



5. ENVIRONMENTAL CONSEQUENCES

This chapter discusses the environmental effects associated with the No Action and Alternatives as they relate to the environmental impact categories outlined in FAA Orders 1050.1F and 5050.4B.

As discussed in **Chapter 4, Affected Environment**, the following environmental resources do not occur within this Environmental Assessment's (EA) study areas. As a result, none of the Alternatives evaluated in this EA would affect these resources:

- Coastal Resources. Durango-La Plata County Airport (DRO or the Airport) is located in Colorado, a state that does not have any coastal resources.
- Department of Transportation Act, Section 4(f). As noted in Chapter 4, no Section 4(f) resources are located within or near the study area.
- Wild and Scenic Rivers. As noted in **Chapter 4**, the nearest Wild and Scenic River is more than 70 miles from the study area.

Based on this information and in accordance with the guidance provided in FAA Orders 1050.1F and 5050.4B, this EA does not examine these two resources further.

This chapter discusses the following environmental impact categories and potential impacts resulting from the No Action and Action Alternatives:

1. Air Quality
2. Biological Resources
3. Climate
4. Department of Transportation Act, Section 4(f)
5. Farmlands
6. Hazardous Materials, Solid Waste, and Pollution Prevention
7. Historic, Architectural, Archaeological, and Cultural Resources
8. Land Use
9. Natural Resources and Energy Supply
10. Noise and Compatible Land use
11. Socioeconomics, Environmental Justice, and Children's Health and Safety Risks
12. Visual Effects
13. Water Resources
14. Cumulative Impacts

In accordance with CEQ regulations, this EA integrates the requirements of the NEPA and other planning and environmental review procedures required by applicable law or agency practice so that the appropriate review procedures run concurrently, rather than consecutively.¹ Therefore, this chapter includes a complete environmental analysis to expedite a concurrent environmental review process associated with the following federal statutes, executive orders and regulations:

¹ CEQ, Title 40 CFR 1500.2(c), Protection of the Environment, Council on Environmental Quality, Policy, 2005



- Title 49 United States Code (USC) 303 and 23 USC 138 (DOT Section 4(f));
- Endangered Species Act of 1973 (Threatened or Endangered Species);
- Executive Order 11988 (Floodplains);
- Section 106 of the National Historic Preservation Act (Historic Resources); and
- Executive Order 11990 (Wetlands).

In an effort to reduce redundancy and overall EA length, Alternatives 1 and 2 of the Terminal Development project are evaluated together, when applicable. The two Alternatives are proposed to be constructed in an area that is environmentally similar and previously developed, resulting in similar environmental impacts.

5.1 Air Quality

This section discusses DRO's emissions inventory for 2015 (baseline year), 2020 (day of opening), and 2030 (future year) for the No Action and Action Alternatives (Alternatives 1 through 3). 2015 was selected as the base year at the beginning of the EA process. Construction-related emissions during the 2019-2020 construction period are also presented. It should be noted that the funding source for Terminal Development Alternatives is pending and could delay the proposed timelines used in this section.

Subsequent chapters evaluate each Alternative individually; however, this section reviews the Alternatives together, separated by operational and construction emissions to allow for an easier comparison of Alternative impacts. The forecast is the same for each of the Alternatives.

Operational Emissions

An operational emissions inventory of aircraft operations as well as auxiliary power units (APUs) and ground support equipment (GSE) was performed at DRO using the FAA's Aviation Environmental Design Tool (AEDT). Airport operational emissions sources other than aircraft-related (e.g., motor vehicles) were not considered in the emissions inventory as these source emissions would not change as a result of the Action Alternatives. Aircraft operations remain the same between the No Action and Action Alternatives, however, taxi times are affected due to the construction of the new terminal on the east side of the runway. **Table 5-1** provides the aircraft fleet and operations by aircraft type used in the operational emissions inventory at DRO for existing and future years.

TABLE 5-1 – AIRCRAFT FLEET AND OPERATIONS

Aircraft Category	Representative Aircraft Type/Engine	Annual Operations		
		2015	2020	2030
Commercial	Bombardier de Havilland Dash 8 Q400/PW123, Bombardier CRJ-200 and CRJ-700/CF34-3B, Bombardier CRJ-900/CF34-8C5, Embraer ERJ145-LR/AE3007A1P, Embraer ERJ135 and ERJ145-XR/AE3007A1E, Embraer ERJ195/CF34-10E6, Airbus A319-100 Series/CFM56-5B2/2, and Boeing 737-800 Series/CFM 56-7B26	7,965	8,471	9,583
Jet	Raytheon Beechjet 400/JT15D-5,-5A,-5B, Cessna 560 Citation V/PW530, Cessna 560 Citation XLS/ BIZMEDIUMJET_F, Cessna 550 Citation II/JT15D-4series, Cessna 750 Citation X AE3007C, Cessna 525 CitationJet/JT15D-1series, Cessna 650 Citation III/TFE731-2-2B, Cessna 525B CitationJet/BIZLIGHTJET, Hawker HS-125 Series 700/BIZMEDIUMJET_F, Bombardier Learjet 35/TFE731-2-2B, Bombardier Learjet 60/PW306A, Bombardier Learjet 55/TFE731-3, Embraer 500 and 505/BIZLIGHTJET_F, and Dassault Falcon 2000/PW308C	2,440	2,753	3,514

TABLE 5-1 – AIRCRAFT FLEET AND OPERATIONS

Aircraft Category	Representative Aircraft Type/Engine	Annual Operations		
		2015	2020	2030
Turbo	Cessna 208 Caravan/PT6A-114, Raytheon Super King Air 200/PT6A-42, and Raytheon King Air 90/PT6A-41	4,159	4,688	5,989
Twin Prop	Cessna 340/TIO-540-J2B2, Cessna 421 Golden Eagle/TIO-540-J2B2, Raytheon Beech 60 Duke/TIO-540-J2B2, and Piper PA-31 Navajo/TIO-540-J2B2	5,248	5,674	6,396
Single Prop	Cirrus SR22/TIO-540-J2B2, Cessna 182/IO-360-B, Cessna 210 Centurion/TIO-540-J2B2, and Cessna 172 Skyhawk/IO-360-B	9,129	9,872	11,129
Military	C-130E/T56-A-7	500	500	500
Total		29,441	31,958	37,111

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.

