



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
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Denver, Colorado 80225-0486

IN REPLY REFER TO:
ES/CO: BOR AVC / NLAA
TAILS: 06E24000-2013-I-0630

AUG 13 2013

Memorandum

To: Michael P. Collins, Area Manager, U.S. Bureau of Reclamation
(Reclamation), Eastern Colorado Area Office, Loveland, Colorado

From: Susan Linner, Field Supervisor, Colorado Ecological Services Office
U.S. Fish and Wildlife Service (Service), Region 6, Denver, Colorado

Subject: Informal Section 7 Consultation for the Arkansas Valley Conduit (AVC),
Fryingpan-Arkansas Project, Colorado

The U.S. Fish and Wildlife Service (Service) received your letter dated June 28, 2013, initiating informal consultation on the proposed AVC project in Bent County, Colorado. These comments have been prepared under the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4327), the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668 et. seq.), and the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et. seq.).

In your June 28, 2013, letter, you provided us with a description of the AVC project and requested concurrence that the proposed project is not likely to adversely affect the federally endangered interior least tern (*Sterna antillarum*) and the threatened northern Great Plains population of the piping plover (*Charadrius melodus*), and is not likely to jeopardize the continued existence of the proposed, threatened lesser prairie-chicken (*Tympanuchus pallidicinctus*) in Colorado. Reclamation is proposing three federal actions associated with the AVC project: construction, operation, and repayment of the AVC; entering into a conveyance contract for use of the Interconnect to be constructed as part of the AVC; and entering into a Master Contract with the Southeastern Colorado Water Conservancy District to store water in Pueblo Reservoir. The Interconnect is an engineering feature of the AVC and would be constructed and operated only if AVC was constructed.

For the purposes of this consultation, Reclamation defined the action area to include: the Arkansas River and its watershed downstream to, and including, John Martin Reservoir; the Fryingpan River from its headwaters downstream to the Roaring Fork River; the Roaring Fork

River from the Fryingpan River downstream to the Colorado River; and the Colorado River from the Roaring Fork River downstream to the Gunnison River.

Your June 28, 2013, letter stated that potential effects of the proposed actions on terns and plovers would largely be confined to John Martin Reservoir, which was constructed and is operated by the U.S. Army Corps of Engineers (Corps). On September 25, 2001, the Service issued Biological Opinion # ES/GJ-6-CO-01-F-041 to the Corps for the federal action transferring recreation and surface water management to Colorado State Parks (now Colorado Parks and Wildlife [CPW]). In accordance with this opinion, the Corps developed an “Endangered Species Management Plan for Piping Plovers (*Charadrius melodis*) and Interior Least Terns (*Sterna antillarum athalassos*), John Martin Reservoir Project and John Martin State Park, Bent County, Colorado” (Plan) dated May 22, 2002. The Plan provides for monitoring, education, law enforcement, and habitat and population enhancement. Page 9 of the Plan states, “to mitigate for this possibility [of nest inundation], the Corps, in conjunction with CPW, will closely monitor pool elevations from the onset of nesting activity until brooding behavior occurs. Corps personnel will also receive training on techniques of nest relocation, and necessary materials and tools will be identified and stockpiled for emergency relocations”. Your June 28, 2013, letter went on to say that “Implementation of these commitments by the Corps should minimize the occurrence of incidental take at John Martin Reservoir associated with projected higher surface elevations at John Martin Reservoir. Based on Corps’ commitments laid out in the Plan to monitor and relocate nests anticipated to be inundated, Reclamation has concluded that the proposed actions may affect, but are not likely to adversely affect interior least terns or piping plovers at John Martin Reservoir”.

In an August 9, 2013, email from the Corps to the Service, the Corps stated, “Management at John Martin Reservoir, U.S. Army Corps of Engineers, Albuquerque District, Hasty, Colorado, is aware of the potential effects of the proposed Arkansas Valley Conduit Project to the reservoir level(s) of John Martin Reservoir. As stewards of the land(s), the U.S. Army Corps of Engineers has in place a management plan for the protection of the endangered and threatened species of birds that nest on the project. Management feels that the management program in place at the project and the district offices for endangered and threatened species will be more than adequate to assure that continued protection is afforded to the species if potential water-raising effects do occur from the Arkansas Valley Conduit Project”.

Your June 28, 2013, letter also stated that potential effects to the lesser prairie-chicken from the AVC project would be negligible as no construction would occur within one mile of any known lek. Furthermore, reservoir surface fluctuations under the proposed actions would also have no effect on this species. The proposed actions would temporarily disturb about 97 acres of potential habitat within lesser prairie-chicken range south of Lamar. Best management practices, such as restoration of disturbed habitat with native vegetation, restricting construction during nesting season, pre-construction surveys, and halting ground-disturbing activities if leks or active nests are encountered would be employed. Reclamation would stop construction and consult with the Service should potential effects on the lesser prairie-chicken be identified during construction.

