the SPWRAP for the one time use of up to 100 acre-feet (af) of Platte River water for the Project. The Service received a copy of the signed Wyoming Platte River Recovery Agreement from the Wyoming State Engineer's Office on July 3, 2007. The Service provided additional correspondence dated July 11, 2007, to notify you that formal consultation had been initiated. Under section 7 of the Act, the Service has 135 calendar days (*i.e.*, November 15, 2007) to conclude formal consultation and provide a final BO. This BO is based on information provided in the May 3, 2007, biological assessment (BA) and the additional information described above.

The BO presents the Service's analysis of whether the effects of the proposed Federal action when considered with the status of the species, the environmental baseline in the action area, and cumulative effects, is likely to jeopardize the continued existence of the species or result in destruction or adverse modification of designated critical habitat. The Service's Wyoming,

Colorado and Kansas field offices have coordinated during the course of the consultation. A complete administrative record of this consultation is on file at the Service's Wyoming Field Office, Cheyenne, Wyoming.

Within the BA, the Bureau issued a determination of "may affect, not likely to adversely affect" for black-footed ferret (*Mustela nigripes*), Wyoming toad (*Bufo baxteri*), Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*), Ute ladies'-tresses (*Spiranthes diluvialis*), and American burying beetle (*Nicrophorus americanus*). The Service concurs with these determinations based on the following rationale. Black-footed ferret surveys have not verified presence of the species; therefore, effects are unlikely if construction begins on individual segments of the pipeline during the one-year period following a survey. The distance from the action area to existing Wyoming toad populations is more than 5 miles, which should preclude adverse effects. No adverse effects to Colorado butterfly plant and Ute ladies'-tresses are expected because surveys in 2006 and 2007 did not document these plants on the pipeline route, and Overland Pass will implement measures to avoid the species if they are found, and segregate and replace topsoil. Effects are extremely unlikely to occur to the American burying beetle because the action area is outside the known range of the species.

The Bureau provided a determination of "may affect, not likely to adversely affect" for bald eagle (*Haliaeetus leucocephalus*). However, the bald eagle was removed from protection under the Act on August 8, 2007 (72 FR 37346). The protections provided to the bald eagle under the Bald and Golden Eagle Protection Act (16 U.S.C. 668) (BGEPA) and the Migratory Bird Treaty Act (16 U.S.C. 703) (MBTA) remain in place. The Service has developed National Bald Eagle Management Guidelines to advise land managers about how the protective provisions of the MBTA and BGEPA may apply to their activities. These guidelines, which the Service intends to update periodically, are available at <http://www.fws.gov/migratorybirds/baldeagle.htm>. The Service has proposed a permit structure under the BGEPA that is similar to the permit structure that exists under the Act for use when impacts are unavoidable; this structure is going through public comment and is not yet in place. Please contact the Wyoming Ecological Services Office if you have any questions regarding the permit structure, the de-listing decision, or technical assistance that may be needed for any planned or ongoing activities that cannot be conducted in compliance with the MBTA, BGEPA, or the National Bald Eagle Management Guidelines.

The Bureau issued a determination of "may impact, but is not likely to contribute to listing" for the lesser prairie chicken (*Tympanuchus pallidicinctus*) and yellow-billed cuckoo (*Coccyzus americanus*). The Service agrees with these determinations based on the limited use of the action area by these species and the conservation measures committed to by Overland Pass.

The Service also acknowledges that the Bureau made "no effect" determinations for grizzly bear (*Ursus arctos horribilis*), gray wolf (*Canis lupus*), Canada lynx (*Lynx canadensis*), Eskimo curlew (*Numenius borealis*), Mexican spotted owl (*Strix occidentalis*), Arkansas darter (*Etheostoma cragini*), Arkansas River shiner (*Notropis girardi*), Topeka shiner (*Notropis topeka*), and blowout penstemon (*Penstemon haydenii*). Service concurrence with "no effect" determinations is not required under the Act, but we do appreciate the information regarding their status in the project area.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

Overland Pass proposes to construct and operate a 760-mile natural gas liquids pipeline that would extend from Opal, Wyoming, to Conway, Kansas. The Bureau's proposed action is issuance of an ROW allowing Overland Pass to construct and operate the pipeline on Federal lands administered by the Bureau and U.S. Forest Service in Colorado and Wyoming (16 percent of the total pipeline length).

Overland Pass will place 14-inch diameter pipe for 146.5 miles, extending from the starting point of the pipeline route at the Opal Meter Station in Wyoming to the Echo Springs Pump Station. The remainder of the pipeline route, from Echo Springs Pump Station to Conway Meter Station, will be comprised of 16-inch diameter pipe. Four shorter 12-inch pipes ranging from 340 feet to 1,260 feet would be installed at transfer meter stations to connect to existing pipelines. In addition to the pipeline, Overland Pass would construct 3 pump stations, 7 meter stations, 11 pigging facilities, 144 mainline valves at 92 sites, 24 pipe storage and contractor yards, various temporary workspace areas, and access roads. Overland Pass plans to begin construction in the October 2007, and construction should last through May 2008. Overland Pass will follow several plans included with the BA and Environmental Impact Statement that provide best management practices during the course of construction and operation.

A 75-foot wide construction ROW will be authorized for the majority of the pipeline route. An additional 25 feet of width may be needed during construction in areas with steep slopes, and additional workspace may be required at sites where the pipeline crosses roads, railroads, pipelines, waterlines, and water bodies. Construction will disturb a total of 8,317 acres, and 4,619 acres will be used for continued operation of the pipeline. In addition, construction will require the use of 582 access roads that total 2,577 miles; many of these roads will be improved or upgraded for hauling equipment. Along most sections of the pipeline, Overland Pass will maintain a 50-foot wide ROW once construction is complete. Approximately 624 miles of the 760-mile pipeline would be co-located with existing pipeline utility or road ROWs. Overland Pass's ROW would generally be offset 50 feet from the center line of existing permanent ROWs.

Prior to placing the pipeline in service, Overland Pass will conduct hydrostatic testing by filling sections of the pipe with water and raising pressure to a level above the pipeline's operating pressure. Water will also be used for dust abatement during construction and to conduct horizontal directional drilling. This water will be taken from surface water and groundwater sources connected to the Colorado River Basin, Platte River Basin, and Kansas River Basin. Overland Pass plans to withdraw 39.3 af of water from the Colorado River Basin, 49.8 af of water from the North Platte Basin, 46.1 af of water from the South Platte Basin, and 62.4 af of water from the Kansas River Basin. Water from the Colorado River Basin and North Platte Basin will be withdrawn in Wyoming. The water from the South Platte River includes withdrawals of approximately 42.5 af of water in Colorado and 3.6 af of water in Wyoming. Water from the Kansas River Basin will be withdrawn in Kansas.