For the purpose of this analysis, the following were derived or assumed:

- The FAA's Emissions and Dispersion Modeling System (EDMS – Version 5.1.4.1) default GSE type and parameters were used for the aircraft listed in **Table 5-1** as AEDT does not provide default GSE.
- The AEDT default APU types and run times per aircraft were used.
- Weighted average aircraft taxi out and taxi in times are presented in **Table 5-2** for existing, with and without the proposed actions, and were derived as follows:
 - using measured distances from the existing and the proposed new terminal location to the runway ends,
 - assuming an aircraft taxi speed of 20 miles per hour, and
 - assuming a north/south airport flow of 50 and 50 percent, respectively.²
- Average aircraft delay times were derived using nomographs that relate the Airport's annual service volume to the demand volume. The estimated ratio of annual demand to annual service volume for the proposed actions was very small and thus the average delay per aircraft is negligible and not included in the total taxi times. This methodology is detailed in FAA's *Airport Capacity and Delay Advisory Circular* (AC 150/5060-5).

² Based on the Airport's Master Plan prepared in July 2014 the percent runway use rounds to 50% north/south airport flow.



TABLE 5-2 – DERIVED WEIGHTED TOTAL TAXI TIMES (MINUTES)

Project Scenarios		2015	2020	2030
Baseline		5.6	--	--
No Action		--	5.6	5.6
Action Alternatives	Alternative 1 – Renovate/Expand Existing Terminal	--	5.6	5.6
	Alternative 2 – Construct New Terminal Adjacent to Existing Terminal	--	5.6	5.6
	Alternative 3 – Construct New Terminal on East Side of Runway	Commercial aircraft ¹	6.8	6.8
		All other GA aircraft	5.6	5.6

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Notes: ¹ Assumes commercial aircraft would use the terminal on the east side of the airfield. These aircraft would cross the existing runway to access runway end 21 and use the partial taxiway to access runway end 3. GA traffic would remain on the west side of the airport.

Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis. Average delay per aircraft is negligible, thus not included in total taxi times.

Table 5-3 presents the operational emissions inventories for existing baseline year 2015, and the future 2020 and 2030 for the No Action and Action Alternatives for DRO (segregated by each source). For disclosure purposes under NEPA, operational emissions of criteria pollutants CO, VOC, NO_x, SO_x, PM_{2.5}, and PM₁₀ were assessed. As shown, overall total emissions increase from the 2015 Baseline to the 2020 and 2030 No Action and Action Alternatives. These total emission changes can be attributed to increases in aircraft operations and change in fleet mix, which would happen regardless of which alternative is selected (including the No Action).

Comparing the No Action Alternative to the Action Alternatives, overall total emissions either stay the same or slightly increase due to the increase in taxi times resulting from the construction of the new terminal on the east side of the airfield. Notably, the No Action Alternative and Alternatives 1 and 2 would not result in any emission changes due to the terminal remaining at its existing location and therefore not altering the airfield's activity levels. Conversely, Alternative 3 involves construction of a new terminal facility on the east side of the airfield and subsequently the airfield activity levels would change slightly due to aircraft taxiing to and from a different terminal location with longer distance.

TABLE 5-3 – OPERATIONAL EMISSIONS INVENTORIES (TONS)

Source	CO	VOC	NO _x	SO _x	PM _{2.5}	PM ₁₀
2015 Baseline						
Aircraft	247.2	5.85	11.4	1.63	0.84	0.84
APUs	1.13	0.09	0.53	0.11	0.11	0.11
GSE	15.80	0.55	1.80	0.06	0.07	0.08
Total	264.1	6.5	13.8	1.8	1.0	1.0
2020 No Action Alternative /Action Alternatives 1 and 2						
Aircraft	268.3	6.35	12.4	1.77	0.91	0.91
APUs	1.22	0.09	0.58	0.12	0.12	0.12
GSE	8.27	0.31	0.87	0.06	0.05	0.05
Total	277.8	6.8	13.9	1.9	1.1	1.1

TABLE 5-3 – OPERATIONAL EMISSIONS INVENTORIES (TONS)

Source	CO	VOC	NOx	SOx	PM2.5	PM10
2020 Action Alternative 3						
Aircraft	269.4	6.44	12.6	1.80	0.91	0.91
APUs	1.22	0.09	0.58	0.12	0.12	0.12
GSE	8.27	0.31	0.87	0.06	0.05	0.05
Total	278.9	6.8	14.0	2.0	1.1	1.1
2030 No Action Alternative/Action Alternatives 1 and 2						
Aircraft	303.8	7.83	24.8	2.94	0.96	0.96
APUs	3.76	0.26	1.18	0.24	0.32	0.32
GSE	7.20	0.27	0.60	0.07	0.04	0.04
Total	314.8	8.4	26.6	3.3	1.3	1.3
2030 Action Alternative 3						
Aircraft	305.1	7.90	25.1	3.00	0.96	0.96
APUs	3.76	0.26	1.18	0.24	0.32	0.32
GSE	7.20	0.27	0.60	0.07	0.04	0.04
Total	316.0	8.4	26.8	3.3	1.3	1.3

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.

Construction Emissions

Construction activities would be temporary and variable depending on the type, duration, and level of activity. These emissions occur predominantly in the engine exhaust of construction equipment and vehicles (e.g., scrapers, dozers, delivery trucks, etc.), but are also attributed to fugitive dust produced from construction materials staging, soil handling, and unstabilized land and wind erosion.

Construction equipment typically utilized in airport projects includes on-road (i.e., road-licensed) and non-road equipment (i.e., off-road). Vehicles in the on-road category are used for the transport and delivery of supplies, material, and equipment to and from the site, and also include construction worker vehicles. Off-road equipment is operated on-site for activities such as soil/material handling, site clearing, and grubbing.

The Airport Construction Emissions Inventory Tool (ACEIT)³ was used for the evaluation of DRO's proposed terminal improvements. Certain project-specific details and/or cost of the improvements were used in ACEIT to estimate construction activities and equipment/vehicles activity data (e.g., equipment mixes/times) for each Action Alternative. Default emission factors were also assigned based on location and type of project. The default factors used by ACEIT are derived from EPA-approved emissions models for both non-road construction equipment (NONROAD) and on-road vehicles (MOVES). NONROAD, a computerized database developed by the EPA, provides emission factors for off-road equipment/vehicles (e.g., dozers, tractors, loaders, etc.); MOVES is an emission modeling system used to develop emission factors for on-road vehicles (e.g., passenger cars, delivery trucks, etc.). Both exhaust and fugitive (e.g., evaporative) emission factors were developed using these

³ Transportation Research Board, ACRP Report 102, *Guidance for Estimating Airport Construction Emissions*, http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_102.pdf, 2014.



models for incorporation into ACEIT. **Table 5-4** presents the construction activities and schedules associated with each Action Alternative.