Based on the information provided in your June 28, 2013, letter and the August 9, 2013, Corps email, the Service has concluded that the proposed AVC project may affect but is not likely to adversely affect the interior least tern and piping plover. Furthermore, the Service has concluded that the AVC project will not jeopardize the continued existence of the lesser prairie-chicken. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

If the Service can be of further assistance, please contact Sandy Vana-Miller of this office at (303) 236-4748.

ec: Jan (Signe) Snortland, Bureau of Reclamation, jsnortland@usbr.gov
FWSR6/ES/LK, S. Vana-Miller



United States Department of the Interior

BUREAU OF RECLAMATION
Great Plains Region
Eastern Colorado Area Office
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IN REPLY REFER TO:

GP-4200
ENV-7.00

JUN 28 2013

MEMORANDUM

To: Susan C. Linner
U.S. Fish and Wildlife Service
Colorado Field Supervisor

From: Michael P. Collins
Area Manager

Subject: Endangered Species Act (ESA) Section 7 Consultation for the Arkansas Valley Conduit (AVC), Fryingpan-Arkansas Project, Colorado

This memorandum, along with the draft AVC Final Environmental Impact Statement (FEIS) (sent under separate cover), constitutes the Bureau of Reclamation's biological assessment for the AVC and associated actions in southeastern Colorado as required at 50 CFR 402.12(b)(1). These documents are intended to satisfy Reclamation's compliance obligations under section 7(a)(2) of the ESA, as amended.

Reclamation is proposing three federal actions associated with the AVC: construction, operation, and repayment of the AVC; entering into a conveyance contract for use of the Interconnect to be constructed as part of AVC; and entering into a Master Contract with Southeastern Colorado Water Conservancy District to store water in Pueblo Reservoir. The Interconnect is an engineering feature of AVC and would be constructed and operated only if AVC was constructed. You can find detailed information on these proposed actions beginning on page 1-6 of Chapter 1 of the draft AVC FEIS.

Action Area

The draft AVC FEIS does not describe the action area associated with these proposed actions. The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402.02). For purposes of this consultation, Reclamation has defined the action area to include:

The Arkansas River and its watershed downstream to, and including, John Martin Reservoir;
The Fryingpan River from its headwaters downstream to the Roaring Fork River;
The Roaring Fork River from the Fryingpan River downstream to the Colorado River; and
The Colorado River from the Roaring Fork River downstream to the Gunnison River.

A characterization of the action area can be found on pages 3-3 through 3-6 in Chapter 3 of the draft AVC FEIS.

Federally-listed Threatened or Endangered, Proposed, and Candidate Species That May Be Present in the Action Area

Reclamation submitted a list of federally-listed, proposed, and candidate species to the U.S Fish and Wildlife Service (Service) for confirmation by memorandum dated February 9, 2011. The Service confirmed that list by memorandum dated March 8, 2011. Reclamation communicated with the Service to re-confirm the list of species by electronic mail on June 11, 2013. As directed by electronic mail from the Service on June 14, 2013, the Service's Information, Planning, and Conservation webpage was accessed to confirm the list of species.

The current list of species includes:

Interior least tern – Endangered
Black-footed ferret – Endangered *
Greenback cutthroat trout – Threatened *
Piping plover – Threatened
Canada lynx – Threatened*
Mexican spotted owl – Threatened*
Preble's meadow jumping mouse – Threatened*
Ute ladies'-tresses orchid – Threatened*
Lesser prairie chicken – Proposed
Arkansas darter - Candidate
Gunnison's prairie dog – Candidate*

In your memorandum dated March 8, 2011, the Service confirmed that either habitat was not present or that the proposed actions were outside the range of the greenback cutthroat trout, Canada lynx, Mexican spotted owl, Preble's meadow jumping mouse, and Gunnison's prairie dog. The Service considers the Fountain Creek drainage to possibly contain Ute ladies'-tresses orchid habitat; however, no orchid populations are currently known from this drainage (Service 2010; 1992). Additionally, the lower Arkansas River area is within a black-footed ferret block clearance for black-tailed prairie dog towns (Service 2009). A block clearance is an area of land in which the Service has determined a federally-listed species no longer exists. An area that has been block cleared for a particular species does not require surveys for that species. Therefore, Reclamation is not considering these species (*) in this consultation.

The operation of the Fryingpan-Arkansas Project, associated depletions, and their effects on federally-listed fish in the upper Colorado River has been considered, quantified, and permitted through the *Final Programmatic Biological Opinion for Bureau of Reclamation's Operations and Depletions, Other Depletions, and Funding and Implementation of Recovery Program Actions in the Upper Colorado River Above the Confluence with the Gunnison River* (Service 1999). The Colorado pikeminnow, razorback sucker, bonytail chub, and humpback chub are not considered in this consultation.

Description of Listed Species That May Be Affected by the Proposed Actions

Descriptions of the federally-listed, proposed, and candidate species can be found on the following pages in Chapter 3 of the draft AVC FEIS. This information constitutes the best scientific and commercial data available for these species in the action area and represents the environmental baseline against which potential effects are assessed.