The Service received a copy of a June 1, 2007, letter that confirmed payment of \$150.00 to the South Platte Water Related Activities Program in Colorado for the one time use of up to 100 af of Platte River water for the Project. On June 27, 2007, Overland Pass executed a Wyoming

Platte River Recovery Agreement with the Wyoming State Engineer's Office regarding use of North Platte and South Platte River Basin water. Based on the SPWRAP payment and Wyoming agreement, Overland Pass is participating in the Platte River Recovery Implementation Program (PRRIP) and the Project tiers to the June 16, 2006, programmatic biological opinion (PBO), as described below. The Colorado River depletions tier to consultation on recovery actions, as described below. The Kansas River Basin is not subject to consultation under the Act for depletions.

Conservation Measures

Several conservation measures are proposed as part of the action to help reduce Project-related impacts to sensitive wildlife species. These conservation measures include adherence to the Sensitive Species Survey Plan and the Construction, Reclamation, and Revegetation Plan, which were both included with the BA. Specific conservation measures developed to protect the Preble's meadow jumping mouse include the following items:

- 1) No equipment will be parked closer than 325 feet from the stream crossing, and refueling will occur as specified in the Overland Pass Pipeline Project Spill Prevention, Containment, and Countermeasure Plan.
- 2) If the pipeline is rerouted, but still occurs in suitable habitat for Preble's, additional surveys may be required, in coordination with the Bureau and Service.
- 3) When equipment crosses suitable Preble's habitat during non-breeding aboveground periods (*i.e.*, May and August to October), a biologist will clear the area and physically remove mice encountered. These efforts will continue ahead of each piece of equipment until the ROW is cleared of vegetation and silt fences are installed to prevent mice from returning to the ROW.
- 4) If crossing of suitable habitat occurs during the breeding season (June or July), adult Preble's will be captured, marked, released at the trap site, and followed to determine if they have young in a nest. If a nest is located within the ROW, a decision will be made to move the ROW and avoid the nest or delay the crossing until late July when the young should be mobile and able to be trapped and moved from the immediate area or exit the area through clearing efforts.
- 5) Construction through suitable Preble's habitat areas will be conducted as quickly as possible.
- 6) 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 (one plant every square foot).
- 7) If suitable Preble's habitat is grazing land and the landowner provides consent, the replanted area will be fenced until vegetation is established.
- 8) In suitable Preble's habitat, the width of the construction ROW will be reduced as practical. In eight of the nine Preble's habitat locations along the pipeline route, the construction ROW will be reduced to 60 feet.

Action Area

"Action area" is defined at 50 CFR § 402 to mean "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." For the purposes of this consultation, the Service defines the action area along a linear path of the

pipeline extending from Opal, Wyoming, to Conway, Kansas. The action area includes all pump stations, meter stations, pigging facilities, mainline valve sites, pipe storage and contractor yards, temporary workspace areas, and access roads associated with this Project. The action area includes 1 mile either side of the pipeline construction ROW and the edge of the other facilities described to account for noise, visual impacts, fugitive dust, and other traffic-related effects. The action area includes all points of surface water and groundwater withdrawal. Within the Platte River Basin, the action area extends from the water withdrawal points and follows existing hydrologic connections through Nebraska to the confluence of the Platte River with the Missouri River. Within the Colorado River Basin, the action area extends from the water withdrawal points and follows existing hydrologic connections downstream to Lake Powell on the Colorado River. The action area includes portions of Lincoln, Sweetwater, Carbon, Albany, and Laramie counties in Wyoming, Larimer, Weld, Morgan, Logan, Washington, and Yuma counties in Colorado, and Cheyenne, Rawlins, Thomas, Sheridan, Gove, Trego, Ellis, Russell, Barton, Ellsworth, Rice, and McPherson counties in Kansas. The action area does not include any designated critical habitat for Preble's meadow jumping mouse, which is why the Bureau has determined the Project will have no effect on Preble's critical habitat.

COLORADO RIVER FISH SPECIES CONSULTATION

The action includes depletions of 39.3 af of water from the Colorado River Basin that will be withdrawn from municipal wells and the Blacks Fork and Green rivers. A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) was initiated on January 22, 1988. The Recovery program was intended to be the reasonable and prudent alternative to avoid jeopardy to the endangered fish by depletions from the Upper Colorado River.

In order to further define and clarify the process in the Recovery Program, a section 7 agreement was implemented on October 15, 1993, by the Recovery Program participants. Incorporated into this agreement is a Recovery Implementation Program Recovery Action Plan (Plan) which identifies actions currently believed to be required to recover the endangered fish in the most expeditious manner in the Upper Colorado River Basin.

A part of the Recovery Program was the requirement that if a project was going to result in a depletion, a depletion fee would be paid to help support the Recovery Program. On July 5, 1994, the Service issued a BO determining that the fee for depletions of 100 af or less would no longer be required. This was based on the premise that the Recovery Program has made sufficient progress to be considered the reasonable and prudent alternative avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat by depletions of 100 af or less. Therefore, **the depletion fee for this Project is waived.**

Permits or other documents authorizing specific projects, which result in depletions, should state that the Bureau retains discretionary authority over each project for the purpose of endangered species consultation. If the Recovery Program is unable to implement the Plan in a timely manner, reinitiation of section 7 consultation may be required so that a new reasonable and prudent alternative can be developed by the Service. Colorado River depletions will not be

discussed further in this document because the action tiers to the Recovery Program and Plan, as described above.

PLATTE RIVER SPECIES BACKGROUND AND STATUS

Overview

On June 16, 2006, the Service issued a PBO for the PRRIP and water-related activities¹ affecting flow volume and timing in the central and lower reaches of the Platte River in Nebraska. The action area for the PBO includes the Platte River basin upstream of the confluence with the Loup River in Nebraska, and the mainstem of the Platte River downstream of the Loup River confluence.