TABLE 5-4 – CONSTRUCTION ACTIVITIES AND SCHEDULES

Alternative	Activity	Schedule
Alternative 1	Terminal	January 2020-October 2020
	Apron	
	Parking Lot	January 2019-December 2019
	Loop Road	January 2020-December 2020
Alternative 2	Terminal	January 2019-December 2020
	Apron	
	Parking Lot	January 2019-December 2019
	Loop Road	January 2020-December 2020
Alternative 3	Terminal	January 2019-October 2020
	Apron	
	Parking Lot	January 2020-October 2020
	Loop Road	
	Taxiway	January 2019-November 2019

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.

Construction emissions associated with the Action Alternatives are presented in **Table 5-5**. Because the construction period extends up to two years, emissions are presented for 2019 and 2020. Furthermore, construction activities, emission factors and footprints vary according to Alternatives. For ease of understanding the differences between Alternatives, ACEIT input and output files are provided as Appendix I, ACEIT Inputs and Outputs.

As shown in **Table 5-5**, all three Alternatives result in construction-related emissions; however, as DRO is not located in a nonattainment area, the emissions are not expected to be significant. Notably, DRO is located in La Plata County which is currently an area designated as attainment of all NAAQS established by the EPA, and General Conformity requirements outlined under the federal CAA do not apply to the proposed project; therefore, de minimis levels are not applicable. Results are presented for disclosure purposes only, under NEPA.

TABLE 5-5 – CONSTRUCTION EMISSIONS (TONS)

Alternative	Year	CO	VOC	NOx	SO2	PM10	PM2.5
Alternative 1	2019	7.4	18.1	2.7	<0.1	0.8	0.1
	2020	24.1	11.4	10.6	0.1	1.4	0.5
Alternative 2	2019	24.8	35.5	13.5	0.1	2.5	0.7
	2020	23.0	20.5	11.4	0.1	1.9	0.6
Alternative 3	2019	18.9	11.7	10.4	0.1	1.4	0.5
	2020	29.0	49.8	16.0	0.1	3.5	0.8

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.

Emissions from construction activities would be further reduced by employing the following standard construction procedures:

- Reducing exposed erodible surface areas;
- Covering exposed surface areas with pavement or vegetation in an expeditious manner and periodic watering;
- Reducing equipment idling times;
- Reducing vehicles speeds onsite;
- Ensuring contractor knowledge of appropriate fugitive dust and equipment exhaust controls;
- Use of low- or zero-emissions equipment;
- Use of covered haul trucks during materials transportation; and
- Suspending construction activities during high-wind conditions.

5.2 Biological Resources

Biological resources include fish, wildlife, plants, and their respective habitats. Wildlife that may occur at DRO includes a variety of species common to transitional areas where agricultural lands, pinon-juniper woodlands, and sagebrush grasslands are intermingled. Mammal species commonly occurring in these habitats may include desert cottontail, black-tailed jackrabbit, prairie dogs, Botta's pocket gopher, deer mouse, white-throated woodrat. Coyote, striped skunk, mountain lion, mule deer, and elk may also be found in these habitat types. Although 12 federal and 31 state-listed plant, animal, and insect species are known to occur in La Plata County, only two were identified during site surveys (Southwestern willow flycatcher and New Mexico meadow jumping mouse). Of the 24 Birds of Conservation Concern (BCC), five are known to occur within the survey area and six have the potential to occur. This section describes how the No Action and Action Alternatives may unavoidably affect identified species in the study area, and the measures that will mitigate those effects.

No Action Alternative

The No Action Alternative would not result in any changes to the existing biological environment and would therefore not result in any impacts to fish, wildlife, and plant species.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would be constructed in an area that has been previously disturbed and is currently developed. Both Alternatives include paving grassy areas for parking lots. Alternatives 1 and 2 would result in disturbance from human activity, potential loss of prey, and potential loss of habitat; however, the impacts would be minimal given that the project area is composed largely of previously disturbed areas. No sensitive species were identified in the area during the survey. Therefore, Alternatives 1 and 2 would not result in significant impacts to biological resources such as fish, wildlife, and plant species. On February 28, 2019, the FAA prepared a Biological Assessment (BA) and sent the results to the USFWS as part of their initiation of informal consultation. The BA included the potential impacts of Alternatives 1 and 2 (DRO's Proposed Action). The FAA requested written concurrence with their effect determination. The USFWS concurred with the FAA's finding of not likely to adversely affect in a letter dated March 29, 2019. See **Appendix J** for the FAA and USFWS correspondence.



Terminal Alternative 3: Construct New Terminal on East Side of Runway

As discussed in **Chapter 4, Affected Environment**, a Biological Resource Survey was completed at DRO in 2014 as part of the 2017 Master Plan. The survey, along with coordination with the USFWS, found that the Southwestern Willow Flycatcher (SWF) and the New Mexico Meadow Jumping Mouse (NMMJM) have the potential to occur at DRO and be impacted by Alternative 3. At this time, the new access road was included as an Alternative and located within the species habitats. As such, additional surveys for the SWF and NMMJM were completed as well as a Biological Assessment (BA) focused on the areas potentially impacted by Alternative 3 (see **Appendix D, Biological Assessment** completed by Ecosphere as part of the EA). With the access road being removed from the project, potential impacts to the species were significantly reduced. The following excerpts from Ecosphere's 2017 BA provide justification for their determination of May Affect, is not likely to Adversely Affect.⁴

New Mexico Meadow Jumping Mouse

There are no construction activities proposed in NMMJM occupied habitats. 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 FAA and the project proponent eliminated the new airport access road from Alternative 3. As such, there would be no direct impacts to suitable or occupied jumping mouse habitats. 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 NMMJM due to the distance between proposed facilities expansion areas and occupied habitats.

With the removal of the previously proposed new access road from the planned airport expansion, implementation of the Alternative 3 may affect, is not likely to adversely affect NMMJM.