Interior least tern – page 3-80

Piping plover – page 3-80

Lesser prairie chicken – page 3-81

Arkansas darter – page 3-49

Effects of the Proposed Action on Listed Species

Reclamation assessed the potential effects on listed, proposed, and candidate species by comparing effects projected for the preferred alternative to existing conditions (environmental baseline). A discussion of the potential effects for the species considered can be found on the following pages of the draft AVC FEIS.

Interior least tern – pages 4-134/137

Piping plover – pages 4-134/137

Lesser prairie chicken – page 4-137

Arkansas darter – page 4-81

Potential effects on terns and plovers would largely be confined to John Martin Reservoir. This reservoir was constructed, and is operated, by the Corps of Engineers (Corps). In 2002, the Service determined that John Martin Reservoir should not be designated as critical habitat for the piping plover because breeding populations are small and fluctuate in size, Colorado approved a recovery plan for interior least terns and piping plovers in 1994, the habitat is not considered essential, and it does not meet the definition of critical habitat (Service 2002).

Pursuant to Biological Opinion ES/GJ-6-CO-01-F-041 dated September 25, 2001, issued to the Corps for transferring recreation and surface water management to Colorado State Parks (now Colorado Parks and Wildlife) [CPW], the Corps developed an “Endangered Species Management Plan for Piping Plovers (*Charadrius melodis*) and Interior Least Terns (*Sterna antillarum athalassos*), John Martin Reservoir Project and John Martin State Park, Bent County, Colorado” (Plan) dated May 22, 2002. This Plan provides for monitoring, education, law enforcement, and habitat and population enhancement. It states on page 9 “to mitigate for this possibility [of nest inundation], the Corps, in conjunction with CPW will closely monitor pool elevations from the onset of nesting activity until brooding behavior occurs. Corps personnel will also receive training on techniques of nest relocation and necessary materials and tools will be identified and stockpiled for emergency relocations.” Implementation of these commitments by the Corps should minimize the occurrence of incidental take at John Martin Reservoir associated with projected higher surface elevations at John Martin Reservoir. Based on Corps’ commitments laid out in the Plan to monitor and relocate nests anticipated to be inundated, Reclamation has concluded that the proposed actions may affect, but are not likely to adversely affect interior least terns or piping plovers at John Martin Reservoir.

Potential effects on the lesser prairie chicken would be negligible as no construction would occur within one mile of any known lek. Reservoir surface fluctuations under all the alternatives would also have no effect on this upland species. All AVC alternatives would temporarily disturb about 97 acres of potential habitat within lesser prairie chicken range south of Lamar. Disturbance of potential habitat would be short-term. Best management practices, such as restoration of disturbed habitat with native vegetation, restricting construction during nesting season, pre-construction surveys, and halting ground-disturbing activities if leks or active nests are encountered, would be employed. Reclamation would stop construction and consult with the Service should potential effects on the proposed lesser prairie chicken be identified during construction. Based on this assessment and these best management practices, Reclamation has concluded that the proposed actions are not likely to jeopardize the continued existence of the lesser prairie chicken.

The Arkansas darter is a federal candidate species. Potential effects of the alternatives would change flow in the Arkansas River and Fountain Creek; however, flows and connectivity to tributary streams would be maintained near current levels. There would be negligible effects on darters as tributary populations would not be affected by the alternatives, and migration routes between tributaries would be maintained.

Cumulative Effects

Reclamation has not identified any non-federal actions in the action area that would adversely affect terns and plovers.

Reclamation has not identified specific non-federal actions in the action area that would adversely affect lesser prairie chickens or their habitat, but acknowledges that effects associated with agricultural activities, livestock grazing, alternative energy development, and oil and gas development on non-federal lands will continue.

Effects Determinations

Interior least tern – Reclamation has determined that the proposed actions may affect, but are not likely to adversely affect interior least terns.

Piping plover - Reclamation has determined that the proposed actions may affect, but are not likely to adversely affect piping plovers.

Lesser prairie chicken – Reclamation has determined that the proposed actions are not likely to jeopardize the continued existence of the lesser prairie chicken.

Reclamation requests the Service provide written concurrence with our effects determinations for the interior least tern, piping plover and lesser prairie chicken at your earliest convenience.

Should you have questions or require additional information, you can contact Gary Davis at (406) 247-7717 or at jgdavis@usbr.gov.

References Cited

- U.S. Fish and Wildlife Service. 1992. Endangered and Threatened Wildlife and Plants; Final Rule to List the Plant *Spiranthes diluvialis* (Ute Ladies'-Tresses) as a Threatened Species. *Federal Register* Vol. 57. No. 12.
- , 1999. Final Programmatic Biological Opinion for Bureau of Reclamation's Operations and Depletions, Other Depletions, and Funding and Implementation of Recovery Program Actions in the Upper Colorado River Above the Confluence with the Gunnison River.
- _____, 2002. Designation of critical habitat for northern Great Plains breeding population of piping plover. Final rule. *Federal Register* Vol. 67. No. 176.
- _____. 2009. USFWS Block-Cleared Areas for Black-footed Ferret Surveys in Colorado. Available at http://www.fws.gov/mountainprairie/species/mammals/blackfootedferret/statewide_block_clearance_map_090809_final.pdf.
- _____. 2010. Threatened, Endangered, Candidate, and Proposed Species by County. Available at <http://www.fws.gov/mountain-prairie/endspp/countylists/colorado.pdf>.