The Federal action addressed by the PBO includes the following:

- 1) funding and implementation of the PRRIP for 13 years, the anticipated first stage of the PRRIP; and
- 2) continued operation of existing and certain new water-related activities² including, but not limited to, Bureau of Reclamation and Service projects that are (or may become) dependent on the PRRIP for compliance with the Act during the first 13-year stage of the PRRIP for their effects on the target species, whooping crane (*Grus americana*) critical habitat, and other listed species that rely on central and lower Platte River habitats. The target species are the endangered whooping crane, interior least tern (*Sterna antillarum*), pallid sturgeon (*Scaphirynchus albus*), and the threatened northern Great Plains population of piping plover (*Charadrius melodus*) (USDOI 2006). Other listed species addressed in the PBO are the bald eagle, western prairie fringed orchid (*Platanthera praeclara*), American burying beetle and Eskimo curlew. All of these other species, except the western prairie fringed orchid, are addressed above.

The PBO established a two-tiered consultation process for future Federal actions on existing and new water-related activities subject to section 7(a)(2) of the Act, with issuance of the PBO being Tier 1 and all subsequent site-specific project analyses constituting Tier 2 consultations covered by the PBO. Under this tiered consultation process, the Service provides tiered BOs when it is determined that future Federal actions are “likely to adversely affect” listed species and/or designated critical habitat in the PRRIP action area and the project is covered by the PBO.

Although the water depletive effects of this Federal action to central and lower Platte River species have been addressed in the PBO, when “no effect,” or “may affect but not likely to adversely affect” determinations are made on a site-specific basis, the Service reviews these

¹ “Water-related activities” means activities and aspects of activities which (1) occur in the Platte River basin upstream of the confluence of the Loup River with the Platte River; and (2) may affect Platte River flow quantity or timing, including, but not limited to, water diversion, storage and use activities, and land use activities.

² “Existing water-related activities” include surface water or hydrologically-connected groundwater activities implemented on or before July 1, 1997. “New water-related activities” include new surface water or hydrologically-connected groundwater activities, including new projects and expansions of projects (regardless of whether it is subject to section 7(a)(2) of the Act), which may affect the quantity or timing of water reaching the associated habitats and which are implemented after July 1, 1997.

determinations and provides written concurrence where appropriate. Upon receipt of written concurrence, section 7(a)(2) consultation will be considered complete for those Federal actions.

Water-related activities requiring Federal approval are reviewed by the Service to determine if: (1) those activities comply with the definition of existing water-related activities and/or (2) proposed new water-related activities are covered by the applicable state's or the Federal depletions plan. The Service has determined that the Project meets these criteria and, therefore, this Tier 2 BO regarding the effects of the Project on the target species, whooping crane critical habitat, and western prairie fringed orchid in the central and lower Platte River can tier from the June 16, 2006, PBO.

Table II-1 of the PBO (USFWS 2006, pages 21-23) contains a list of species and critical habitat in the action area, their status, and the Service's determination of the effects of the Federal action analyzed in the PBO.

The Service determined in the Tier 1 PBO that the Federal action, including the continued operation of existing and certain new water-related activities, may adversely affect but would not likely jeopardize the continued existence of the endangered whooping crane, interior least tern, and pallid sturgeon, or the threatened northern Great Plains population of the piping plover, western prairie fringed orchid, and bald eagle in the central and lower Platte River. The bald eagle was removed from protection under the Act on August 8, 2007, and will not be discussed further. The Service also determined that the Federal action, including the continued operation of existing and certain new water-related activities, was not likely to destroy or adversely modify designated critical habitat for the whooping crane.

Scope of the Tier 2 Biological Opinion

The Project is a component of "the continued operation of existing and certain new water-related activities" needing a Federal action evaluated in the Tier 1 PBO, and flow-related effects of the Federal action are consistent with the scope and the determination of effects in the June 16, 2006, PBO. Because Overland Pass has elected to participate in the PRRIP, compliance with the Act for flow-related effects to endangered and threatened species and designated critical habitat from the Project is provided to the extent described in the Tier 1 PBO.

This BO applies to the Project effects to listed endangered and threatened species and designated critical habitat as described in the PBO for the first 13 years of the PRRIP (*i.e.*, the anticipated duration of the first PRRIP increment).

Status of the Species/Critical Habitat

Species descriptions, life histories, population dynamics, status and distributions are fully described in the PBO (USFWS 2006, pages 76-156) for the whooping crane, interior least tern, piping plover, pallid sturgeon and western prairie fringed orchid, bald eagle, and whooping crane critical habitat and are hereby incorporated by reference. The bald eagle was removed from protection under the Act on August 8, 2007. Otherwise, since issuance of the Service's PBO, there have been no substantial changes in the status of the target species/critical habitat.

STATUS OF PREBLE'S MEADOW JUMPING MOUSE

The Service listed the Preble's meadow jumping mouse as a threatened species on May 13, 1998 (63 FR 26517). The Service designated critical habitat for the species on June 23, 2003 (68 FR 37275).

Species Description

The Preble's meadow jumping mouse is a member of the family Dipodidae (jumping mice) with four living genera, two of which, *Zapus* and *Napaeozapus* are found in North America (Hall 1981). The three living species within the genus *Zapus* are *Z. hudsonius* (the meadow jumping mouse), *Z. princeps* (the western jumping mouse), and *Z. trinotatus* (the Pacific jumping mouse). Edward A. Preble (1899) first documented the meadow jumping mouse from Colorado. Krutzsch (1954) described Preble's as a separate subspecies of meadow jumping mouse limited to Colorado and Wyoming. Preble's is now recognized as one of twelve subspecies of meadow jumping mouse (Hafner *et al.* 1981).

The Preble's meadow jumping mouse is a small rodent with an extremely long tail, large hind feet and long hind legs. The tail is bicolored, lightly-furred and typically twice as long as the body. The large hind feet can be one-third again as large as those of other mice of similar size. Preble's has a distinct, dark, broad stripe on its back that runs from head to tail and is bordered on either side by grey to orange-brown fur. The hair on the back of all jumping mice appears coarse compared to other mice. The underside hair is white and much finer in texture. Total length of adult Preble's mice is approximately 7 to 10 inches and tail length is 4 to 6 inches (Krutzsch 1954, Fitzgerald *et al.* 1994). The average weight of 120 adult Preble's mice captured early in their active season (prior to June 18) was 0.6 ounces; included were 10 pregnant females weighing more than 0.8 ounces each (Meaney *et al.*, 2002).