Southwestern Willow Flycatcher

As discussed in **Chapter 4, Affected Environment**, the Biological Survey completed in 2016 identified small areas of suitable habitat in the Action Area for the SWF. The Biological Survey recommended an additional survey to determine the presence or absence of any SWF; this survey was completed in Summer 2017. The survey included three sites, none of which produced signs of the SWF (see **Appendix K, Southwestern Willow Flycatcher Survey Summary**). As such, it is not expected that the species would be directly impacted by any facilities expansion activities. There would be no construction activities in any of these small habitat patch areas. Consequently, no habitat would be lost as a result of developing Alternative 3.

Construction activities occurring between May and September could have potential effects to migrating or nesting SWF 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.

⁴ Ecosphere Environmental Services, Durango-La Plata County Airport Expansion Biological Assessment, 2017

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 SWF. Coupled with the other indirect impacts described in this section, Alternative 3, May Affect, and is not likely to Adversely Affect SWF.

On February 28, 2019, the FAA prepared a Biological Assessment (BA) and sent the results to the USFWS as part of their initiation of informal consultation. The FAA requested written concurrence with their effect determination. The USFWS concurred with the FAA's finding of not likely to adversely affect in a letter dated March 29, 2019. See **Appendix J** for the FAA and USFWS correspondence.

5.3 Climate

Although there are no federal standards for aviation-related Greenhouse Gas (GHG) emissions, it is well-established that GHG emissions can affect climate. The CEQ has indicated that climate should be considered in NEPA analyses and in 2016 released final guidance for federal agencies on how to consider the impacts of their actions on global climate change in their NEPA reviews, a Notice of Availability for which was published on August 5, 2016 (81 FR 51866). However, pursuant to Executive Order 13783, "Promoting Energy Independence and Economic Growth," of March 28, 2017, the guidance has been withdrawn for further consideration.

For this analysis, GHG emissions associated with construction-related activities during the 2019-2020 construction period as well as the net change in operational emissions between the future 2020 and 2030 No Action Alternative and Action Alternatives (Alternatives 1 through 3) are disclosed. The GHG emissions are presented in metric tons of CO₂ equivalent (CO₂e) relevant to their Global Warming Potentials (GWP).

The estimated operational and construction-related annual CO₂e emissions are presented in **Table 5-6** and **Table 5-7**, respectively. As shown in **Table 5-6**, over the long term, when compared to the No Action Alternative and Alternatives 1 and 2, GHG emissions would slightly increase with Alternative 3 due to the increase in taxi times resulting from the construction of the new terminal on the east side of the airfield. As shown in **Table 5-7**, emissions of GHG would increase over the short-term due to construction activities. For ease of understanding the differences in construction emissions between Alternatives, ACEIT input and output files are provided as Appendix I, ACEIT Inputs and Outputs.

TABLE 5-6 – OPERATIONAL EMISSIONS (METRIC TONS)

Scenario	CO ₂ e
2015 Baseline	3,611
2020 No Action Alternative /Alternatives 1 and 2	3,919
2020 Alternative 3	4,006
2030 No Action Alternative/ Alternatives 1 and 2	6,511
2030 Alternative 3	6,665

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017.

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.



TABLE 5-7 – CONSTRUCTION EMISSIONS (METRIC TONS)

Alternative	Year	CO ₂ e
Alternative 1	2019	1,627
	2020	7,277
Alternative 2	2019	7,805
	2020	7,619
Alternative 3	2019	6,132
	2020	10,520

Source: KB Environmental Sciences, Durango-La Plata County Airport Air Quality and Climate Assessment, 2017

Note: Project funding may change the terminal construction date; however, for comparative purposes, the initial planned construction date is used throughout this analysis.

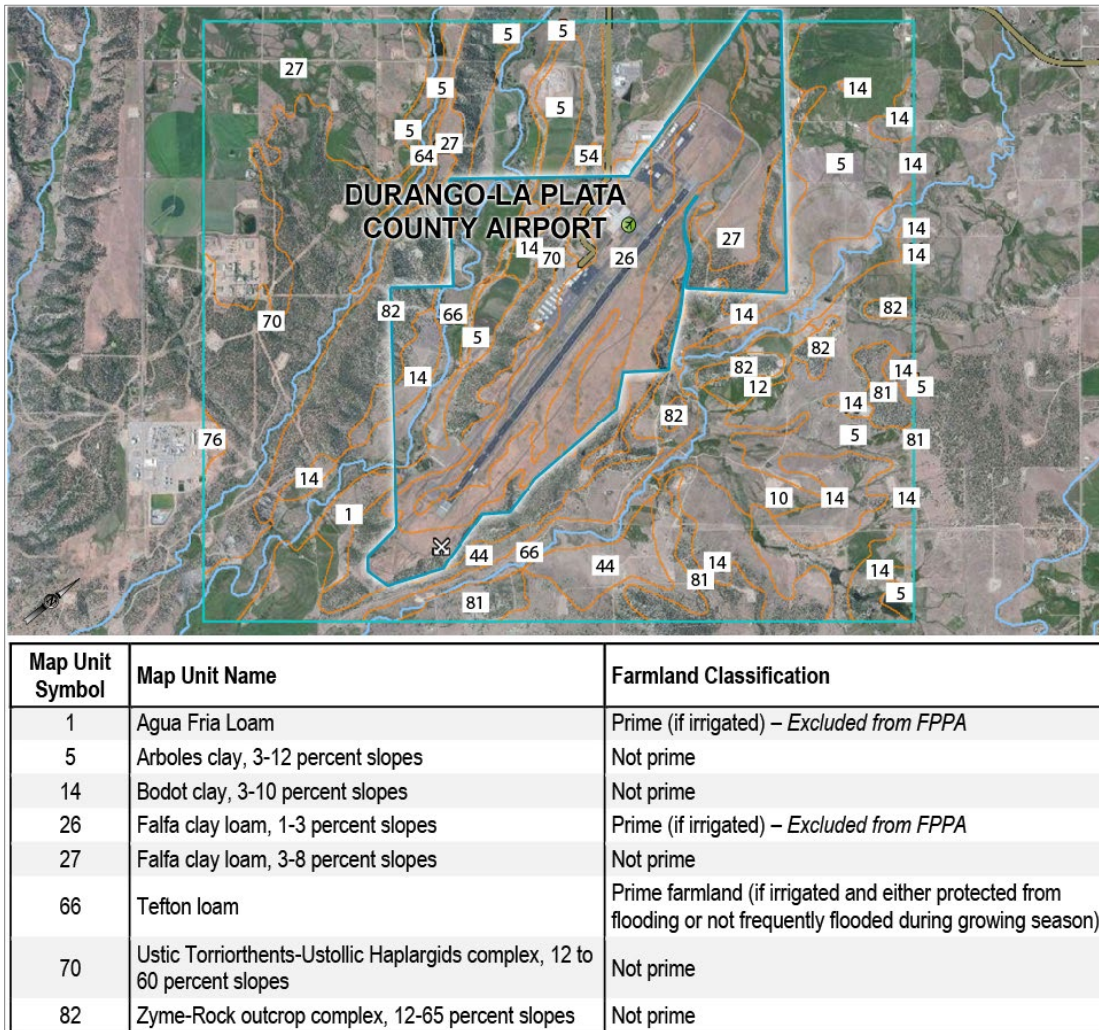
Operations related to Alternatives 1 through 3 would result in no change or a slight increase in GHG emissions over the No Action Alternatives. Implementing either the Action Alternatives or the No Action Alternative would not create a significant impact on Climate.