United States Department of the Interior



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IN REPLY REFER TO:

EC-1300
2.2.1.06

February 2, 2022

VIA ELECTRONIC MAIL ONLY

Memorandum

To: Liisa Niva
Eastern Colorado Supervisor, Ecological Services
Colorado Field Office - Lakewood
134 Union Blvd
Lakewood, CO 80228
ColoradoES@fws.gov

From: Jeffrey Rieker
Area Manager, Eastern Colorado Area Office
jrieker@usbr.gov

Subject: Endangered Species Act—Request for Concurrence-Arkansas Valley Conduit

Under Section 7 of the Endangered Species Act (ESA), the Bureau of Reclamation is requesting Fish and Wildlife Service (Service) concurrence regarding construction and operation of the Arkansas Valley Conduit (AVC) located in Southeastern Colorado counties of Pueblo, Otero, Bent, Crowley, Prowers, and Kiowa.

Background and Project Description

AVC was congressionally authorized in 1962 as a feature of the Fryingpan-Arkansas (Fry-Ark) Project, but never constructed. With passage of Public Law 111-11 in 2009, the Fry-Ark Project's authorization legislation was amended to provide annual federal funding, as necessary, for constructing the AVC and provided that only a 35 percent cost share for construction of the AVC would be repaid over a period of no more than 50 years. Reclamation then completed informal consultation on AVC (see attachment) and then issued a Record of Decision (ROD) in February 2014. The ROD was based on the August 2013 final environmental impact statement (FEIS). The Comanche North Alternative was selected and a feasibility design report was completed by Reclamation in September 2016.

Through a collaborative effort between Reclamation and Southeastern Colorado Water Conservancy District (Southeastern) in 2018 and 2019, a revised AVC configuration was

developed with the goal of reducing total estimated AVC Project costs and requirements for Reclamation appropriations. Reclamation prepared an AVC supplemental information report (SIR) in June 2021, and then a draft environmental assessment (EA) in December 2021. The EA served as the biological assessment for the reconfigured AVC. The FEIS, SIR and EA documents can also be downloaded at: <https://www.usbr.gov/gp/eca/avc/>. No changes are being proposed to Master Contract or the Pueblo Dam North/South Outlet Interconnect (Interconnect) as described in the 2013 AVC FEIS. Therefore, this informal consultation is limited to proposed changes to the AVC.

Below is a summary of how the reconfigured AVC differs from what was described in the FEIS.

1. **Co-operative management and construction of the AVC.** Division of AVC into two major sub-projects which will be co-operatively managed by both Reclamation and Southeastern. Reclamation will construct about 120 miles of trunk line and Southeastern will construct about 54.3 miles of spur pipelines and 58.7 miles delivery pipeline to AVC participants' delivery points.
2. **Changes in pipeline lengths.** AVC reconfigurations reduce the trunk line by about 24.7 miles and increase delivery pipelines needed by about 30.6 miles (see Tables 1 and 2). Delivery pipelines will connect to existing AVC Participants' infrastructure.

Table 1-AVC Pipeline Changes

Pipeline Type	Proposed Action Alignment	Comanche North Alignment	Difference
Trunk Line	120.0 miles ¹	144.7 miles	-24.7 miles
Spur Pipelines	54.3 miles	54.4 miles	-0.1 miles
Delivery Pipelines	58.7 miles	28.2 miles	+30.6 miles

¹Length includes about 6.3 miles of new trunk line from Pueblo Connection Point to North Avondale and elimination of about 1.2 miles of trunk line from JUP Wye to Whitlock WTP and about 35.1 miles of trunk line from WTP Treatment to St. Charles Mesa and Avondale.

Table 2-Additional Delivery Pipeline Lengths by AVC Participant

AVC Participant/Delivery Point	Alignment Name*	Additional Pipeline (miles)
Boone Delivery	B DP	1.50
Avondale**	-	1.20
Fowler	F DP	0.40
Crowley County Water Assoc.	CCWA-DP	2.0***
Sugar City	SC DP	2.50
Valley Water	VW DP	1.6***
Patterson Valley	PV DP	2.25
Hilltop	HT DP	0.40
West Grand Valley	WGVW DP	1.1***
Riverside	DP RS	1.40
North Holbrook Water	NH DP	0.50
West Holbrook Water	WH DP	0.75
Holbrook Center Soft Water Assoc.	H CTR SWA DP	0.90

Cheraw	C DP	2.40
South Side Water Assoc.	SS WA DP	1.20
East End	EE DP	1.30
Swink – U.S. 50 Route	S50 DP	0.50
Swink – Fairview Delivery Point	SFV DP	2.40
Swink – Fairmont Delivery Point	SFM DP	0.90
Homestead Improvement Assoc.	HIA DP	0.40
La Junta	LJ DP	0.10
Wiley	W DP	1.30
May Valley Delivery Point 1	MV DP	1.00
May Valley Delivery Point 2	MV2 DP	2.10
	Avg	1.3
	Median	1.10
	Total	30.6
<i>*Reference the 2016 Feasibility Design Report, Appendix I</i> <i>** There was no Avondale delivery line in the 2016 Final Design Report as the main trunk line went directly through Avondale (alignment SCMB)</i> <i>***Alignment has changed from SIR description.</i>		

