



APPENDIX D

Durango-La Plata County Airport Expansion

Biological Assessment

Prepared for:

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Abbreviations and Acronyms

°F	degrees Fahrenheit
AF	Airport Forecast
BA	Biological Assessment
CFR	Code of Federal Regulations
cfs	cubic feet per second
CR	County Road
DRO	Durango-La Plata County Airport
Ecosphere	Ecosphere Environmental Services, Inc.
ESA	Endangered Species Act
IGA	intergovernmental agreement
LOS	level of service
TAF	Terminal Area Forecast
USFWS	US Fish and Wildlife Service

1. Introduction

The purpose of this Biological Assessment (BA) is to address the potential environmental effects that proposed expansion of the Durango-La Plata County Airport (DRO or the Airport) could have on federally listed endangered or threatened species, or designated critical habitat. The airport is located in southwestern Colorado, in the approximate center of La Plata County.

Threatened and endangered species are managed under the authority of the Endangered Species Act (ESA) of 1973 (Public Law 93-205, as amended; 16 United States Code 1536 (c)). The ESA requires federal agencies to ensure all actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of their critical habitat. This BA is prepared in accordance with legal requirements set forth under section 7 of the ESA, and follows the standards established in 7 Code of Federal Regulations (CFR) 1940.312(c).

This BA has been prepared by Ecosphere Environmental Services, Inc. (Ecosphere). The following species are considered in this BA:

- Wolverine (*Gulo gulo*); Proposed Threatened
- New Mexico meadow jumping mouse (*Zapus hudsonius luteus*); Endangered with critical habitat
- Southwestern willow flycatcher (*Empidonax traillii extimus*); Endangered with critical habitat
- Mexican spotted owl (*Strix occidentalis lucida*); Threatened with critical habitat
- Yellow-billed cuckoo (*Coccyzus americanus occidentalis*); Threatened with proposed critical habitat
- Colorado pikeminnow (*Ptychocheilus lucius*); Endangered with critical habitat
- Razorback sucker (*Xyrauchen texanus*); Endangered with critical habitat
- Knowlton's cactus (*Pediocactus knowltonii*); Endangered

Designated critical habitat for New Mexico meadow jumping mouse occurs within La Plata County on fee and state-managed land. No other designated or proposed critical habitat for any federally listed species occurs in the project or action areas.

Of the listed species with potential to occur in La Plata County, only the New Mexico meadow jumping mouse and the southwestern willow flycatcher have suitable habitat in the project area. US Fish and Wildlife Service (USFWS) protocol surveys were conducted for both species in 2016 by USFWS-permitted Ecosphere biologists. Southwestern willow flycatcher surveys were also conducted in 2017. Both species were detected in the project area, although the willow flycatcher was only detected during one of ten surveys (over 2 years). Two individual willow flycatchers were detected in May 2016 during the first seasonal protocol survey. Detections in May, but not in any other surveys, are typically considered migratory willow flycatchers. It is unknown whether migrants detected this early in the migratory/breeding season are the federally listed southwestern subspecies.

New Mexico meadow jumping mouse trapping surveys were completed in 2016, with the trapping effort resulting in the capture and release of five individuals. The surveys were completed in a wetland area immediately north of the proposed airport expansion. At the time of the surveys, a new access road into the airport was proposed at that location. Because of the presence of the New Mexico meadow jumping mouse in this area, the new access road into the airport was removed from the proposed action. Ultimately, no habitat for either species would be directly impacted by the proposed action. Effects determinations of “may affect, not likely to adversely affect” are made for the southwestern willow flycatcher and New Mexico meadow jumping mouse in this BA. There would be no effect to any other listed species due to the absence of habitat in the action area.

1.1 Background

DRO is a public-use airport located approximately 14 miles southeast of the Central Business District of Durango (Appendix A, Map A-1). Its elevation is 6,689 feet above mean sea level and occupies approximately 1,382 acres. The original 257 acres were purchased in 1947; the other 1,125 acres were purchased between 1959 and 1992.

DRO is co-owned by the City of Durango and La Plata County. Through an intergovernmental agreement (IGA), DRO functions as a City department with direct oversight by the City of Durango. Pursuant to the IGA, the Airport Commission serves in an advisory capacity with its members appointed by the City and County. The Commission is made up of seven board members—three members appointed by City Council, three members appointed by the Board of County Commissioners, and one joint member. The City and County jointly own and maintain the airport facilities, and have ultimate responsibility for all airport policy considerations, as well as compliance with all federal, state, and local regulations.

The Durango-La Plata County Airport 2017 Master Plan’s 10-year forecast shows a growth in total operations at DRO from 27,928 in 2013 to 34,439 operations in 2025 (Table 1.1). This forecast was based on different growth rates for commercial operations and general aviation operations.

Table 1.1 – Durango-La Plata County Airport Total Operations Forecast

Year	Itinerant Commercial	Itinerant GA	Itinerant Military	GA Local	GA Total	Total Operations
2013	7,128	6,902	500	13,398	20,300	27,928
2015	7,965	7,132	500	13,844	20,976	29,441
2020	8,471	8,045	500	14,942	22,987	31,958
2025	9,010	8,974	500	15,955	24,929	34,439

Source: Aviation 2017

The 2017 Master Plan recommends a preferred forecast of 283,505 enplanements by 2025 (see Table). A primary factor driving forecasted passenger enplanement growth is the continued trend in larger regional aircraft that will serve markets such as DRO, the conversion of existing seasonal frequency in

favor of year-round service, plus the probable addition of one or more new destinations and additional frequency to existing destinations in the future.

The 2017 Master Plan found the existing level of service (LOS) to be a “D”; however, it is preferred that DRO provide a “B” LOS. A “B” LOS is considered a high level of service where conditions of stable flow, very few delays, and high levels of comfort are most often experienced. In order to meet a “B” LOS, the Airport needs additional terminal space, specifically for airlines, Transportation Security Administration, concessions, and space for the general public as shown in Table 1.3.

Table 1.2 – Durango-La Plata County Airport passenger enplanement forecast

Timeframe	Year	DRO Forecast	TAF	AF/TAF (% Difference)
N/A	2013	192,797	192,797	0.0%
Base year	2015	205,594	205,594	0.0%
Base year + 5 years	2020	241,427	231,186	4.4%
Base year + 10 years	2025	283,505	253,344	11.9%

Source: Jviation 2017.

Notes: AF=Airport Forecast; DRO=Durango-La Plata County Airport; N/A=not applicable; TAF=Terminal Area Forecast.

Table 1.3 – Durango-La Plata County Airport terminal facility requirements summary

Type of Occupancy	Existing Space (square feet)	Current Need (2015)
Airline Space	17,000	26,924
Transportation Security Administration Space	2,500	14,830
Concessions	4,200	3,500
Public Circulation	12,263	24,500
Washrooms	1,159	3,660
Public Space Sub-Total	13,500	28,160
Airport Administration Sub-Total	2,400	5,000
Utilities and Support Spaces Sub-Total	1,900	3,686
Total Terminal Area (Rounded)	41,500 ^a	82,100

Source: Jviation 2017.