5.4 Farmlands

In 1981, the Farmland Protection Policy Act (FPPA) was adopted. The purpose of this legislation is to protect farmland lands that are considered to have national significance in terms of being prime or unique or of significance from a state or local perspective. Soil quality and type(s) generally determine if farmland falls into any of these classifications.

As discussed in **Chapter 4** and depicted in **Figure 5-1**, only one area within the Airport boundary, symbol 66, is designated as agricultural land and applicable to the FPPA (the FPPA excludes land dedicated to urban use (including aviation) prior to 1982). This area is west of the existing terminal and parking area and follows the Florida River.

FIGURE 5-1 – NRCS SOILS



Source: NRCS, Web Soil Survey, www.websoilsurvey.nrcs.usda.gov, accessed July 2014

Note: Not to scale

No Action Alternative

The No Action Alternative would not result in any changes to the existing terminal buildings, access roads, or airport operations; therefore, no FPPA protected farmlands would be impacted.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would only result in changes to the existing terminal building and parking area, neither of which are within or adjacent to an area designated as farmland and protected by FPPA. As such, Alternatives 1 and 2 would not result in any impacts to farmland.



Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3 would occur on land designated as not prime (symbol 27) and prime (if irrigated) (symbol 26) (**Figure 5-1**). Although areas designated as prime (symbol 26) occur within the project area, the land was dedicated to aviation use prior to 1982, making it exempt from FPPA. Additionally, none of the land is irrigated and is not currently considered prime farmland. Finally, none of the land within the project boundaries of Alternative 3 is currently being farmed. Therefore, Alternative 3 would not result in any impacts to farmland.

5.5 Hazardous Materials, Solid Waste, and Pollution Prevention

As discussed in **Chapter 4**, no hazardous sites, such as superfund or clean-up sites, occur at DRO. The Airport generates solid waste associated with the operations and maintenance of the Airport and aircraft and is permitted as a small generator through the EPA under a NPDES permit. This section describes the potential impacts that would occur with the implementation of the No Action Alternative and the Action Alternatives.

No Action Alternative

The No Action Alternative would not result in any ground disturbance or changes to existing Airport facilities, nor would it generate any additional waste to what is currently being generated. Therefore, the No Action Alternative would not result in the generation of or disturbance of hazardous materials, solid waste, or pollution.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Hazardous Materials

Alternatives 1 and 2 would occur on previously disturbed land that does not have any known hazardous sites. Hazardous waste (paints/solvents, fuel, lubricants, etc.) may be generated during the construction and demolition phases of these Alternatives. Proper containment practices would be required to reduce and eliminate the release of hazardous materials during construction. Hazardous waste materials would be transported off Airport property and disposed of at a permitted facility.

Solid Waste

Alternatives 1 and 2 would result in an increase of terminal square footage to meet current and future passenger demands. The Alternatives would not result in an increase in solid waste from passengers in the near future as the increase would accommodate existing passengers; however, as passenger numbers increase as forecasted, the amount of solid waste would also increase. This increase would be a result of the air service provided at the Airport, not from Alternatives 1 and 2. The amount of solid waste generated in the short- and long-term would be accommodated by the existing solid waste removal contract with the City. Solid waste will likely be disposed of at the nearest landfill, the Bondad Landfill.

The construction and demolition phase of Alternatives 1 and 2 would result in a short-term increase in the generation of waste. The increase in waste would be accommodated by the Bondad Landfill, which accepts construction waste and has not reached capacity. It is anticipated that the contractor would actively pursue opportunities to reduce waste through best management practices.

Pollution Prevention

As discussed in **Chapter 4**, DRO manages the handling and containment of hazardous materials on Airport property through a National Pollutant Discharge Elimination (NPDES) permit, Storm Water Pollution Prevention Plan (SWPPP), and a Spill Prevention, Control, and Countermeasure Plan (SPCC). These permits and plans ensure the Airport aggressively prevents, to the extent possible, pollution resulting from airport operations. These permits and plans will be followed and updated as needed during construction to reduce and eliminate when possible the potential for the release of pollutants. Additionally, construction plans will specify that contractor ensure all hazardous materials be handled and stored properly.

DRO is also an active participant in a recycling program. DRO strives to participate in the City and County programs, when applicable. The Airport, and its tenants, has recycling bins and dumpsters available for passengers, employees, and tenants to utilize. Both recycling and trash dumpsters are picked up weekly by the City of Durango. The following items are accepted by the City of Durango's recycling program and therefore the Airport has the option to recycle:

- Cardboard and Mixed Paper (newspaper, magazines/catalogs, corrugated cardboard, mixed paper, paperboard, cartons, junk mail, phone books, paper bags, and other miscellaneous items)
- Metals (steel cans, aluminum cans/foils/pie plates, loose metal jar lids/bottle caps)
- Plastics (#1-#7 plastic bottles/tubs/jugs/trays/containers)
- Glass
- Batteries (Airport does not currently collect, but has the option)
- Electronics/Cell phone (Airport does not currently collect, but has the option)
- Fluorescent light bulbs (Airport does not currently collect, but has the option)
- Mulch (Airport does not currently collect, but has the option)

It is anticipated that similar recycling programs would continue after the new terminal is constructed.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Hazardous Materials

Terminal Alternative 3 would be constructed in an undisturbed area free of any known hazardous materials. However, similar to Alternatives 1 and 2, the construction phase of the project would include the use of hazardous materials such as paints/solvents, fuel, lubricants, etc. This Alternative also includes the demolition of the existing terminal which would likely result in the use of similar hazardous materials. During both phases, the contractor would be required to properly handle and dispose of hazardous materials and when possible reduce and/or eliminate their use. Hazardous waste materials would be transported off Airport property and disposed of at a permitted facility.