3. **Changes in AVC Participants.** Changes in AVC Participants include the withdrawal of Saint Charles Mesa Water District (St. Charles Mesa) and addition of Riverside Water Company (Riverside). This has a net effect of reducing the total maximum annual water deliveries through the AVC from 10,256 acre-feet per year (afy) to 7,625 afy.
4. **Elimination of pipeline around Pueblo.** The reconfigured AVC utilizes existing infrastructure owned and operated by the Board of Water Works of Pueblo (Pueblo Water) to convey AVC water to a connection point east of Pueblo near Devine, Colorado (referred to as Pueblo Connection Point in the SIR and EA), which eliminates about 27 miles of pipeline around the south side of Pueblo. About 6.3 miles of pipeline is required to reach from the Pueblo Connection Point to the FEIS’s Comanche North alignment. This change results in net reduction of about 20.7 miles of pipe.
5. **Contract with Pueblo Water.** A contract with Pueblo Water is required to allow conveyance of AVC water through their existing treatment and distribution system. Pueblo Water will treat and deliver a maximum of 13 million gallons per day (mgd) to meet the FEIS’s 2070 projected AVC Participant demands. The contract will authorize continued use of excess storage capacity in Pueblo Reservoir of between 10,000 and 25,000 afy, if and when available, for a period of 50 years when available pursuant to the spill priorities described in Article 11 of Contract No. 229F650016 between Southeastern and the United States. Pueblo Water is also requesting to store Bessemer Ditch water rights in excess capacity space in Pueblo Reservoir under the contract.
6. **Pueblo Water system upgrades.** Increasing the capacity of about 10 miles of Pueblo Water’s delivery system by Pueblo Water will allow delivery of up to 13 mgd of the 2070 AVC Participants demand to the Pueblo Connection Point. Payments to Pueblo Water proposed as part of the contract would make Pueblo Water responsible for increasing the capacity of their system to accommodate the increased demands.
7. **Chemical injection facilities.** Two chemical injection facilities adjacent to the trunk line along U.S. 50 will be constructed to inject sodium hypochlorite and sodium bisulfite into the pipeline to remove chloramines from water treated by Pueblo Water at the existing

- Whitlock Water Treatment Plant.
8. **Other feature relocations.** Regulating tank and pumping plant locations will be modified to facilitate gravity flow for most of the AVC system.
 9. **Delivery point changes.** Approximately 30.6 miles of additional pipeline constructed by Southeastern and AVC Participants will be needed to connect to existing and future AVC Participant delivery facilities (water tanks, pipelines, etc.).
 10. **Fiber Optic Lines.** Dedicated fiber optic lines may be installed along the AVC trunk line, spurs and delivery pipelines, where appropriate, to provide communications between AVC facilities. Fiber optic lines may be installed within each pipeline's construction footprint, either within the pipeline trench or adjacent to it. Additional fiber optic conduits may also be installed during construction to facilitate rural broadband development by other entities, as long as, there are no additional costs to the AVC.

Prior ESA Consultations—Reclamation initiated informal consultation with the Service on AVC. The FEIS served as the biological assessment for three actions (AVC, Master Contract and Interconnect). The Service concluded on June 28, 2013 (see Attachment), that the FEIS's proposed actions may affect, but are not likely to adversely affect, the interior least tern (*Sterna antillarum*) and piping plover (*Charadrius melodus*). The Service also concluded that the FEIS's proposed actions will not jeopardize the continued existence of the lesser prairie-chicken, a species at the time proposed for listing under the ESA. The Service's concurrence memorandum included a statement "Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered."

Listed Species and Critical Habitat in the Action Area

Reclamation obtained an updated species list from the Service on January 6, 2022, which includes the following species and their current ESA status:

Endangered Species

Black-footed Ferret (*Mustela nigripes*)

Threatened Species

Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*)

Mexican Spotted Owl (*Strix occidentalis lucida*)

Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)

Canada Lynx (*Lynx canadensis*)

Greenback Cutthroat Trout (*Oncorhynchus clarkii stomias*)

Since completion of the 2013 informal consultation, the Eastern black rail was listed as a threatened species under the ESA. With exceptions for the Eastern black rail, the 2013 informal consultation remains appropriate for AVC.

Delisted and Other ESA Species

The least tern was delisted due to recovery by the Service on January 13, 2021. The piping plover, listed as threatened within the Northern Great Plains, is no longer included in the 2022 updated species list provided by the Service.

No suitable habitat occurs within the reconfigured AVC construction corridor for black-footed ferret, Mexican spotted owl, Preble's meadow jumping mouse, Canada lynx, and greenback cutthroat trout.