^aThe areas described above are approximate based on available archived drawings and CAD files for the existing terminal building; therefore, rounded totals were used for the existing facility.

The airport facilities include the airfield (runway, taxiways, and aprons), terminal area, parking areas, navigational/visual aids, Fixed-Based Operator, and hangars. The primary purpose of the proposed action is to better meet Durango-La Plata County Airport’s existing service and facility needs in a manner

that allows for future growth and development specifically in relation to the terminal building, parking, and apron.

1.2 Consultation History

There is no consultation history with the USFWS directly related to the DRO. Past consultations in the region pertain to water supply associated with Ridges Basin Reservoir (consultation numbers 2-22-80-F-13 and ES/GJ-6-CO-00-F-016) and to dam operations at Navajo Reservoir southeast of the airport (consultation numbers 2-22-91-F-292 and 2-22-98-F-402). These and other USFWS consultations in La Plata County are outside of the action area analyzed in this BA.

There is also the Intra-Service Section 7 Consultation for Minor Water Depletions of 100 Acre-Feet or Less from the San Juan River (R2/ES-TE CL 04-054) (USFWS 1999). The consultation concluded that new individual depletions of 100 acre-feet or less, up to cumulative total of 3,000 acre-feet per year, would not limit the provision of flows identified for the recovery of Colorado pikeminnow and razorback sucker, and thus, would not be likely to jeopardize the endangered fish species or result in the destruction or adverse modification of their habitat (USFWS 1999). This past consultation comes into play when a proposed action results in depletion of water to the San Juan River. No new water depletions to the San Juan River would occur under this proposed action.

2. Description of the Proposed Action and Action Area

2.1 Purpose and Need

The primary purpose of the proposed action is to better meet DRO's existing service and facility needs in a manner that allows for future growth and development specifically in relation to the terminal building, parking, and apron.

2.2 Study Area

The airport is situated in the foothills of the San Juan Mountains in southwestern Colorado, approximately 14 miles southeast of the city of Durango (Appendix A, Map A-1). The airport is located in La Plata County in Section 29, Township 34 North, Range 8 West, New Mexico Principal Meridian on the Loma Linda, Colorado 7.5-minute US Geological Survey quadrangle.

2.3 Action Area

The action area comprises all areas directly or indirectly affected by the proposed project (50 § CFR 402.02). Direct effects are caused by the action, and occur at the same time and place as the action. Indirect effects are those caused by or resulting from the proposed action and are later in time, but still reasonably certain to occur.

Potential impacts to federally listed species that could occur from the proposed action include the following:

- Ground and vegetation disturbance, and resulting habitat alteration or loss
- Disturbance from increased traffic in localized areas
- Adverse effects to surface or groundwater quality from spilled petroleum products or industrial fluids
- Injury or mortality to individuals from vehicles or equipment
- Disturbance from noise

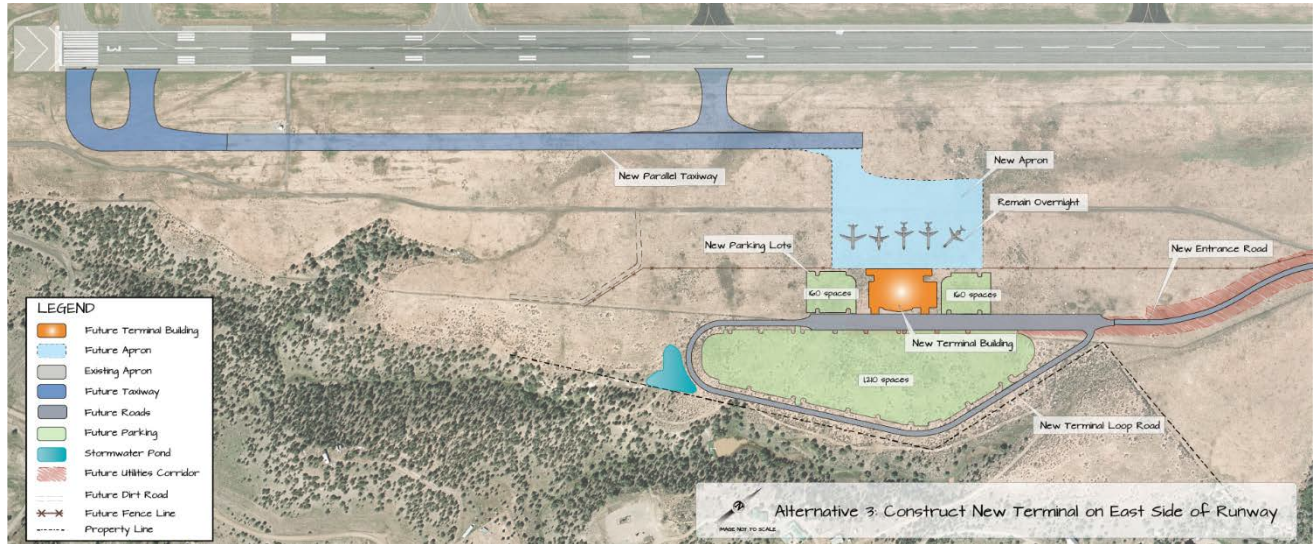
Based on the types of impacts that could result in direct or indirect impacts to federally listed species, the action area was delineated as a 0.5-mile buffer around the proposed airport expansion footprint.

2.4 Summary of the Proposed Action

The proposed action (Preferred Alternative) is listed as Alternative 3 in the project Environmental Assessment. The proposed action involves construction of all new terminal facilities on the east side of the existing airfield on undeveloped land (Figure 2.1); some of this land was disturbed during initial airport construction. This alternative seeks to use airport-owned land that is available for development, but has not been considered accessible due to barriers such as utility extension and access. Construction of a new terminal, aircraft parking apron, partial parallel taxiway, auto parking, and access roadways to

County Road (CR) 309A would be required. Once that occurs, the former terminal location would be made available for lease or redevelopment.

Figure 2.1 – Construct new terminal on east side of runway



Note: Not to scale

2.4.1 Terminal Building

The proposed action includes construction of a new terminal building on the east side of the existing airfield. High-performance modern systems would be used to capture the benefits of sustainable design principles and reduce operating costs of the new building. No phasing would be needed, as airport operations would not be affected by construction. Concession areas meeting program requirements would be located at both sides of the security checkpoint and sized to offer passengers options for food, beverage, and sundries. Sustainable design elements would be featured throughout the site development.

2.4.2 Terminal Apron

A new aircraft parking apron is included with construction of the new terminal building. The apron would accommodate five aircraft parking spaces: four gate positions and one overnight spot. The new terminal building would be centered on the terminal apron, and both the terminal and apron could be expanded to the north and south.

2.4.3 Partial Parallel and Connector Taxiways

To provide terminal service on the east side of the runway, a new partial parallel taxiway—Taxiway B—would be constructed to allow for safe and efficient aircraft movement. Three connector taxiways with the required 400-foot taxiway-to-runway separation would be constructed with edge lighting, airfield signage would be installed, and various electronic navigational aids would be relocated outside of the safety areas. The south end of Taxiway B would remain within a critical area for the Glideslope antenna,

thus hold lines are proposed on either side of the critical area, a commonly used mitigation strategy. This approach allows for considerable savings because the area features sloping terrain that would otherwise require additional earthwork to construct around the critical area.