Solid Waste

Alternative 3 would initially be constructed to accommodate the existing number of passengers and would not increase the generation of solid waste; as discussed previously for Alternatives 1 and 2, the number of passengers will likely increase as forecasted. This would result in an increase in solid waste generation as a result of the air service provided at DRO, not the new terminal building. The increase in solid waste would be accommodated by the existing solid waste removal contract with the City. Solid waste will likely be disposed of at the nearest landfill, the Bondad Landfill.



The construction of the new terminal building, upgrade of the access road, and demolition of the existing terminal building will all likely generate solid waste. This increase to the existing generation of solid waste will be short-term and will be hauled to the Bondad Landfill as it accepts construction material. When possible, the contract will be advised to reduce the generation of solid waste and reuse materials as applicable through best management practices.

Pollution Prevention

Alternative 3 also has the potential to release surface pollutants (paints/solvents, fuel, lubricants, etc.) during the construction and demolition phases. The contract will abide by the requirements stated in DRO's NDPES permit, and their SWPPP and SPCC plans. Additionally, construction plans will specify that contractors ensure all hazardous materials be handled and stored properly.

As discussed previously, DRO actively participates in a recycling program. It is anticipated that the airport would continue to participate in this program with the construction of the new terminal.

5.6 Historic, Architectural, Archaeological, and Cultural Resources

The National Historic Preservation Act (NHPA) of 1966, as amended, establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service (NPS). The NHPA instructs federal agencies to preserve and use historic buildings and identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the NRHP.

The Area of Potential Effect (APE) is the area within which an undertaking may directly or indirectly affect a historic property or cultural resource. The APE encompasses areas proposed for disturbance and areas with the potential for noise and/or visual effects, including the view shed (the area which the project may visually impact). The APEs were determined to be the same as the study area as identified earlier in **Chapter 4**.

As stated in **Chapter 4**, a total of five NRHP-eligible sites were identified in the APE during the Cultural Resource Reports completed in 2014 and 2016. The sites include 5LP 10798, 5LP 10804, 5LP 10805, 5LP 10806, and 5LP 10808.

No Action Alternative

The No Action Alternative will not result in any ground disturbance or any other development activities. As such, no impacts to NRHP-eligible or listed properties would result from the Alternative.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would occur on previously disturbed ground without any known NRHP-eligible properties. The project areas are not in proximity of any of the historic sites identified in the Cultural Resource Survey, as they all occur on the east side of Runway 03/21. The existing terminal building was constructed in 1988, making it less than 50 years old; all adjacent facilities, including the parking lots, have also been constructed since 1970. Therefore, none of the structures would yet qualify for eligibility for the NRHP. As such, no impacts to any resources found to be NRHP-eligible will be impacted by Alternatives 1 and 2. The FAA issued finding of No Adverse Effect to the SHPO and SHPO concurred with the finding, see Appendix J for concurrence letter.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Alternative 3 would occur on undisturbed land. The project area was included in the Cultural Resource Survey completed in 2014 as part of the 2017 Master Plan. This initial survey, as well as the follow up survey completed in 2016, found five NRHP-eligible sites on Airport property. Of these, sites 5LP 10804, 5LP 10805, 5LP 10806 are in proximity to Alternative 3 project area. None of these sites will be directly impacted by Alternative 3; and the site will retain sufficient physical integrity.

If any unexpected historic discoveries are found during construction of any of the alternatives, activity will stop and the FAA and the SHPO will be contacted.

5.7 Land Use

Historically, aircraft related noise is the most common issue related to airports and compatible land uses. Those impacts are discussed in **Section 5.9**. This section describes how the No Action and Action Alternatives could potentially affect, as well as how existing land uses may affect, the Action Alternatives.

As discussed in **Chapter 4**, DRO's property is designated as Public and Community Facility land use by La Plata County. The areas surrounding DRO are classified as Office/Light Industrial to the north and northwest, and Ag Rural Residential to the west. Small pockets of industrial are to the west and southwest and tribal to the north and northwest. Planning for the future, La Plata County recently released a Comprehensive Plan.⁵ The Plan discusses that future land use plans around DRO should consider higher intensive commercial and industrial uses in and around the Airport. Both land uses are commonly found near airports as they are generally common with airport activity and noise.

No Action Alternative

The No Action Alternative would not include the acquisition of or changes to any land. As such, the Alternative would not result in any impacts to land use on or surrounding DRO.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would occur on existing property owned and operated by the City of Durango and La Plata County and has a land use designation of Public and Community Facility. Neither Alternative 1 or 2 would result in the acquisition of or changes to any land on or adjacent to DRO. Therefore, Alternatives 1 and 2 would not result in any impacts to land use on or surrounding DRO.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3 would be constructed in an area currently owned by the City of Durango and La Plata County. The area is designated with the same land use as the rest of the Airport property, Public and Community Facility. Alternative 3 would not change airport operational noise; however, it will change noise associated with surface traffic. As the areas around DRO is developed—specifically on the east side, which would be most impacted by Alternative 3—the City and County should consider designating unclassified or residential areas as commercial or industrial to both satisfy the Comprehensive Plan recommendations as well as ensure compatible land use.

⁵ La Plata County Community Development Services, Comprehensive Plan, 2017



In its current land use designation, the area east of the Airport is left unclassified by the Southeast La Plata Planning District. This makes land use compatibility planning rather difficult as the future uses are unknown. The area is largely undeveloped and rural; however, a few homes are located adjacent to Airport property. These homes will likely experience a minor increase in noise and light impacts resulting from the new terminal and increase in surface traffic. See Sections 5.9 and 5.11 for additional discussion on noise and lighting impacts.

Strictly speaking compatible land use, Alternative 3 would not change the land use designation of the area or any adjacent areas and doesn't include any land acquisition; therefore, not resulting in any impacts to land use compatibility.

5.8 Natural Resources and Energy Supply

Executive Order 13123, Greening the Government through Efficient Energy Management, supports the expansion and use of renewable energy within facilities and activities. It also requires federal agencies to reduce the use of petroleum, total energy use and associated air emissions, and water consumption in facilities. In addition, the FAA encourages the development of facilities that demonstrate high standards of design including principles of sustainability. To satisfy the requirements set forth by NEPA, the FAA must evaluate the proponent's effort in conserving resources, pollution prevention, minimization on aesthetic effects, and addressing public sensitivity to these concerns.