Life History/Habitat

General Habitat: Typical habitat for Preble's meadow jumping mouse is comprised of well-developed plains riparian vegetation with adjacent, relatively undisturbed grassland communities and a nearby water source. Well-developed plains riparian vegetation typically includes a dense combination of grasses, forbs, and shrubs; a taller shrub and tree canopy may be present (Bakeman 1997). When present, the shrub canopy is often willow, although other shrub species, including snowberry (*Symphoricarpos* spp.), chokecherry (*Prunus virginiana*), hawthorn (*Crataegus* spp.), Gambel's oak (*Quercus gambelli*), alder (*Alnus incana*), river birch (*Betula fontinalis*), skunkbrush (*Rhus trilobata*), wild plum (*Prunus americana*), lead plant (*Amorpha fruticosa*), and dogwood (*Cornus sericea*) may also occur (Bakeman 1997, Shenk and Eussen 1998). Preble's have rarely been trapped in uplands adjacent to riparian areas (Dharman 2001). However, Preble's have been found feeding and resting in adjacent uplands (Shenk and Sivert 1999b, Schorr 2001) as far out as 328 feet beyond the 100-year floodplain (Ryon 1999). Preble's can also move considerable distances along streams – as far as 1 mile in one evening (Ryon 1999, Shenk and Sivert 1999a). Adjacent uplands used by the Preble's meadow jumping mouse are extremely variable, ranging from open grasslands to ponderosa pine (*Pinus ponderosa*) woodlands (Corn *et al.* 1995, Pague and Grunau 2000).

Riparian shrub cover, tree cover, and the amount of open water nearby are good predictors of Preble's densities (White and Shenk 2000). Estimates of abundance by White and Shenk (2000) ranged from 6 to 110 mice per mile and averaged 53 mice per mile of stream. A comparison of habitats at capture locations on the Department of Energy's Rocky Flats Environmental Technology Site in Jefferson County, Colorado, and the U.S. Air Force Academy in El Paso County, Colorado, revealed that Academy sites had lower plant species richness at capture locations but considerably greater numbers of Preble's (Schorr 2001). However, the Academy sites also had higher densities of both grasses and shrubs. Preble's abundance is likely driven by the density of riparian vegetation rather than the diversity of plant species.

Hydrologic regimes that support Preble's habitat range from large perennial rivers such as the South Platte River to small ephemeral drainages only 3 to 10 feet in width, as at Rocky Flats and in montane habitats. Flooding is a common and natural event in the riparian systems along the Front Range of Colorado. This periodic flooding helps create a dense vegetative community by stimulating resprouting from willow shrubs and allows herbs and grasses to take advantage of newly-deposited soil.

Preble's construct day nests composed of grasses, forbs, sedges, rushes, and other available plant material. They may be globular in shape or simply raised mats of litter. Nests are most commonly above ground but can also be below ground. They are typically found under debris at the base of shrubs and trees, or in open grasslands (Ryon 2001). An individual mouse can have multiple day nests in both riparian and grassland communities (Shenk and Sivert 1999a), and may abandon a nest after approximately a week of use (Ryon 2001).

Hibernation: Preble's is a true hibernator, usually entering hibernation in September or October and emerging the following May, after a hibernation period of seven or eight months. Adults enter hibernation earliest because they accumulate the necessary fat stores sooner than young of the year. Similar to other subspecies of meadow jumping mouse, Preble's do not store food, but survive on fat stores accumulated prior to hibernation (Whitaker 1963). Apparent hibernacula (hibernation nests) of Preble's have been located both within and outside the 100-year floodplain of streams (Shenk and Sivert 1999a, Ryon 2001, Schorr 2001). Mice hibernating outside the 100-year floodplain would likely be less vulnerable to flood-related mortality. Fifteen apparent Preble's hibernacula have been located through radio telemetry, all within 260 feet of a perennial streambed or intermittent tributary (Bakeman and Deans 1997, Shenk and Sivert 1999a, Schorr 2001).

Hibernacula have been located under willow, chokecherry, snowberry, skunkbrush, sumac (*Rhus* spp.), clematis (*Clematis* spp.), cottonwoods (*Populus* spp.), Gambel's oak, thistle (*Cirsium* spp.), and alyssum (*Alyssum* spp.) (Shenk and Sivert 1999a). At the Academy, 4 of 6 likely hibernacula found by radio-telemetry were located in close proximity to coyote willow (*Salix exigua*) (Schorr 2001). The one excavated hibernaculum at Rocky Flats was found 30 feet above the streambed, in a dense patch of chokecherry and snowberry (Bakeman and Deans 1997). The nest was constructed of leaf litter 12 inches below the surface in coarse textured soil.

Diet: While fecal analyses have provided the best data on Preble's diet to date, they overestimate the components of the diet that are less digestible. The diet shifts seasonally; it

consists primarily of insects and fungus after emerging from hibernation, shifts to fungus, moss, and pollen during mid-summer (July-August), with insects again added in September (Shenk and Sivert 1999a). The shift in diet along with shifts in mouse movements suggests that Preble's may require specific seasonal diets, perhaps related to the physiological constraints imposed by hibernation (Shenk and Sivert 1999a).

Reproduction: Preble's usually have two litters per year, but there are records of three litters per year. An average of five young are born, but the size of a litter can range from two to eight young (Quimby 1951, Whitaker 1963). Preble's are long-lived for a small mammal, in comparison with many species of mice and voles that seldom live a full year. Along South Boulder Creek, Boulder County, Colorado, seven individuals originally captured as adults were still alive two years later, having attained at least three years of age (Meaney *et al.*, 2002).

Mortality: Preble's have a host of known predators, including garter snakes (*Thamnophis* spp.), prairie rattlesnakes (*Crotalus viridus*), bullfrogs (*Rana catesbiana*), foxes (*Vulpes vulpes* and *Urocyon cinereoargenteus*), house cats (*Felis catus*), long-tailed weasels (*Mustela frenata*), and red-tailed hawks (*Buteo jamaicensis*) (Shenk and Sivert 1999a, Schorr 2001). Other mortality factors of Preble's include drowning and vehicle collision (Schorr 2001, Shenk and Sivert 1999a). Mortality factors known for the meadow jumping mouse, such as starvation, exposure, disease, and insufficient fat stores for hibernation (Whitaker 1963) are also likely causes of death for Preble's.