2.4.4 Auto Parking

Parking has been defined in three areas that have the potential to be expanded to the north and south to accommodate future growth. The stormwater in these lots would be collected by a system of inlets and underground storm sewer pipes, and conveyed to a new detention pond. Allowable ponding depths at inlets in parking areas would be carefully considered to balance inlet efficiency and passenger comfort. Utility infrastructure for the parking lots would include electrical, communications ducts, and wiring for lighting and revenue control.

2.4.5 Access Roadways

A new road would be constructed from CR 309A up to a new terminal loop road (Figure 2.2). CR 309A would be improved by bringing the existing two-lane paved and gravel roadways up to new access road typical section standards. CR 309A is located below the mesa, therefore the new access road would need to ascend the slope to reach the new terminal site. This would require cut and fill to meet grade requirements. Landscaping berms would be considered to lessen the visual impact of the new roadway as it climbs the mesa. A new circulation road—with two 12-foot lanes, curb and gutter, and two 5-foot-wide sidewalks—would be constructed to support the terminal development on the east side. Additional lanes may be needed at intersections and in front of the terminal to increase safety and improve traffic flow.

2.4.6 Utility Improvements

Additional utility infrastructure—water, sanitary sewer, storm sewer, natural gas, electric, communications, and irrigation—is needed to support the new terminal building. Most of these utilities would be installed using open-trench construction with granular bedding, and would be extended from the existing infrastructure on the west side of the runway.

To accommodate the new development area, an electric vault would be installed on the east side of the airfield near the terminal. This new vault would replace the existing vault and provide power to the entire airfield lighting system.

Figure 2.2 – Airport access road



Source: Jvation, 2017

Note: Not to scale

2.4.7 Borrow Site

Fill material would be needed to prepare the construction site for the proposed development. The proposed borrow site is shown in Figure 2.3. The site is approximately 78,000 square yards and would provide enough fill for all components of the proposed action.

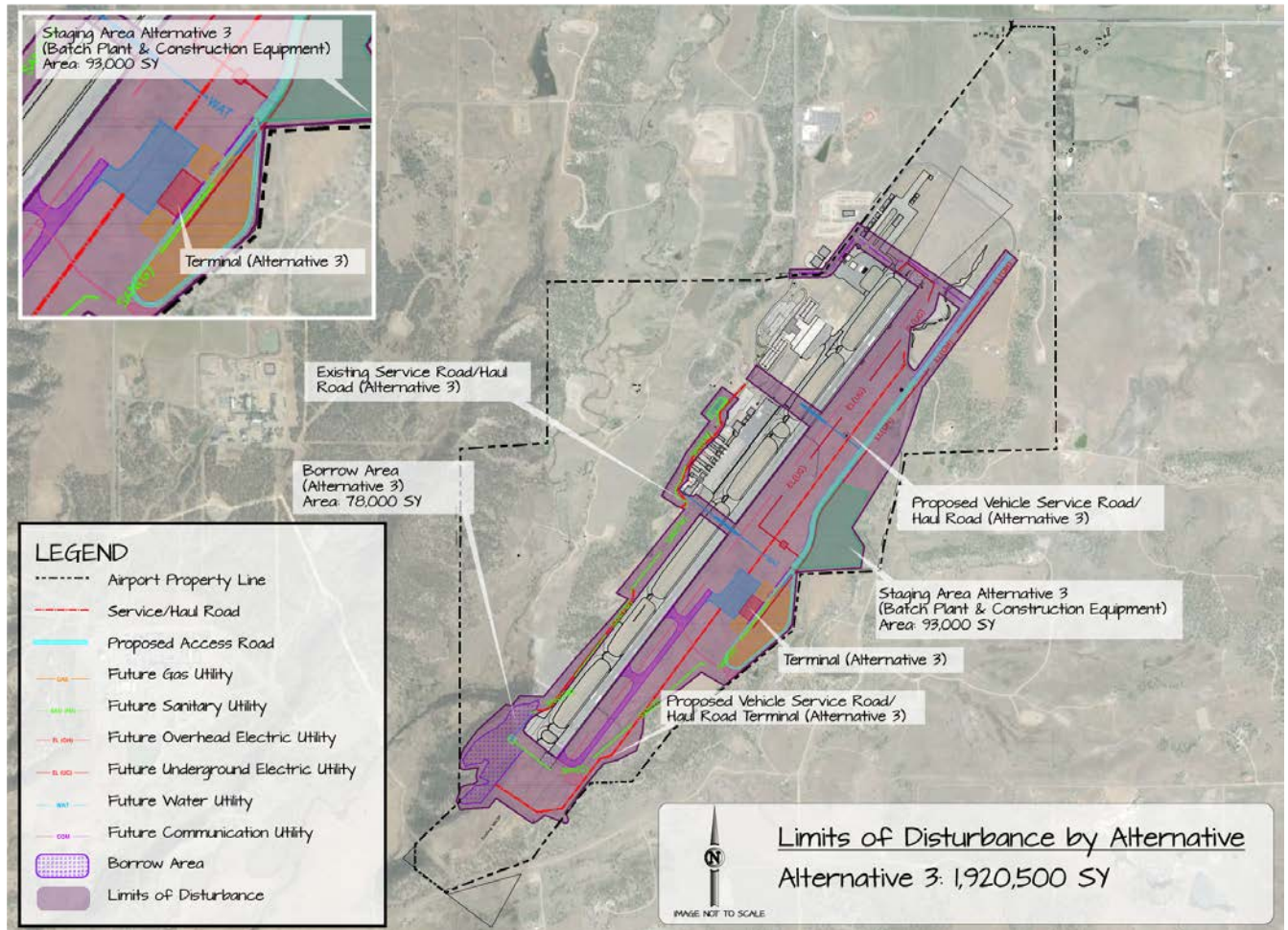
2.4.8 Staging Area

A staging area for equipment and an asphalt batch plant are also part of the proposed action. The staging area would be located east of the runway and north of the proposed terminal site (Figure 2.3). The development site would be accessed from the staging area via the proposed access road.

2.4.9 Vehicle Service and Haul Roads

The proposed action includes construction of a vehicle service/haul road that would run from the proposed borrow site to the new apron. The road would continue north of the apron and tie into the existing service road at the north end of the runway (Figure 2.3). The southern portion of the access road (running from the borrow site to the new apron) would also serve as a haul road during construction.

Figure 2.3 – Limits of disturbance



Source: Jviation, 2017

Note: Not to scale

3. Environmental Baseline

The environmental baseline includes the past and present effects of all federal, state, or private actions and other human activities in the action area; the anticipated effects of all proposed federal projects in the action area that have already undergone formal or early section 7 or section 10 consultation; and the effect of state or private actions, which are contemporaneous with the consultation process (50 CFR 402.02).