Species Descriptions

Eastern Black Rail—The Eastern black rail was listed as federally threatened on October 7, 2020, and includes a Section 4(d) rule. The ESA 4(d) rule is as follows:

“The primary goals of this 4(d) rule are to minimize incidental take of eastern black rails and ensure that the dense overhead cover that the eastern black rail needs is maintained. The Service has defined dense overhead cover as “the cover that exists in excess of the height of an eastern black rail, and is assessed from above in terms of herbaceous persistent emergent wetland plant cover (as defined by Cowardin et al. 1979) versus non-vegetative cover of the ground, including bare ground itself.” Eastern black rails typically occupy areas with overhead cover that permits little or no view of bare ground. Three different means for assessing this type of cover are outlined in the Service's final rule.”

Eastern black rail have been reliably located within the Arkansas River Valley and are a presumed breeder in Colorado. Suitable habitat consists of dense or thick emergent vegetation with high interspersion and new and residual growth. Eastern black rail are known to use shallow wetlands dominated by cattails, hard stem bulrush, soft-stemmed bulrush, and willow in the overstory. They have also been detected exclusively in extensive cattail marshes with standing water. According to the final listing rule, the species has been encountered in spring and summer at Fort Lyon Wildlife Area, Bent's Old Fort, Oxbow State Wildlife Area, Bristol, and John Martin Reservoir State Park. Surveys conducted between April 15 and June 15, 2018, in southeastern Colorado detected at least one black rail during repeat surveys at 39 of 115 points and 17 of 66 marshes surveyed. Critical habitat has not been designated for this species.

Potential habitat may occur within or adjacent to the AVC construction footprint and at pipeline crossings of the Lower Arkansas River and tributaries, wetlands, and canals. However, the AVC alignment generally follows existing federal, state and county highway with the highway right of ways and will avoid impacts to wetlands where possible.

Personal communications with Colorado Parks and Wildlife Conservation Biologist, Liza Rossi on January 12, 2022, identified between the time period between April 15th and September 15th as the critical period for nesting and rearing eastern black rail in occupied habitats in Colorado.

Piping Plover—The Piping Plover was originally listed in 1985. Piping plovers nesting in the Great Lakes are listed as endangered and piping plovers nesting along the Atlantic Coasts and in the northern Great Plains of the U.S. and Canada are listed as threatened. Critical habitat has not been designated in Colorado. Although not included in the 2022 updated species list, Reclamation is considering reconfigured AVC effects on Piping Plover as described in the 2013 informal consultation.

All piping plovers on the wintering grounds are considered threatened. Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands. In Colorado, they occur in the eastern part of the state as very rare migrants and have been known to nest at Adobe Creek, John Martin, Neegronda, and Neeskah reservoirs.

The combined effects of AVC, Master Contract, and Interconnect on piping plovers were previously addressed in the 2013 informal consultation. The reconfigured AVC will not affect reservoir operations as contemplated in the AVC FEIS. The Army Corps of Engineers (ACOE) continues to take necessary actions to address the small piping plover at John Martin Reservoir with habitat creation and improvements, closure of nesting areas to protect breeding sites from disturbance, predation control, sandbar augmentation, vegetation management, and inundation mitigation, all in accordance with the biological opinion for ACOE reservoir operations.

Lesser Prairie Chicken—The lesser prairie chicken, a proposed species for ESA listing in 2013, was also addressed in the 2013 informal consultation. The Service determined that AVC FEIS's proposed actions would not likely to jeopardize the continued existence of lesser prairie-chicken. Since the 2013 consultation, the species was listed as endangered in 2014 and then vacated in 2015 by the federal court. A proposed rule was published in the Federal Register on June 1, 2021, proposing to list two distinct population segments of lesser prairie chicken (86 FR 29432). The Service is proposing to list the Southern DPS as endangered and the Northern DPS as threatened with a 4(d) rule that tailors protections for the species. To date, a final rule has not been published. The lesser prairie chicken was not included in the updated 2022 species list but Reclamation is reviewing potential effects because the species was included in the 2013 informal consultation, and is currently proposed species for listing under ESA.

Lesser prairie chicken is a North American grouse species that occupies sand sagebrush, sand shinnery oak and mixed grass vegetation communities of the southern Great Plains within portions of Colorado, Kansas, New Mexico, Oklahoma and Texas. During the breeding season males congregate on lek sites and perform courtship displays to attract females for mating. The critical reproduction period range-wide is from March 1-July 15, with some variation due to latitude. In autumn and winter, birds assemble into mixed flocks, feeding primarily in sand sagebrush, sand shinnery oak, or mixed-grass prairies, but also often in waste grain fields.

The 2013 informal consultation identified potential effects from the AVC but predicted these effects would be negligible as no construction would occur within one mile of any known lek. The AVC will temporarily disturb about 97 acres of potential habitat within lesser prairie-chicken range south of Lamar as previously identified in the 2013 informal consultation. Best management practices, such as restoration of disturbed habitat with native vegetation, restricting construction during nesting season, pre-construction surveys, and halting ground-disturbing activities if leks or active nests are encountered were included as commitments by Reclamation.

Effects of the Action

When considering effects of the reconfigured AVC on the listed species, implementation of best management practices (BMPs) and mitigation measures by Reclamation, Southeastern, and selected construction contractors will reduce or eliminate potential effect to these species.