From this, the FAA must also evaluate projects for significant impacts on energy supply and natural resources. Typical actions that have the potential to cause impacts on natural resources and energy supply include: airside/landside expansion; land acquisition for aviation-related use, new or moved access roadways, remote parking facilities and rental car lots; significant changes in air traffic and airfield operations; and significant construction activity.

No Action Alternative

The existing terminal building is reaching the end of its useful life and will continue to deteriorate in the future. The building would likely operate less efficiently in the future and possibly require increased natural resources to continue operation. However, the No Action Alternative would not include any development or changes to the existing aircraft or surface vehicle operation and would therefore not increase the consumption of natural resources, energy, or fuel.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would require the use of fuel, water, and building materials during remodeling, expansion, construction, and demolition. When possible, locally sourced materials would be used to reduce fuel used for transportation. The use of these resources would be short-term and temporary. Additionally, the increase in use of these resources would be very small when compared to the amount of each resource readily available.

The final build out of both Alternatives would be similar in size and would operate at the same level of efficiency. Alternative 1 includes the complete interior and exterior remodel of the existing terminal building; it is assumed it would be remodeled to operate as efficient as a new building. High-performance modern systems would be used in both Alternatives to capture the benefits of sustainable design principles and reduce operating costs of the new building. The remodeled/expanded terminal and new terminal would be larger than the existing terminal building, which in general would require more energy to heat and cool. However, the existing terminal is older, uses outdated heating and air-conditioning systems, and does not operate as efficiently as the new terminal buildings would; thus, it is likely the energy consumption of the new buildings

would be comparable to what is currently being consumed if not improved. Therefore, it is not anticipated that any long-term increase in the use of natural resource or energy would result from Alternatives 1 and 2.

Neither Alternative 1 or 2 would change how aircraft operate at DRO, therefore, fuel usage would be the same compared to the No Action. Additionally, neither alternative would significantly change how surface vehicles operate as the auto parking areas remain in the same general location to what is currently in place.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3, similar to Alternatives 1 and 2, would require the use of fuel, water, and building materials during construction and demolition. During construction, locally sourced materials would be used to the extent possible to reduce fuel usage during transportation. The use of the aforementioned resources would be short-term and temporary; when compared to the availability of these resources in the area, the increased usage would not be significant.

Alternative 3 would be larger than the existing terminal which generally would result in more energy to heat and cool; however, as stated with the previous Alternatives, the existing terminal is outdated and does not operate as efficiently as a new building would. The new terminal would incorporate high-performance modern systems to capture the benefits of sustainable design principles and reduce operating costs of the new building. Although the new terminal would be larger, the energy consumption of the new terminal would be reduced. Further, DRO would likely see a significant reduction in energy consumption over the life of the new terminal. As such, it is not anticipated that any long-term increase in the use of natural resource or energy would result from Alternative 3.

Alternative 3 would result in increased fuel usage for commercial aircraft that land to the north on runway 3 as these aircraft would need to taxi south on Taxiway A, along the southwest end of Runway 3 and back to the new terminal. However, the prevailing wind at DRO are from the west and southwest; a majority of the commercial landings at DRO occur on Runway 21. Commercial aircraft landing to the south, on Runway 21, would experience a shortened taxi time to the new terminal in Alternative 3. Commercial aircraft taking off from Runway 21, would experience a longer taxi time; however, when considered with the shortened arrival taxi time, the total taxi time and fuel usage would be comparable to the existing taxi time and fuel usage.

Surface vehicles accessing the new terminal in Alternative 3 would experience an increase in fuel consumption as they would travel an additional 2 miles to reach the new terminal building and parking areas. DRO is currently located approximately 15 miles from the City of Durango; it is assumed that an additional 2 miles of travel would not create a significant increase in fuel consumption.

5.9 Noise and Compatible Land Use

Noise associated with airport activity is of specific importance to the FAA in examining a Proposed Action. Airport development projects that have the potential to change the runway configuration(s); aircraft operations, movements, and types; or aircraft flight characteristics can change the future airport-related noise levels.

As part of this EA, an analysis of aircraft noise at DRO was completed by KB Environmental (see **Appendix L, Aircraft Noise Analysis**). The analysis includes a discussion of existing (baseline) aircraft noise as well as forecasted aircraft noise throughout the planning period (2030). None of the Terminal Alternatives impact or influence the forecasted aircraft operations and their associated noise impacts, as all three Terminal Alternatives are proposed as a response to existing and future passenger demands. Further, none of the Alternatives propose a change to approaching or departing aircraft, thus no impact to aircraft noise will result from any of the three Alternatives.



Although aircraft noise will not be impacted by the Action Alternatives, noise related to surface vehicles may change and is evaluated in the following sections.

No Action Alternative

The No Action Alternative will not result in any changes to aircraft operations or surface vehicles. As such, no change to the existing noise at DRO will result from the No Action Alternative.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternative 1 does not include any changes to the existing aircraft operations or parking; Alternative 2 includes a minor expansion of the apron which would result in slight changes to aircraft parking. Neither of these Alternatives would result in any changes to aircraft operations that would result in a change in aircraft noise noticeable outside of the airside operating area at DRO. As shown in **Appendix L, Aircraft Noise Analysis**, the existing and future noise contours stay largely within the airport property boundary. Contours that extend outside of the property are a result of increased operations, not a result of terminal development.

Terminal Alternatives 1 and 2 propose to use the existing airport access roads. The amount of traffic on these roads will increase over time as forecasted operations increase; however, the increase in traffic is not a result of Alternatives 1 and 2 but rather a result of the air service offered at DRO.

Lastly, Alternatives 1 and 2 would result in noise from construction and demolition activities. These noise-related impacts would be localized to airport property and areas immediately surrounding the proposed project areas. There are no residences or other noise-sensitive land uses within or near the project areas. As such, Alternatives 1 and 2 would not result in impacts to noise-sensitive receptors.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Similar to Alternatives 1 and 2, Terminal Alternative 3 would not result in any changes to aircraft arrival and departure operations. However, the new location of the terminal would alter aircraft taxiing and parking operations by moving them from the west side to the east side of the runway. The most noticeable aircraft noise is generated during aircraft takeoff rather than during taxiing. Alternative 3 only results in changes to the location of aircraft taxiing and the minimal noise associated with this operation. Therefore, it is anticipated that any changes in aircraft noise as a result of Alternative 3 would be insignificant when compared to the overall noise of DRO.