3.1 Climate

The climate in the action area is mild and semi-arid. Summers are dry, and winters often have heavy snow. The growing season is about 100 days. Based on climate data from the Ignacio 1N (054250) weather station and the period of record from 1909 to 1993, the average annual precipitation is 14.7 inches. Snowfall averages 38.4 inches annually (Western Regional Climate Center 2016).

Over the last 30 years, temperatures have increased by approximately 2 degrees Fahrenheit (°F) in Colorado. Climate models project Colorado will warm by 2.5°F to 5°F by 2050, relative to the 1971-2000 baseline. Summers are projected to warm more than winters. From observed climate trends in Colorado, no consistent long-term trends in annual precipitation have been detected. Projections show a decline in snowpack at lower elevations (below 8,200 feet) across the West by the mid-21st century. Several studies suggest that shifts in timing and intensity of stream flows are related to warming spring temperatures. The timing of runoff in Colorado river basins has shifted by 1 to 4 weeks earlier in the spring (Lukas et al. 2014).

Climate change may have wide-ranging effects on water resources in the state, including the action area. According to Lukas et al. 2014, these effects include the following:

- Increases in evapotranspiration by plants, lower soil moisture, and altered growing seasons may increase water demand.
- Changes in snowpack, streamflow timing, and hydrograph evolution may affect the timing and magnitude of spring runoff, which may affect the functioning of diversion, storage, and irrigation conveyances in the action area.
- Changes in the timing and hydrograph may affect sediment load and contaminant concentrations, which may affect water quality.
- Increasing temperature and changing soil moisture may shift mountain habitats toward higher elevations.
- Changes in air, water, and soil temperatures may affect the relationships between forests, surface water, groundwater, wildfire, and insect pests. Water-stressed trees, for example, may be more vulnerable to pests.
- Stream temperatures are expected to increase as the climate warms. This could have direct and indirect effects on aquatic ecosystems, including the spread of in-stream nonnative species and diseases to higher elevations, and the potential for nonnative plant species to invade riparian areas. Changes in streamflow intensity and timing may also affect riparian ecosystems.

- Changes in reservoir storage, streamflow intensity and timing, character and timing of snowpack, and the ratio of snowfall to rainfall may affect recreation activities.
- Changes in long-term precipitation and soil moisture may affect groundwater recharge rates. Coupled with demand issues, this may cause greater pressures on groundwater resources.

3.2 Vegetation Communities

According to the Southwest Regional Gap Analysis Project, the primary vegetation community in the survey area is mapped as agriculture, both on the mesa top and in the Florida River valley. Although the airport is industrial, the historical land use was agricultural. Agriculture, especially ranching, continues to dominate the surrounding area. The second-most dominant vegetation community is Colorado Plateau Piñon-Juniper Woodlands, which covers the slopes leading up to the mesa and the slope along the Florida River valley. Other vegetation types include Inter-Mountain Basins Big Sagebrush Shrublands interspersed within the piñon-juniper woodlands and Inter-Mountain Basins Semi-Desert Shrub Steppe. The airport facilities and buildings occur in an area mapped as Inter-Mountain Basins Greasewood Flats.

3.3 Wetlands

In total, approximately 57 acres of potentially jurisdictional wetlands were delineated and mapped in the study area. A complete description of these wetlands, including the location of all wetland features, is included in the Wetlands and Waters of the US Preliminary Jurisdictional Delineation Report (Ecosphere 2014) provided under separate cover to Jviation.

3.4 Hydrology

The Florida River is a managed, perennial stream tributary to the Animas River. As a result, surrounding floodplains infrequently flood, unless there is a localized lower-elevation precipitation event. Lemon Reservoir is located roughly 20 miles upstream and is managed by the US Bureau of Reclamation as a Colorado River Storage Project. Outflow from the reservoir on September 27, 2014, was 10 cubic feet per second (cfs). The Florida Water Conservancy District manages irrigation water deliveries from the reservoir. Irrigation return flows increase streamflow in the Florida River along its course and until its confluence with the Animas River.

Within the survey area, cattle have access to most all the river corridor, perhaps limiting establishment of woody riparian species, such as coyote willow (*Salix exigua*). However, a few small, scattered palustrine scrub-shrub communities of coyote willow and/or hawthorne (*Crataegus* spp) were identified.

3.5 Water Use

The airport has water rights in two basins to meet its potable and non-potable water needs. The airport is located on the edge of the Florida River watershed; the airport facilities use Florida River water rights

to provide potable water supply for domestic, commercial, and industrial uses as well as non-potable (irrigation) needs. The airport is also located in the Pine River basin and uses the water for irrigation.

These water rights currently allow the airport a share of 1.0 cfs during irrigation season, 0.10 cfs absolute and 0.84 cfs conditional as a winter water source, and 0.25 cfs conditional year-round source. Additionally, a 0.25 cubic foot per minute conditional surface water share is available from the Florida River.

DRO's on-site water system consists of a raw water holding tank, a water treatment system, and two treated water holding tanks. The system provides approximately 12,000 to 15,000 gallons of water per day to the airport, with the capacity to provide up to 30,000 gallons per day.

4. Species/Critical Habitat Considered

According to the USFWS, there are eight threatened, endangered, or proposed species with the potential to occur in the project area (Appendix B). Table 4.1 lists these species and their potential to occur in the study area. Two of the eight species, the New Mexico meadow jumping mouse and the southwestern willow flycatcher, are evaluated in detail in this assessment. The rationale for eliminating the remaining listed species is detailed in Table 4.1, and is primarily based on an absence of habitat.

The following sections describe the habitat requirements, life history, and distributions and status of the jumping mouse and willow flycatcher. Also included in these sections are the effects determinations for each species.

4.1 Species Descriptions

4.1.1 New Mexico Meadow Jumping Mouse

New Mexico meadow jumping mouse was identified as a candidate for federal listing in December 2007. The subspecies was listed as endangered in 2014 (USFWS 2014a). In 2016, critical habitat was designated where the species is known or likely to be extant (USFWS 2016). Identified threats to this subspecies are habitat loss from excessive grazing pressure, water use, and management; highway reconstruction; development; unregulated recreation; and beaver removal (USFWS 2014a). Catastrophic drought and wildfire have also been identified as threats, and may be heightened by the effects of climate change (USFWS 2014b).

Recent DNA genetic and morphological studies conclusively found that the New Mexico meadow jumping mouse is a distinct well-diverged, subspecies differentiated from other *Zapus hudsonius* subspecies (Frey 2008, Malaney et al. 2012, USFWS 2014b).

The New Mexico meadow jumping mouse is dark yellowish brown, dark brown, and grayish-brown on the back, yellowish brown on the sides, and white underneath (Frey 2008, USFWS 2014b). This small rodent has long hind feet and an extremely long tail. The hind legs are longer than the front legs. The tail is tapered, sub-cylindrical, and longer than the body. Each hind foot has five toes, while each front foot has four toes (Frey 2008, USFWS 2014b).