Population Dynamics

Preble's annual survival rate is low, but rates appear to be lower over the summer than over the winter. Over-summer survival rates ranged from 22 to 78 percent and over-winter survival rates ranged from 56 to 97 percent (Shenk and Sivert 1999b, Schorr 2001, Meaney *et al.* 2002). Additionally, fire is a natural component of the Colorado Front Range and Wyoming foothills and Preble's habitat naturally fluctuates with fire events. Within shrubland and forested areas, intensive fire may result in adverse impacts to Preble's populations. However, in a review of the effects of grassland fires on small mammals, Kaufman *et al.* (1990) found a positive effect of fire on the meadow jumping mouse in one study and no effect of fire on the species in another study.

Status and Distribution

The Preble's meadow jumping mouse is found along the foothills in southeastern Wyoming, southward along the eastern edge of the Front Range of Colorado to Colorado Springs in El Paso County (Hall 1981, Clark and Stromberg 1987, Fitzgerald *et al.* 1994). Knowledge about the current distribution of Preble's comes from specimens collected from live-trapping efforts conducted in Wyoming and Colorado since the mid-1990s. Recently-collected specimens are housed at the Denver Museum of Nature and Science, and survey reports are filed with the Service's Field Offices in Colorado and Wyoming. The Service listed the Preble's meadow jumping mouse as a threatened species on May 13, 1998 (63 FR 26517). The Service designated critical habitat for the species on June 23, 2003 (68 FR 37275).

In Wyoming, the distribution of Preble's extends in a band from the town of Douglas southward along the Laramie Range to the Colorado border; this area goes east into Platte County and to Cheyenne in Laramie County. In Colorado, the distribution of Preble's forms a band along the Front Range from Wyoming southward to Colorado Springs in El Paso County; distribution extends to western Weld County, western Elbert County and north-central El Paso County.

Preble's is likely an Ice Age relict (Hafner *et al.* 1981, Fitzgerald *et al.* 1994). When the climate became drier and the glaciers receded, Preble's was confined to the riparian systems where moisture was more plentiful. The semi-arid climate in southeastern Wyoming and eastern Colorado limits the extent of riparian corridors and restricts the range of Preble's in this region. Preble's has not been found east of Cheyenne in Wyoming or on the extreme eastern plains in Colorado. The eastern boundary for the subspecies is likely defined by the dry shortgrass prairie, which may present a barrier to eastward expansion (Beauvais 2001).

The western boundary of Preble's range in both States appears related to elevations along the Laramie Range and Front Range. In the Federal Register listing for Preble's, the Service used 2,300 meters (7,600 feet) in elevation as the general upward limit of Preble's habitat in Colorado (63 FR 26517). Recent morphological examination of specimens has confirmed Preble's occur at elevations up to approximately 7,600 feet in Colorado (Meaney *et al.* 2001). Distributions may extend up to 8,100 feet in southeastern Wyoming (Smith *et al.* 2004). In a modeling study of habitat associations in Wyoming, Keinath (2001) predicted suitable habitat in the Laramie Basin and Snowy Range Mountains (west of known Preble's occurrence) but predicted very little suitable habitat on the plains of Goshen, Niobrara, and eastern Laramie counties (east of known Preble's occurrence).

Preble's is closely associated with riparian ecosystems that are linear in nature and represent a small percentage of the landscape. If Preble's habitat is destroyed or modified, populations in those areas may decline or be extirpated. The decline in the extent and quality of Preble's habitat is considered the main factor threatening the subspecies (Hafner *et al.* 1998, Shenk 1998). Habitat alteration, degradation, loss, and fragmentation resulting from urban development, flood control, water development, intensive agricultural activities, and other human land uses have adversely affected Preble's populations. Habitat destruction may impact individual Preble's directly or by destroying nest sites, food resources, and hibernation sites, by disrupting behavior, or by forming a barrier to movement.

Although there is little information on past distribution or abundance of Preble's, surveys have identified various locations where the subspecies was historically present but is now absent (Ryon 1996). Despite numerous surveys, Preble's has not recently been found in the Denver and Colorado Springs metropolitan areas and is believed to be extirpated from these areas as a result of extensive urban development. Since at least 1991, Preble's has not been found in Denver, Adams, and Arapahoe counties in Colorado. Its absence in these counties is likely due to urban development, which has altered, reduced, or eliminated riparian habitat (Compton and Hugie 1993, Ryon 1996).

Threats

The Preble's meadow jumping mouse is threatened by various human-related activities, including agriculture, recreation, habitat fragmentation, water management, mining in riparian areas, transportation and utility corridors, pesticides, herbicides, noxious weeds, and fire.

Conversion of native riparian ecosystems to commercial croplands and grazed rangelands was identified as the major threat to Preble's persistence in Wyoming (Clark and Stromberg 1987, Compton and Hugie 1993). Certain grazing and haying management scenarios maintain what appears to be good habitat for Preble's. However, intensive grazing and haying operations may negatively impact Preble's by removing food and shelter. While some Preble's populations coexist with livestock operations, overgrazing can decimate riparian communities on which Preble's depends. Similarly, haying operations (and the associated water development) that allow significant riparian vegetation to remain in place appear to be compatible with persistence of Preble's populations. In fact, the large populations of Preble's occur in grazed and hayed areas along Cottonwood Creek, Chugwater Creek, and Horse Creek in Wyoming.

Recreational trail systems frequently parallel or intersect riparian communities and thus are common throughout Preble's range. Trail development can alter natural communities and may impact Preble's by modifying nest sites, food resources, and hibernation sites; fragmenting habitat; and increasing predation. Humans and pets using these trails may alter behavior patterns of Preble's and cause a decrease in survival and reproductive success.

Habitat fragmentation limits the extent and abundance of Preble's. In general, as populations of a species become fragmented and isolated, the likelihood for long-term persistence decreases. Small, isolated habitat patches are unable to support as many Preble's mice as larger habitat patches, and larger populations generally are more secure from extirpation than smaller ones. The increasing presence of humans near Preble's habitats may result in increased level of predation that may pose a threat to Preble's. The striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), red fox, and the domestic and feral cat are found in greater densities in and around areas of human activity; all four of these species feed opportunistically on small mammals. Introduction of species such as the bullfrog into waters within Preble's range may result in additional predation. The fact that summer mortality is higher than overwinter mortality underscores the impact that predators can have on Preble's.