BMPs included as environmental commitments in the ROD include, but are not limited to:

- 1) To the extent practicable, construction will avoid wetlands; federal, state, and local wildlife areas and refuges; designated critical habitats; and migratory bird habitat during nesting brood-rearing season;
- 2) Identified perennial river or stream crossings will be performed by trenchless construction operations, which will not disturb the stream channel or the adjacent wetlands;
- 3) Preserve, if feasible, existing trees along the stream bank;
- 4) Stabilize, control erosion, restore, and re-vegetate streambeds and embankments as soon as a stream crossing is completed, following vegetation best management practices, and maintain until stable;
- 5) Replant riparian, as necessary, woody shrubs and trees appropriate to ecological characteristics of the site to preserve watercourse shading characteristics and the aesthetic nature of the stream bank;
- 6) All temporarily disturbed jurisdictional and non-jurisdictional wetlands and riparian areas will be reestablished following construction by doing the following:
 - Restore contours to previous elevations
 - Compact trenches sufficiently to prevent drainage along the trench or via bottom seepage
 - Salvage and replace topsoil
 - Backfill in such a manner as to not drain wetland or stream
 - Reestablish wetlands to similar type of wetland and wetland function
 - Monitor for success of reestablishment annually for a period of 3 years and take remedial actions as necessary until successful;
- 7) Permanent and temporary effects on wetlands and riparian areas will be avoided to the extent practicable in compliance with Section 404 of the Clean Water Act;
- 8) Construction will be prohibited within ½ mile of designated piping plover or Interior least tern breeding areas during the breeding season (April 15 through August 31) when these species are present;
- 9) Effects on migratory birds will be avoided and minimized by implementing a Migratory Bird Management Plan. The management plan will include a number of measures, including removal of vegetation before migratory bird breeding season (which is typically between April 1 and August 15 in Colorado) or conducting clearance surveys immediately before construction;
- 10) If threatened or endangered species are identified and encountered during construction, all ground-disturbing activities in the immediate area will be stopped to consult with the U.S. Fish and Wildlife Service and determine appropriate steps to avoid affecting the species.

Mitigation commitments included in the ROD applicable to Eastern black rail and other listed or sensitive species includes the following:

- 1) Effects on jurisdictional wetlands and waters of the U.S. will require authorization from the Corps. A compensatory mitigation plan may be required for the loss of any wetlands and will include methods to replace specific functions of affected wetlands. Any

permanent loss of non-jurisdictional wetlands will be replaced; and

- 2) Preconstruction surveys by trained observers will identify sensitive habitats and wildlife use before construction to allow implementing best management practices, temporal and spatial restrictions, and implementation of a migratory bird management plan. Pipelines, water treatment plants, and pump station facilities will be realigned during final design, where feasible, to avoid sensitive wildlife habitat.

Preconstruction surveys completed for the Boone Reach in 2020 and 2021 did not identify potential Eastern black rail habitat within or adjacent to the AVC construction corridor between the Pueblo Connection Point and the Town of Boone. No wetlands will be temporarily or permanently affected within this reach. Trunk line crossing locations adjacent to US. Highway 50 and Colorado State Highway 96 at Chico Wash, Boone Creek, and Colorado Canal east of Boone, Colorado lack the dense herbaceous vegetation and shallow standing water needed to support Eastern black rail. As other AVC reaches and facilities begin final design, preconstruction surveys as described in Mitigation Commitment No. 2 above will be completed.

Reclamation has determined the reconfigured AVC will have no effect to black-footed ferret, Mexican spotted owl, Preble's meadow jumping mouse, Canada lynx, and greenback cutthroat trout or designated critical habitat. With implementation of the BMPs and mitigation measures described above, Reclamation has determined that the Proposed Action "may affect, but is not likely to adversely affect" Eastern black rail. In addition, the 2013 informal consultation adequately addresses potential effects to the threatened piping plover and proposed lesser prairie chicken.

Request for Service's Concurrence

Reclamation requests Service's written concurrence on its determination that the AVC Project may affect, but not likely to adversely effect, the Eastern black rail and piping plover. In addition, Reclamation requests concurrence that the reconfigured AVC will not jeopardize the continued existence of the lesser prairie-chicken, a proposed species for listing and protection under the ESA.

If you have any questions or comments, please contact Terence Stroh at 970-962-4337. For those deaf or hard of hearing, please call the Federal Relay System at (800) 877-8339.

cc: Dr. Jen Williams, Fish and Wildlife Biologist, Colorado Ecological Services Field Office
134 Union Blvd, Lakewood CO 80228 jen_williams@fws.gov

Attachment

References

- Cowardin L.M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979). Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, DC.
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United States Department of the Interior

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IN REPLY REFER TO:
ES/CO: BOR AVC / NLAA
TAILS: 06E24000-2013-I-0630

AUG 13 2013

Memorandum

To: Michael P. Collins, Area Manager, U.S. Bureau of Reclamation
(Reclamation), Eastern Colorado Area Office, Loveland, Colorado

From: Susan Linner, Field Supervisor, Colorado Ecological Services Office
U.S. Fish and Wildlife Service (Service), Region 6, Denver, Colorado

Subject: Informal Section 7 Consultation for the Arkansas Valley Conduit (AVC),
Fryingpan-Arkansas Project, Colorado

The U.S. Fish and Wildlife Service (Service) received your letter dated June 28, 2013, initiating informal consultation on the proposed AVC project in Bent County, Colorado. These comments have been prepared under the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4327), the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668 et. seq.), and the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et. seq.).