Table 4.1 – US Fish and Wildlife Service species listed for La Plata County, Colorado

Species	Status	Habitat	Potential to Occur in the Study Area	Eliminated from Detailed Consideration
Mammals				
Wolverine (<i>Gulo gulo</i>)	PT	Large, remote tracts of boreal forest and alpine tundra.	None. No boreal forest or alpine tundra habitats exist in the survey area.	Yes
New Mexico meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	E	Habitat specialist occurring in herbaceous emergent wetlands, especially dominated by sedges and broad-leaved forbs. Also, may utilize riparian communities containing scrub-shrub wetlands along perennial streams.	Known to occur in the study area. Suitable habitat occurs along rivers in the study area including the Animas, La Plata, Los Piños, Piedra, and San Juan Rivers, as well as Sambrito Creek.	No
Birds				
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E	Breeds in dense, shrubby riparian habitats, usually near surface water or saturated soil.	Suitable habitat occurs along the Animas, La Plata, Los Piños, Piedra, and San Juan Rivers as well as in willow thickets near irrigation ditches or wetlands. Breeding birds have been historically documented on the Los Piños River in the study area.	No
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T	Nests in caves, cliffs, or trees in steep-walled canyons of mixed conifer forests.	None. No caves, cliffs, or steep-walled canyons occur in the survey area.	Yes
Yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	T	Breeds in riparian woodlands with dense, understory vegetation. Rarely nests in habitat patches smaller than 50 acres.	None. No cottonwood gallery forests with adequate understory vegetation occur in the survey area.	Yes

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Species	Status	Habitat	Potential to Occur in the Study Area	Eliminated from Detailed Consideration
Fish				
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	E	Occurs in large rivers with strong currents, deep pools, and quiet backwaters.	Not known to occur in the study area. Occurs downstream on the San Juan River. Listed in La Plata County, based on depletions to the Colorado River basin.	Yes
Razorback sucker (<i>Xyrauchen texanus</i>)	E	Occurs in medium to large rivers with silty to rocky substrates. Prefers strong currents and deep pools.	Not known to occur in the study area. Occurs downstream on the San Juan River. Listed in La Plata County, based on depletions to the Colorado River basin.	Yes
Plants				
Knowlton's cactus (<i>Pediocactus knowltonii</i>)	E	Occurs in alluvial deposits that form rolling, gravelly hills in piñon-juniper and sagebrush communities between 6,200 and 6,400 feet. A type locality of the Los Piños River area.	Los Piños, La Plata, Florida, Piedra, and Animas River Valleys and Sambrito Creek include potential alluvial substrates; known populations exist along the Los Piños River bordering the study area.	Yes

Notes: E=endangered, PT=proposed threatened, T=threatened.

4.1.1.1 Life History

The New Mexico meadow jumping mouse hibernates 8 or 9 months of the year, and is active only during the summer when it breeds, raises young, and stores sufficient fat reserves to survive the next hibernation period. In general, breeding occurs from May through September, but is often curtailed at higher elevations and extended in lower, warmer regions. This species can be active both day and night, but are generally nocturnal and solitary (USFWS 2014a; Frey 2015). The average lifespan of this mouse is likely less than 1 year, with the longest lifespan about 3 years (USFWS 2014b).

The New Mexico meadow jumping mouse's breeding season likely begins in July or August, shortly after emerging from hibernation (USFWS 2014b). In montane populations, pregnant females are known from July to late August and evidence suggests that they have a single litter each year based on a single peak in pregnancies in late July (Frey 2015).

Diets of other jumping mouse species are varied, consisting of seeds, insects, fruits, and fungi. As the season progresses, diets shift from insects to seeds as they become more available. In New Mexico, New Mexico meadow jumping mouse has been observed eating common threesquare (*Schoenoplectus pungens*), saltgrass (*Distichlis spicata*), spikerush (*Eleocharis macrostachya*), foxtail barley (*Hordeum jubatum*), Saunder's wildrye (*Elymus saundersii*), Japanese brome (*Bromus japonicas*), slender wheatgrass (*Elymus trachycaulus*), and knotgrass (*Paspalum distichum*). Food availability, particularly grass seed, is an important factor that affects population persistence (USFWS 2014b).

4.1.1.2 Habitat

The New Mexico meadow jumping mouse occurs at elevations between 4,500 and 8,000 feet, but historic populations were found at higher elevations, including areas around Tres Ritos (8,750 feet) and the Taos Ski Valley (9,600 feet) (USFWS 2013, 2014b). Habitat requirements are characterized by tall (24-inch), dense riparian herbaceous vegetation composed of sedges and forbs. This suitable habitat is found only when wetland vegetation achieves full growth potential associated with perennial flowing water. The subspecies has not been found in areas with rocky stream banks or with bare ground (USFWS 2014a).

Day nests are used for protection and resting, and are typically constructed of grasses, forbs, sedges, rushes, or other plant material and are commonly above ground. The subspecies has been found to use multiple day nests. Maternal nests are constructed below ground in woody riparian areas dominated by shrubs or trees (USFWS 2013, 2014a). Little is known about hibernation nests, but they are likely similar to other subspecies of meadow jumping mouse. It has been suggested that the New Mexico meadow jumping mouse may nest and hibernate in drier upland, grassy areas adjacent to riparian habitat; and likely occurs below ground near the base of shrubs or trees (Frey and Wright 2012; USFWS 2014b).

The subspecies is thought to have limited mobility and dispersal capacity. On the Bosque del Apache National Wildlife Refuge, New Mexico meadow jumping mouse exhibited high site fidelity for daily activities and the maximum distance traveled between two points was 2,141 feet; however, most daily

movements were less than 328 feet. In the Jemez Mountains, the maximum distance traveled was 500 feet, with an average of 176 feet. Individual mice in the Jemez Mountains study were found to frequently move between 164 to 328 feet on a regular basis (USFWS 2014b). Home range sizes are likely related to the size of the suitable habitat. Average home ranges in the Jemez Mountains were estimated at 0.63 acre (for males) and 0.45 acre (for females). Home ranges in the Bosque del Apache National Wildlife Refuge averaged 3.4 acres to 4.15 acres, with male home ranges larger than those of females (USFWS 2014b; Wright and Frey 2015).

4.1.1.3 Designated Critical Habitat

There is no critical habitat for the New Mexico meadow jumping mouse in the DRO expansion project action area. There is designated critical habitat for this species in other areas of La Plata County, however those areas are outside of the area of impact associated with the proposed action.

4.1.1.4 Distribution and Status

New Mexico meadow jumping mouse is endemic to Arizona, southern Colorado, and New Mexico and is currently restricted to isolated areas in the San Juan, Sangre de Cristo, Jemez, Sacramento, and White Mountains along with portions of the Rio Grande Valley (USFWS 2014b).

Although there may be some additional populations of New Mexico meadow jumping mouse that persist in small isolated areas, there have only been 29 documented localities since 2005. Three localities are in the Sangre de Cristo Mountains along the border of Colorado and New Mexico; seven in the Jemez Mountains, four in the Sacramento Mountains, one at Bosque del Apache National Wildlife Refuge, New Mexico, two are in the San Juan Mountains, Colorado, and 12 are localities in the White Mountains, Arizona (USFWS 2014b).