The structure and function of riparian ecosystems are determined by the hydrology of the waterway. Water development and management may lead to development of lush riparian vegetation by maintaining more moisture in the riparian areas for longer periods of time. This may lead to beneficial effects for Preble's. However, some changes to the timing and abundance of water may alter the channel structure, riparian vegetation, and floodplain. Some of these changes may result in harmful impacts to the persistence of Preble's. Increased development and impervious surface within a drainage can result in more frequent and severe flood events and prevent the maintenance of riparian communities. Bank stabilization, channelization, and other measures to address flooding and storm water runoff have increased the rate of stream flow, straightened riparian channels, and narrowed riparian areas (Pague and Grunau 2000). Using riprap and other structural stabilization options to address erosion can destroy riparian vegetation and deter its reestablishment. These measures can alter the

hydrologic processes and plant communities present to the point where Preble's populations can no longer persist.

Alluvial aggregate extraction may produce long-term changes to Preble's habitat by altering hydrology and removing riparian vegetation. In particular, such extraction removes and often precludes reestablishment of habitat components required by Preble's. Such mining impacts the deposits of alluvial sands and gravels that may be important hibernation locations for Preble's.

Transportation and utility corridors frequently cross Preble's habitat and may negatively affect populations. As new roads are built and old roads are maintained, habitat can be destroyed or fragmented. Roads and bridges also may act as barriers to dispersal. Train and truck accidents within riparian areas may release spills of chemicals, fuels and other substances that may impact the mouse or its habitat. Rights-of-way for sewer, water, communications, gas, and electric lines cross Preble's habitat and can contribute to habitat disturbance and fragmentation through new construction and periodic maintenance.

Pesticides and herbicides are used within the range of Preble's. Inappropriate use of these chemicals may harm Preble's through direct contact or ingestion. An integrated pest management approach (use of biological, chemical, and mechanical controls) may help reduce the threat of chemicals. However, the large-scale removal of noxious weeds through chemical treatments and mechanical mowing may also negatively impact Preble's. Invasive, noxious plants pose a threat to Preble's as well because they can encroach upon a landscape and displace native plant species. This change reduces the abundance and diversity of native plants, and may negatively impact cover and food sources for Preble's.

Intense fires can alter habitat dramatically and change the structure and composition of the vegetation communities so that Preble's may no longer persist. Precipitation in a burned area may degrade Preble's habitat by causing greater levels of erosion and sedimentation along creeks. Controlled use of fire may be one method to maintain appropriate riparian, floodplain, and upland vegetation within Preble's habitat. However, decades of fire suppression efforts have allowed increases in fuel loadings that could allow uncharacteristically intense fires in the future.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed state or Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation process. The action area for the proposed action is described above. This area does not include any designated critical habitat for Preble's meadow jumping mouse.

Approximately 624 miles of the 760-mile pipeline would be co-located with existing pipeline utility or road ROWs that have been previously disturbed. Overland Pass's ROW would generally be offset 50 feet from the center line of existing permanent ROWs. Therefore, the

general pipeline construction area has been previously disturbed in most areas; however, these areas should be in a reclaimed condition that allows for ongoing maintenance. The 582 access roads have been previously constructed and are in various conditions for construction use. Of the 24 pipe storage and contractor yards, Overland Pass plans to place 11 on lands that are already developed. Other segments of the pipeline are not developed but have been used for agriculture, grazing and recreation.

The water withdrawal points are at existing facilities that have been developed to provide water for private, municipal, or irrigation purposes. The existing use of these sources does not include dust control, hydrostatic testing or horizontal directional drilling.

Platte River Species

The environmental baseline sections for the Platte River and for the whooping crane, interior least tern, piping plover, pallid sturgeon and western prairie fringed orchid, and whooping crane critical habitat are described on pages 157-219 of the Tier 1 PBO (USFWS 2006), and are hereby incorporated by reference. Since issuance of the Tier 1 PBO, there have been no substantial changes in the status of the target species/critical habitat in the action area.

Status of Preble's Meadow Jumping Mouse within the Action Area

In Wyoming, 37 historic observations of Preble's have been recorded near the Project area in Laramie and Albany counties (Smith *et al.* 2004). Although Preble's critical habitat is not designated within the action area, potentially suitable habitat for Preble's was identified at nine areas along the Overland Pass ROW between mile reference points 292.5 and 322.9 (Derby and Rintz 2006). Therefore, this section of the action area is expected to be occupied by Preble's. Little is known about the size of Preble's populations, but they are likely influenced by stream reach length, width of riparian vegetation, habitat condition, and landscape context (Pague and Grunau 2000). The majority of the variation in Preble's density may be explained by variation in shrub and tree cover (White and Shenk 2000). A rough estimate of 38 mice per stream mile is cautiously being used for recovery planning purposes by the Preble's Recovery Team.

Factors Affecting the Environment of Preble's Meadow Jumping Mouse in the Action Area

The majority of the action area that contains potential Preble's habitat is privately owned and is likely used for grazing and agricultural activities. Based on the intensity of these activities, the quality of Preble's habitat may be reduced. However, based on the recent surveys that were conducted to determine Preble's habitat (Derby and Rintz 2006), these areas should be reasonably functional. Existing ROW routes also parallel portions of Preble's habitat in the action area and have likely altered habitat through original construction and ongoing maintenance. However, the majority of the impacts from the existing ROWs were likely temporary. The action area also may have invasive plant species in the riparian zone that have reduced the diversity and density of native vegetation, resulting in reduced habitat for Preble's. Changes to hydrology through an increase in water wells, culverts, and/or bridges over riparian areas may have resulted in some erosion and degradation of habitat in the past.

EFFECTS OF THE ACTION

“Effects of the action” means the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action. Direct effects result directly or immediately from the proposed action. Indirect effects are caused by, or result from, the proposed action and occur later in time. Indirect effects may occur outside the area directly affected by the action. “Interrelated actions” are those that are part of a larger action and depend on the larger action for their justification; “interdependent actions” are those that have no independent utility apart from the action under consideration (50 CFR § 402.02).

Based on our analysis of the information provided in the BA for the Project, the Service concludes that the proposed Federal action will result in a new depletion to the Platte River system above the Loup River confluence in Nebraska. These depletions are associated with water used for hydrostatic testing of the pipeline, dust control during construction activities, and horizontal directional drilling. In Colorado, depletions consist of a one-time water use of approximately 42.8 af from the North Sterling Ditch and numerous municipal wells in the South Platte Basin. In Wyoming, depletions consist of a one-time water use of approximately 49.8 af from various sources in the North Platte Basin and 3.6 af from municipal wells near Cheyenne in the South Platte Basin.