In your June 28, 2013, letter, you provided us with a description of the AVC project and requested concurrence that the proposed project is not likely to adversely affect the federally endangered interior least tern (*Sterna antillarum*) and the threatened northern Great Plains population of the piping plover (*Charadrius melodus*), and is not likely to jeopardize the continued existence of the proposed, threatened lesser prairie-chicken (*Tympanuchus pallidicinctus*) in Colorado. Reclamation is proposing three federal actions associated with the AVC project: construction, operation, and repayment of the AVC; entering into a conveyance contract for use of the Interconnect to be constructed as part of the AVC; and entering into a Master Contract with the Southeastern Colorado Water Conservancy District to store water in Pueblo Reservoir. The Interconnect is an engineering feature of the AVC and would be constructed and operated only if AVC was constructed.

For the purposes of this consultation, Reclamation defined the action area to include: the Arkansas River and its watershed downstream to, and including, John Martin Reservoir; the Fryingpan River from its headwaters downstream to the Roaring Fork River; the Roaring Fork

River from the Fryingpan River downstream to the Colorado River; and the Colorado River from the Roaring Fork River downstream to the Gunnison River.

Your June 28, 2013, letter stated that potential effects of the proposed actions on terns and plovers would largely be confined to John Martin Reservoir, which was constructed and is operated by the U.S. Army Corps of Engineers (Corps). On September 25, 2001, the Service issued Biological Opinion # ES/GJ-6-CO-01-F-041 to the Corps for the federal action transferring recreation and surface water management to Colorado State Parks (now Colorado Parks and Wildlife [CPW]). In accordance with this opinion, the Corps developed an "Endangered Species Management Plan for Piping Plovers (*Charadrius melodis*) and Interior Least Terns (*Sterna antillarum athalassos*), John Martin Reservoir Project and John Martin State Park, Bent County, Colorado" (Plan) dated May 22, 2002. The Plan provides for monitoring, education, law enforcement, and habitat and population enhancement. Page 9 of the Plan states, "to mitigate for this possibility [of nest inundation], the Corps, in conjunction with CPW, will closely monitor pool elevations from the onset of nesting activity until brooding behavior occurs. Corps personnel will also receive training on techniques of nest relocation, and necessary materials and tools will be identified and stockpiled for emergency relocations". Your June 28, 2013, letter went on to say that "Implementation of these commitments by the Corps should minimize the occurrence of incidental take at John Martin Reservoir associated with projected higher surface elevations at John Martin Reservoir. Based on Corps' commitments laid out in the Plan to monitor and relocate nests anticipated to be inundated, Reclamation has concluded that the proposed actions may affect, but are not likely to adversely affect interior least terns or piping plovers at John Martin Reservoir".

In an August 9, 2013, email from the Corps to the Service, the Corps stated, "Management at John Martin Reservoir, U.S. Army Corps of Engineers, Albuquerque District, Hasty, Colorado, is aware of the potential effects of the proposed Arkansas Valley Conduit Project to the reservoir level(s) of John Martin Reservoir. As stewards of the land(s), the U.S. Army Corps of Engineers has in place a management plan for the protection of the endangered and threatened species of birds that nest on the project. Management feels that the management program in place at the project and the district offices for endangered and threatened species will be more than adequate to assure that continued protection is afforded to the species if potential water-raising effects do occur from the Arkansas Valley Conduit Project".

Your June 28, 2013, letter also stated that potential effects to the lesser prairie-chicken from the AVC project would be negligible as no construction would occur within one mile of any known lek. Furthermore, reservoir surface fluctuations under the proposed actions would also have no effect on this species. The proposed actions would temporarily disturb about 97 acres of potential habitat within lesser prairie-chicken range south of Lamar. Best management practices, such as restoration of disturbed habitat with native vegetation, restricting construction during nesting season, pre-construction surveys, and halting ground-disturbing activities if leks or active nests are encountered would be employed. Reclamation would stop construction and consult with the Service should potential effects on the lesser prairie-chicken be identified during construction.

Based on the information provided in your June 28, 2013, letter and the August 9, 2013, Corps email, the Service has concluded that the proposed AVC project may affect but is not likely to adversely affect the interior least tern and piping plover. Furthermore, the Service has concluded that the AVC project will not jeopardize the continued existence of the lesser prairie-chicken. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

If the Service can be of further assistance, please contact Sandy Vana-Miller of this office at (303) 236-4748.

ec: Jan (Signe) Snortland, Bureau of Reclamation, jsnortland@usbr.gov
FWSR6/ES/LK, S. Vana-Miller