New Mexico meadow jumping mouse occurrence in this portion of La Plata County has been genetically confirmed. Data collected from surveys between 2014 and 2017 are being used to determine the species population status. Based on these recent surveys, the subspecies has been documented in at least 10 different distinct populations from the Los Piños, Piedra, Florida, Animas, and San Juan river drainages and their tributaries in La Plata County. In 2007, the subspecies was trapped along the Florida River on private property in the study area (Frey 2008; USFWS 2014b). In 2012 and 2013, the subspecies was recorded in Sambrito Creek by Colorado Parks and Wildlife (USFWS 2014b) and during surveys in 2015 (Ecosphere 2016, unpublished data). In 2016, five individuals were captured and released following USFWS-protocol trapping surveys completed by Ecosphere in the action area. The jumping mouse was detected in habitat along the Florida River west of the airport proper and along an irrigation canal north of the airport proper where a new airport access road was previously proposed.

4.1.2 Southwestern Willow Flycatcher

The southwestern willow flycatcher was listed as endangered in 1995 (USFWS 1995). Critical habitat was designated in 1997 and modified in 2013 (USFWS 2014c).

The flycatcher subspecies is a small bird with adults averaging about 5.8 inches in length. It has a grayish-green back and wings, light grey-olive breast, and pale yellowish body. This bird eats a wide range of invertebrate prey including flying, ground-, and vegetation-dwelling, terrestrial and aquatic insect species. Although males are the primary singers, females also sing occasionally (USFWS 2002).

Threats to the subspecies include habitat loss and modification from increased agricultural and urban development in riparian areas. Riparian ecosystems have also been modified by declines in water flow and groundwater interruptions, physical modifications to streams, livestock grazing removal of riparian vegetation, wildfire, and water management and land use practices. Brood parasitism by brown-headed cowbirds (*Molothrus ater*) has also been identified as a threat to the subspecies (USFWS 2002). Additional threats include the tamarisk (saltcedar) leaf beetle and effects of climate change (USFWS 2014c).

4.1.2.1 Life History

The southwestern willow flycatcher is one of four subspecies of the willow flycatcher currently recognized. The subspecies is a neo-tropical migrant that winters in Central and South America and breeds in the southwestern US. All willow flycatcher subspecies migrate and breed in the U.S. from April to September (USFWS 1995). The average southwestern willow flycatcher life expectancy is 1.9 years following fledging, but some individuals have lived at least 9 years. Nestlings that fledge later in the breeding season have a lower survivorship than those that fledged earlier in the season. Southwestern willow flycatchers have higher site fidelity (to a local area) than nest fidelity (to a specific nest location). The subspecies has been found to move among sites within stream drainages rather than between drainages (USFWS 2014c).

4.1.2.2 Habitat

Typical southwestern willow flycatcher breeding habitat consists of relatively dense riparian vegetation along streams or other wetlands, near or adjacent to surface water, or underlain by saturated soils (Sogge et al. 1997; USFWS 2002). Historically, southwestern willow flycatchers nested in native riparian vegetation such as willows (*Salix* spp.) and boxelder (*Acer negundo*). Following changes in vegetation patterns, flycatchers still nest in native vegetation where available, but also nest in riparian exotics such as tamarisk (*Tamarix* spp.) and Russian olive (*Elaeagnus angustifolia*) (USFWS 2002). Habitat characteristics such as dominant plant species, size and shape of habitat patch, tree canopy structure, vegetation height, and vegetation density vary widely among breeding sites. Riparian patches used by breeding flycatchers vary in size and shape, ranging from a relatively contiguous stand of uniform vegetation to an irregularly shaped mosaic of dense vegetation with open areas. Southwestern willow flycatchers have nested in patches as small as 1.97 acres (e.g., in the Grand Canyon) and as large as several hundred acres (e.g., at Roosevelt Lake, Arizona, or Elephant Butte Reservoir, New Mexico.). They have rarely been found nesting in isolated, narrow, linear riparian habitats that are less than 98 feet wide, although they will use such linear habitats during migration (Sogge et al. 2010). Nests are found in thickets of trees and shrubs primarily 13 to 23 feet in height, among dense and homogenous foliage. Habitat occurs at elevations below 8,500 feet (USFWS 2002).

4.1.2.3 Designated Critical Habitat

There is no designated critical habitat for the southwestern willow flycatcher in the action area. Current critical habitat for this species is located along the Los Piños River approximately 15 miles northeast of the airport.

4.1.2.4 Distribution and Status

The known geographical area historically occupied by both migrating and breeding southwestern willow flycatchers includes southern California, southern Nevada, southern Utah, southern Colorado, Arizona, New Mexico, western Texas, and extreme northwestern Mexico. The subspecies current breeding range is similar to the historical range, but the quantity of suitable habitat has declined (USFWS 2002, 2014c).

Throughout the range of the southwestern willow flycatcher since 2002, the overall abundance of territories has increased, but not every Recovery Unit or Management Unit has increased. In particular, there have been increases in the Gila and Rio Grande Recovery Units, but little change or a decline in numbers within the Lower Colorado, Basin and Range, Upper Colorado River, and Coastal California Recovery Units. The number of surveys conducted annually has decreased since 2002, making tracking the distribution and abundance of the subspecies more difficult (USFWS 2014c).

The action area is located within the Upper Colorado River Unit, which is the smallest of all the Recovery Units and contains few known breeding sites. Two management units, the Powell and San Juan, occur in the Recovery Unit. There has been little change within the Recovery Unit since 2002. The most recent data indicate there are 10 southwestern willow flycatcher territories in the San Juan Unit, an increase since 2002 (USFWS 2014c).

Surveys have been conducted over multiple years along all the major river systems in La Plata County including the La Plata, Animas, Florida, Los Piños, Piedra, and San Juan Rivers. Flycatchers have been documented annually during migration within each of these drainages. Flycatchers have been documented breeding only along the Los Piños River near Ignacio. Between 2003 and 2009, several breeding territories were reported on the Los Piños River. However, no breeding has been documented in the county since 2009.

Within the action area, potential habitat occurs for the southwestern willow flycatcher in small patches along the Florida River, along irrigation ditches near CR 309, and by the entrance to the airport. Habitat is patchy in each of these areas, but meets the USFWS criteria to be considered habitat—the willows are at least 5 feet tall, dense, at least 0.25 acre, and at least 30 feet across in some portions of the habitat patch. Because the patches are small, narrow, and disconnected from other willow habitat, the habitat may be used during migration, but less likely for breeding. USFWS protocol presence/absence were completed in 2016 and 2017 by permitted biologists from Ecosphere. In 2016, all three habitat patches were surveyed. Two willow flycatchers were detected at the Florida River site during the first survey period (May) approximately 0.5 mile from the airport. Because no other detections occurred at this site during the other protocol surveys, the individual detected on May 30th was considered a migrant. No

willow flycatchers were detected at either of the other sites surveys in 2016. In 2017 no willow flycatchers were detected at any of the three sites.