As an existing water-related activity, we have determined that the flow-related adverse effects of the Project are consistent with those evaluated in the Tier 1 PBO for the whooping crane, interior least tern, piping plover, pallid sturgeon, western prairie fringed orchid, and whooping crane critical habitat, and these effects on flows are being addressed in conformance with Wyoming’s Depletions Plan and the Colorado Plan for Future Depletions of the PRRIP.

Project activities will disturb 1.64 acres of Preble’s habitat in total. Of this area, 0.34 acres will be revegetated as Preble’s habitat, and therefore temporarily impacted. The remaining area will be revegetated, but may be periodically disturbed during maintenance activities within the ROW. Individual Preble’s may be directly taken due to construction, restoration, enhancement, and/or revegetation efforts within or near their habitat. The majority of the impacts will likely be non-lethal, but the proposed action may cause lethal impacts to Preble’s if mice are unable to avoid excavation or other construction impacts. Impacts may include: crushing by heavy machinery, disruption during hibernation, disturbance of nest sites, displacement by noise, reductions in habitat available for foraging and reproduction, and disruptions to travel corridors. Secondary impacts of the proposed Project to Preble’s may result from temporary increases in noise, light, and human activities related to the normal implementation of the Project. The adverse effects from construction are anticipated to be experienced between fall and spring and should last no longer than two to three weeks in Preble’s habitat. Maintenance activities would likely be infrequent and completed quickly. Various indirect effects may result to mice through impacts of the Project caused by erosion and runoff or contamination from a fuel or oil spill, but these impacts are not anticipated based on Overland Pass’s conservation measures.

In evaluating Preble’s meadow jumping mouse effects from habitat loss, the Service considers potential effects to Preble’s meadow jumping mouse hibernacula, foraging and nesting habitat all of which could potentially occur 120 meters (400 feet) outward from the stream edge on both sides of the stream (total of 800 feet). According to USFWS (2003), this distance captures

foraging and resting habitat adjacent to uplands and includes the alluvial floodplain, transition slopes and pertinent uplands as described by Shenk and Sivert 1999b, Ryon 1999, and Schorr 2001. These studies reveal that the Preble's meadow jumping mouse regularly utilizes uplands at least as far out as 100 meters (328 feet) beyond the 100-year floodplain (Ryon 1999).

Preble's meadow jumping mouse home ranges may vary from approximately 0.81 to 1.23 acres USFWS (1998). The loss of approximately 1 acre would constitute the loss of approximately 1 Preble's meadow jumping mouse home range, on average, but depending on the number of overlapping home ranges and location and amount of habitat loss by each project, it is likely that more than one Preble's meadow jumping mouse home range will be affected by the proposed action.

The proposed action will result in adverse effects to individual mice that occur in Project impact areas during construction and maintenance activities. However, these individuals generally should be able to relocate to nearby habitat and no significant changes to the population are anticipated from the action. The overall impact to the mouse comes from impacts from proposed activities that occur in a very small portion of the overall habitat that will not result in an appreciable reduction of the ability of Preble's to survive and recover. Over time and with successful reclamation, Preble's habitat is expected to be re-established at or near pre-construction quality.

CUMULATIVE EFFECTS

Cumulative effects are the effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur in the action area. Cumulative effects related to the Platte River species are described on pages 194 to 300 of the Tier 1 PBO (USFWS 2006), and are hereby incorporated by reference. Since the Tier 1 PBO was issued, there have been no substantial changes in the status of cumulative effects. In the action area, use of private lands for agriculture and grazing is anticipated to continue into the foreseeable future. Additionally, use of adjacent ROWs for other utilities are likely to continue into the future. Oil, gas and wind development is occurring outside the action area, but future energy development may occur at locations that could affect the action area.

CONCLUSIONS

The Service concludes that the proposed Project is consistent with the PRRIP Tier 1 PBO for effects to listed species and critical habitat addressed in the Tier 1 PBO. After reviewing site specific information, including: 1) the scope of the Federal action, 2) the environmental baseline, 3) the status of the whooping crane, interior least tern, piping plover, pallid sturgeon, and western prairie fringed orchid in the central and lower Platte River and their potential occurrence within the project area, as well as whooping crane critical habitat, 4) the effects of the Project, and 5) any cumulative effects, it is the Service's biological opinion that the Project, as described, is not likely to jeopardize the continued existence of the endangered whooping crane, interior least tern, and pallid sturgeon, or the threatened northern Great Plains population of the piping plover and western prairie fringed orchid in the central and lower Platte River. The

Federal action is also not likely to destroy or adversely modify designated critical habitat for the whooping crane.

After reviewing the current status of Preble's, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of Preble's. We base our conclusion on the following: 1) impacts to 1.64 acres of the available habitat would not preclude recovery of the species based on the relatively small area of available Preble's habitat; 2) the Project would not preclude our ability to recover the species because the total effects of the Project-related disturbance is essentially temporary; and 3) no significant impacts to the population are anticipated.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the Terms and Conditions (T&Cs) of this incidental take statement.

Sections 7(b)(4) and 7(o)(2) of the Act do not apply to the incidental take of Federally listed plant species (*e.g.*, Colorado butterfly plant, Ute ladies' tresses orchid, and western prairie fringed orchid). However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of Federally listed endangered plants or the malicious damage of such plants on non-Federal areas in violation of state law or regulation or in the course of any violation of a state criminal trespass law. Such laws vary from state to state.

The Department of the Interior, acting through the Service and Bureau of Reclamation, is implementing all pertinent Reasonable and Prudent Measures (RPMs) and implementing T&Cs stipulated in the PRRIP Tier 1 PBO incidental take statement (USFWS 2006, pages 309-326) which will minimize the anticipated incidental take of listed species. In instances where the amount or extent of incidental take outlined in the Tier 1 PBO is exceeded, or the amount or extent of incidental take for other listed species is exceeded, the specific PRRIP action causing such take shall be subject to reinitiation expeditiously.

The measures described below are non-discretionary, and must be undertaken by the Bureau so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. The Bureau has a continuing duty to regulate the activity covered by this incidental take statement. If the Bureau (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Bureau must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR § 402.14(i)(3)).