4.2 Effects to Listed Species and Critical Habitat

4.2.1 New Mexico Meadow Jumping Mouse

There are no construction activities proposed in New Mexico meadow jumping mouse occupied habitats in the action area. Occupied habitats in the action area include along the Florida River and along the irrigation ditch and association wetlands near Spring Creek. A new airport access road had originally been proposed to cross through the Spring Creek canal and wetland habitats; however, following the detection of the jumping mouse in this habitat, the Federal Aviation Administration and the project proponent eliminated the new airport access road from the proposed action. As such, there would be no direct impacts to suitable or occupied jumping mouse habitats in the action area. Construction that occurs between May and October near occupied habitat could have potential effects such as short-term avoidance of an area due to noise or human activity. This potential impact however is expected to be minimal as current human activity, traffic, low-flying aircraft, and industrial and agricultural activities in the immediate area have been persistent for years. Expansion of the airport facilities within the current property boundaries are not expected to indirectly affect the New Mexico jumping meadow mouse due to the distance between proposed facilities expansion areas and occupied habitats. The Florida River habitat is within 1,640 feet of the existing terminal, but well below the mesa top where the proposed facilities expansion would be concentrated. The Spring Creek habitat area is nearly 3,280 feet from the airport property and immediately adjacent to State Highway 172.

With the removal of the previously proposed new access road from the planned airport expansion, implementation of the proposed action **may affect, is not likely to adversely affect** New Mexico meadow jumping mouse.

4.2.2 Southwestern Willow Flycatcher

The small sections of suitable southwestern willow flycatcher habitat identified in the action area are not expected to be directly impacted by any facilities expansion activities. There would be no construction activities in any of these small habitat patches. Consequently, no habitat would be lost as a result of developing the proposed action.

Construction activities occurring between May and September could have potential effects to migrating or nesting southwestern willow flycatchers if present. These short-term effects could include avoidance of an area due to noise or human activity, or in the case of nesting flycatchers, nest abandonment. This potential impact is more likely to effect migratory willow flycatchers, as the small habitat patches are currently only marginally suitable for nesting.

There is the potential that sedimentation or accidental spills or leaks of hazardous materials from the airport property could indirectly affect the quality of potential habitat and the prey base for

southwestern willow flycatchers. Coupled with the other indirect impacts described in this section, the proposed action **may affect, is not likely to adversely affect** southwestern willow flycatcher.

4.2.3 Cumulative Impacts

The environmental baseline includes the past and present impacts of all state and private actions in the action area, and the anticipated impacts of all proposed federal projects in the action area that have already undergone formal or early section 7 consultation. This section addresses those species that may be adversely affected by the proposed action: New Mexico jumping meadow mouse and southwestern willow flycatcher.

Past, ongoing, and foreseeable activities that have or would in the future affect these species within the cumulative impacts analysis area include:

- Residential, commercial and industrial, and municipal development
- Road and utility construction
- Oil and gas extraction
- Coal, and sand and gravel mining
- Agriculture including irrigation
- Livestock grazing
- Prescribed burning or other vegetation treatments
- Wildfire
- Water impoundments and stream barriers

The amount of development from future private and state actions cannot be quantified for this assessment. but it would be subject to Colorado State or La Plata County land use planning regulations. Development on nearby Southern Ute Indian Tribe land would be subject to regulatory oversight, including the National Environmental Policy Act, which would avoid or minimize potential cumulative impacts to these species.

Changes to surface water quality from development within the floodplain; livestock grazing; and contamination from sewage treatment plants, septic systems, and runoff from developed or cultivated land could affect both species if these foreseeable potential impacts transpire. In the future, population increases and associated increases in water use could also impact habitats for both species. Less surface water availability would have an adverse impact on habitats for both species as riparian habitats become desiccated and thus shrink the amount of available habitat.

Climatic variation associated with climate change may lead to reductions in quality of habitat for Colorado pikeminnow and razorback sucker. The potential impacts from climate change that could affect these species in the action area include changes in snowpack, streamflow timing, and hydrograph evolution. Changes in the timing and magnitude of runoff including earlier runoff, warmer stream temperatures, and the spread of in-stream nonnative species and diseases. Changes in streamflow intensity and timing may also affect riparian ecosystems.

5. Conclusions

Because of short-term increases in human activity and construction noise, the proposed action **may affect and is not likely to adversely affect** the New Mexico meadow jumping mouse and southwestern willow flycatcher. There would be **no effect** to any other listed species due to the absence of habitat in the action area.

The effects determinations and analysis in this Biological Assessment were made by Mike Fitzgerald of Ecosphere Environmental Services, Inc., 776 East 2nd Avenue, Durango, Colorado; 970-382-7256.



Mike Fitzgerald

fitz@ecosphere-services.com

6. Consultation and Coordination

Ecosphere informally consulted with Terry Ireland, USFWS Region 6 during the preparation of this BA.

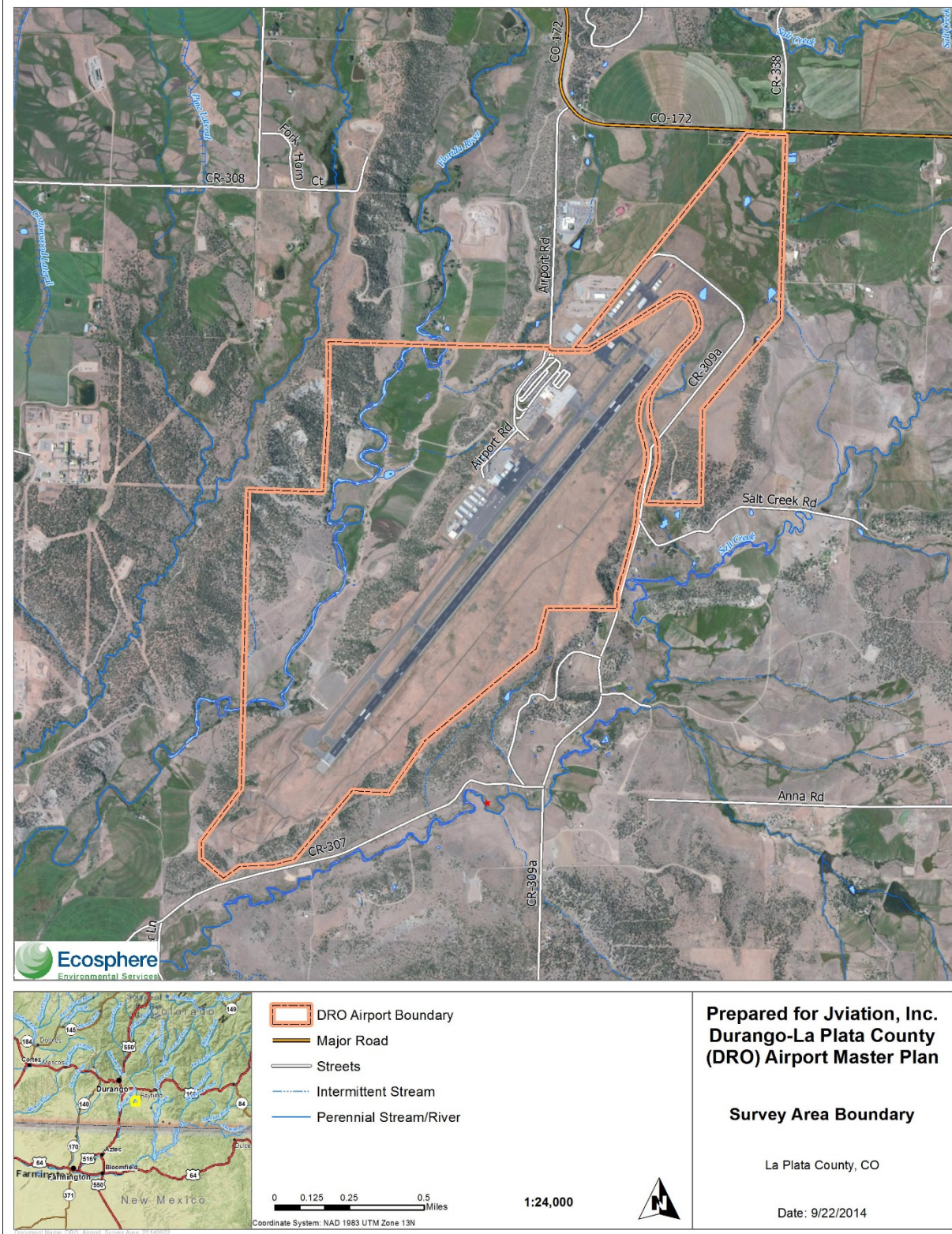
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Appendix A – Project Area Map

Biological Assessment
Durango-La Plata County Airport Expansion



Map A-1 – Durango-La Plata County Airport survey area boundary

**Appendix B – US Fish and Wildlife Service
Information for Planning
and Consultation Letter**



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Western Colorado Ecological Services Field Office

445 West Gunnison Avenue, Suite 240

Grand Junction, CO 81501-5711

Phone: (970) 243-2778 Fax: (970) 245-6933

<http://www.fws.gov/mountain-prairie/es/Colorado/>

<http://www.fws.gov/platteriver/>

In Reply Refer To:

November 09, 2017

Consultation Code: 06E24100-2018-SLI-0055

Event Code: 06E24100-2018-E-00096

Project Name: Durango - La Plata County Airport Expansion

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Western Colorado Ecological Services Field Office

445 West Gunnison Avenue, Suite 240

Grand Junction, CO 81501-5711

(970) 243-2778

Project Summary

Consultation Code: 06E24100-2018-SLI-0055

Event Code: 06E24100-2018-E-00096

Project Name: Durango - La Plata County Airport Expansion

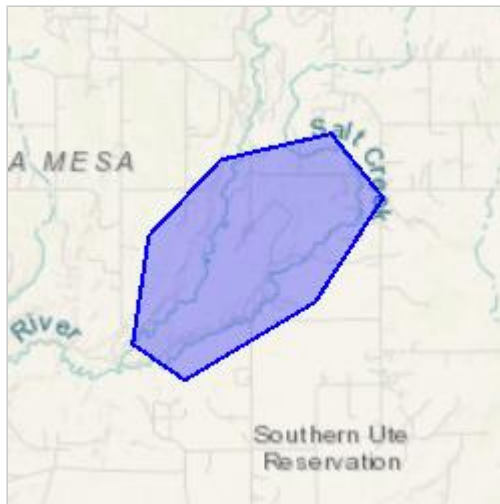
Project Type: TRANSPORTATION

Project Description: Airport facilities expansion within existing property

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/37.15425765754077N107.75176232042458W>



Counties: La Plata, CO

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
<p>New Mexico Meadow Jumping Mouse <i>Zapus hudsonius luteus</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/7965</p>	Endangered
<p>North American Wolverine <i>Gulo gulo luscus</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/5123</p>	Proposed Threatened

Birds

NAME	STATUS
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/8196</p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/6749</p>	Endangered
<p>Yellow-billed Cuckoo <i>Coccyzus americanus</i></p> <p>Population: Western U.S. DPS</p> <p>There is proposed critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/3911</p>	Threatened

Fishes

NAME

STATUS

Colorado Pikeminnow (=squawfish) *Ptychocheilus lucius*

Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/3531>

Razorback Sucker *Xyrauchen texanus*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/530>

Flowering Plants

NAME

STATUS

Knowlton's Cactus *Pediocactus knowltonii*

Endangered

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/1590>

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are [USFWS Birds of Conservation Concern](#) that might be affected by activities in this location. The list does not contain every bird you may find in this location, nor is it guaranteed that all of the birds on the list will be found on or near this location. To get a better idea of the specific locations where certain species have been reported and their level of occurrence, please refer to resources such as the [E-bird data mapping tool](#) (year-round bird sightings by birders and the general public) and [Breeding Bird Survey](#) (relative abundance maps for breeding birds). Although it is important to try to avoid and minimize impacts to all birds, special attention should be given to the birds on the list below. To get a list of all birds potentially present in your project area, visit the [E-bird Explore Data Tool](#).

NAME	BREEDING SEASON
Brown-capped Rosy-finch <i>Leucosticte australis</i> Bird of Conservation Concern (BCC)	Breeds Jun 15 to Sep 15
Black Rosy-finch <i>Leucosticte atrata</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9460	Breeds Jun 15 to Aug 31
Black Swift <i>Cypseloides niger</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Brewer's Sparrow <i>Spizella breweri</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Clark's Grebe <i>Aechmophorus clarkii</i> Bird of Conservation Concern (BCC)	Breeds Jan 1 to Dec 31

Golden Eagle <i>Aquila chrysaetos</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/1680	Breeds Apr 1 to Aug 31
Gray Vireo <i>Vireo vicinior</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/8680	Breeds May 10 to Aug 20
Grace's Warbler <i>Dendroica graciae</i> Bird of Conservation Concern (BCC)	Breeds May 20 to Jul 20
Long-billed Curlew <i>Numenius americanus</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Lewis's Woodpecker <i>Melanerpes lewis</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Lesser Yellowlegs <i>Tringa flavipes</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher <i>Contopus cooperi</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay <i>Gymnorhinus cyanocephalus</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Rufous Hummingbird <i>selasphorus rufus</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Virginia's Warbler <i>Vermivora virginiae</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/9441	Breeds May 1 to Jul 31
Willow Flycatcher <i>Empidonax traillii</i> Bird of Conservation Concern (BCC) https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31
Willet <i>Tringa semipalmata</i> Bird of Conservation Concern (BCC)	Breeds elsewhere

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
 - Measures for avoiding and minimizing impacts to birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
 - Nationwide conservation measures for birds
<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeas>
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Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

FRESHWATER EMERGENT WETLAND

- [PEMC](#)
- [PEMF](#)
- [PEMA](#)
- [PEMCh](#)
- [PEMCx](#)
- [PEMB](#)
- [PEMFh](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PSSA](#)

FRESHWATER POND

- [PABFh](#)
- [PUBFx](#)
- [PABF](#)
- [PUSCh](#)

RIVERINE

- [R3UBH](#)
 - [R3UBF](#)
 - [R4SBA](#)
 - [R4SBC](#)
 - [R4SBCx](#)
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