AMOUNT OR EXTENT OF TAKE

Individual Preble's meadow jumping mice are likely to be present in the action area at times when adverse effects of the proposed action will occur. The Service anticipates the action will result in incidental take of Preble's through direct killing and by loss of food, cover, and other essential habitat elements. This take will be difficult to detect because Preble's are small and may be hibernating underground while excavation occurs. The amount of take cannot be determined because the distribution and abundance of individual mice in the action area is unknown and may vary over time. However, the extent of take can be defined based on the habitat directly impacted. According to Fitzgerald *et al.*'s (1994) estimations, the Service anticipates that the proposed action will result in the incidental take of no more than two home range of Preble's meadow jumping mouse through the loss and disturbance of a total of 1.64 acres of Preble's meadow jumping mouse habitat (maximum total permanent loss of 1.30 acres and temporary loss of 0.34 acres).

EFFECT OF THE TAKE

In the accompanying BO, the Service determined that this level of anticipated take of Preble's meadow jumping mouse is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES

The Service believes the following RPMs are necessary and appropriate to minimize impacts of incidental take of Preble's meadow jumping mouse:

- RPM1 The Bureau shall avoid or minimize take of Preble's by requiring implementation of worker education programs and well-defined operational procedures with the cooperation of a qualified biologist, and
- RPM2 The Bureau shall require timely revegetation and enhancement of the Project area to minimize the disturbance to Preble's habitat.
- RPM3 The Bureau shall provide the Service with reports about the results of the action.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Bureau must comply with the following T&Cs, which implement the RPMs described above and outline required reporting/monitoring requirements. These T&Cs are nondiscretionary.

The following T&Cs implement RPM1:

- T&C1 The Bureau shall ensure that proposed conservation measures (outlined above and in Project descriptions), as further refined by these terms and conditions, are formally adopted and implemented.
- T&C2 The Bureau shall clearly define and mark the upstream and downstream limits of Project disturbance as well as the lateral limits of disturbance. The Bureau shall monitor the extent of habitat impacted to ensure that it does not exceed the acreage analyzed in the accompanying BO.
- T&C3 Project activities in Preble's habitat during the active season (May 1 through October 31) shall occur only during daylight hours.
- T&C4 During the Project, Preble's habitat not designated for construction or revegetation shall be fenced with snow fencing or another appropriate barrier, to prevent inadvertent impacts to habitat outside the construction footprint.
- T&C5 The applicants or an authorized representative shall inform workers on site of the reason for, and importance of, limiting disturbances and impacts to Preble's habitat outside of the fenced work areas. An authorized biologist shall conduct a training session for all Project personnel working in the vicinity of Preble's habitat prior to conducting those Project activities. At a minimum, the training shall include a description of Preble's and its habitat; general provisions of the Act; the necessity for adhering to the provisions of the Act; the penalties associated with violating the provisions of the Act; the specific measures being implemented to conserve Preble's while this Project is being conducted; and the boundaries within which the Project may be accomplished.
- T&C6 Work areas shall be kept clean to avoid attracting human-commensal predators of Preble's. All food-related trash items shall be enclosed in sealed containers and regularly removed from the Project area.

The following T&Cs implement RPM2:

- T&C7 The Bureau shall require that temporarily disturbed areas are revegetated with pre-disturbance vegetation to the following specifications:
- At least 80 percent of shrubs and trees are established and growing without showing signs of stress or continued need for irrigation or fertilization (unless the land is used for agriculture).
 - Grass and wetland plants (rushes, sedges, etc.) coverage in restored areas equals at least 80 percent of comparable undisturbed areas nearby.

- Noxious weeds may cover no more than five percent of the surface area of the enhanced/restored areas.

T&C8 The Bureau shall include as a binding condition of Project approval that annual monitoring of revegetation efforts, as well as the implementation and effectiveness of such efforts, which shall include photographs, and shall gather other necessary information to determine the extent and effects of the Project. Monitoring will extend for at least three years (or until such time as the Bureau and the Service determine that proposed revegetation has been successfully completed).

T&C9 In the unlikely event that a Preble's mouse is encountered (dead, injured, or hibernating) during construction or maintenance activities, the Service's Wyoming Field Office (307-772-2374) and the Service's Law Enforcement Office (307-261-6365) shall be notified within 24 hours.

The following T&C implements RPM3:

T&C10 The Bureau shall provide a written report within 60 days of the completion of construction activities. This report shall contain a discussion of the activities conducted; the approximate acreage of Preble's habitat permanently and temporarily affected; any problems encountered in implementing the terms and conditions; recommendations for modifying the stipulations to enhance the conservation of Preble's; results of biological surveys and sighting records; and any other pertinent information. In addition, the Bureau shall provide the Service with an annual report on the revegetation efforts after each growing season and prior to December 1 until success criteria have been met.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. Conservation recommendations are provided in the PRRIP PBO (USFWS 2006, pages 328-329) and are hereby incorporated by reference. In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

PLATTE RIVER PROGRAM REQUIREMENTS AND REINITIATION

Any person or entity undertaking a water-related activity that receives Federal funding or a Federal authorization and which relies on the PRRIP as a component of its compliance with section 7 consultation must agree: (1) to the inclusion in its Federal funding or authorization documents of reopening authority, including reopening authority to accommodate reinitiation

upon the circumstances described in Section IV.E. of the PRRIP document (2006); and (2) to request appropriate amendments from the Federal action agency as needed to conform its funding or authorization to any PRRIP adjustments negotiated among the three states and the Department of the Interior, including specifically new requirements, if any, at the end of the first PRRIP increment and any subsequent PRRIP increments. The Service believes that the PRRIP should not provide compliance with the Act for any water-related activity for which the funding or authorization document does not conform to any PRRIP adjustments (PRRIP document 2006, section V1).

Reinitiation of consultation for the Project will not be required at the end of the first 13 years of the PRRIP provided a subsequent Program increment or first increment Program extension is adopted pursuant to appropriate procedures compliant with the Act and the National Environmental Policy Act. For a subsequent increment, the effects of the Project are covered under a Tier 1 PBO for that increment addressing continued operation of previously consulted-on water-related activities.

This concludes formal consultation on the actions outlined in the May 3, 2007, BA for the Project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

Thank you for your assistance in the conservation of endangered and threatened species. If you have any questions or comments on this BO or your responsibilities under the Act, please contact Dan Blake at (307) 352-0375.

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