Alternative 3 would result in a change to the Airport access road which also changes the noise associated with surface vehicles. The new traffic would enter airport property as it currently does, but would then travel around the northeast end of Runway 03/21 via the current vehicle service road (to be upgraded), and back to the west on an improved County Road 309A. The change would result in an increase in surface traffic on the east side of the Airport.

Lastly, Alternative 3 would result in construction and demolition-related noise impacts. The demolition-related noise would remain localized to Airport property on the west side of DRO and away from any residences or sensitive noise receptors. Construction-related noise associated with the new terminal would remain primarily on airport property. However, residences are located adjacent to Airport property on the west side and in relatively close proximity to the location of the new terminal building and parking lot. Residents in this area will likely experience noise impacts related to construction; however, the impacts would be short-term and temporary.

Adjacent residents have been made aware of the Action Alternatives and been given the opportunity to express their comments and concerns; no comments expressing concerns with noise have been received. As such, it is not anticipated that Alternative 3 would result in noise impacts.

5.10 Socioeconomics, Environmental Justice, and Children’s Health and Safety Risks

Airport development projects have the potential to result in significant impacts to the communities around them. This section looks at impacts to three areas:

- Socioeconomic: potential impacts to social and economic aspects of a community; includes impacts to population, employment, housing, and public services.
- Environmental Justice: potential impacts resulting from unfair treatment or opportunity to be involved in the project due to race, color, national origin, or income.
- Children’s Health and Safety: evaluation of projects that may result in disproportionate impacts to children.

No Action Alternative

The No Action Alternative does not require property acquisition, relocation of residences or businesses, alteration of traffic patterns, division of communities, disruption of planned development, nor appreciable changes in employment. In addition, the No Action alternative would not impact low-income or minority populations, nor would it impact children. However, DRO could be significantly restricted in its ability to accommodate growth in air service, changes in aircraft operating at the Airport, and an increase in passengers. This could result in reduced tourism activity and limited air service opportunities at DRO for the surrounding community in the future.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternative 1 proposes to renovate the existing terminal while continuing service. It is anticipated that the renovation may be inconvenient to passengers, airline ticket agents, rental car agents, airport restaurant, and other businesses located within the terminal. However, the inconvenience would be short-term and temporary. It is likely that all businesses and passengers would experience the same level of inconvenience.

Terminal Alternative 2 proposes a new terminal be constructed adjacent to the existing terminal building. This Alternative would allow for construction of the new terminal without significant disruption to the operation of businesses and passengers in the existing terminal. The new terminal would be built in an existing parking lot, reducing parking spaces during construction and before the existing terminal is torn down. This would be an inconvenience for traveling passengers; however, the inconvenience would be short-term and temporary. It is anticipated that all businesses would transition to the new terminal at approximately the same time. Therefore, Alternative 2 would not result in negative socioeconomic, environmental justice, or children’s health impacts.

There are no adverse human health or environmental effects associated with Alternative 1 or 2, which would exceed applicable thresholds of significance. As such, no persons of low income or minority populations would be affected as a disproportionately higher level than other population segments. Alternative 2 would not affect products or substances a child is likely to encounter, ingest, use, or be exposed to.



The expanded terminal space in both Alternative 1 and 2 would likely result in positive socioeconomic impacts, as the passenger experience would be improved and additional concession space would be available allowing for new business opportunities. With an improved experience and new concessions, passengers may spend more, creating additional economic benefits.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3, similar to Alternative 2, would be built without disruption to existing passengers, terminal businesses, and Airport parking. It is anticipated that all businesses would transition into the new terminal building at the same time and result in an improved passenger experience.

Although this Alternative would move the terminal building closer to residents on the east side of the Airport, it does not result in disproportionate impacts to low income or minority populations. Alternative 3 would not affect products or substances a child is likely to encounter, ingest, use, or be exposed to. Therefore, this Alternative would not result in negative socioeconomic, environmental justice, or children's health impacts. As a part of the EA process, all nearby residents have been provided several opportunities to participate in public meetings and provide comments.

Alternative 3 would likely result in positive socioeconomic impacts as the passenger experience would be improved and additional concession space may become available with the new terminal. Together these would result in increased passenger spending and economic benefits to the area.

5.11 Visual Effects

The FAA broadly defines visual effects in two ways: 1) produces light emissions that create annoyance or interferes with activities; or 2) contrasts with, or detracts from, the visual resource and/or the visual character of the existing environment.⁶ These effects can be difficult to assess as they often involve subjectivity, thus there are no federal thresholds of significance.

No Action Alternative

The No Action Alternative would not result in any changes to the lighting or visual environment at DRO.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would occur on the west side of DRO, within the existing terminal and parking lot areas and away from light-sensitive receptors. The Alternatives would result in a larger terminal building which in return will likely result in increased light emissions. However, when compared to the overall light emissions in this area and in proximity to sensitive light receptors, Alternatives 1 and 2 would not result in a noticeable difference in light emissions.

A Terminal Area Master Plan (TAMP) was completed in 2016 for DRO and included a detailed analysis and conceptual designs for Alternatives 1 and 2. A concept was developed for Alternative 1 that expanded the existing terminal in a linear fashion while raising the departure lounges to a second level to accommodate boarding bridges and create a more condensed footprint on which both ground service equipment and passenger activities could occur simultaneously. A similar and condensed two-level concept was also developed for Alternative 2 that would allow space for all the necessary activities (including boarding bridges) while minimizing the terminal footprint and preserving space for future expansion. Both Alternative concepts

⁶ FAA, 1050.1F Desk Reference, July 2015

maintain that the terminal building be located on the west side of the Airport and not within proximity to any residences or visually sensitive areas. Although the terminal building will change in shape and size, the final design concepts will incorporate ideas to ensure the building is compatible with the colors and textures of the area.

Further, adjacent residents have been made aware of the Action Alternatives and been given the opportunity to express their comments and concerns; no comments expressing concerns with lighting and visual impacts have been received. As such, it is not anticipated that Alternatives 1 and 2 would result in visual impacts.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3 proposes the terminal be relocated to the east side of the Airport in an area that is not currently developed. Alternative 3 will include the terminal building with interior and exterior lighting, parking lot lighting, roadway lighting, and taxiing aircraft lighting, all of which will be new lighting to the area and adjacent residents. It should be noted that none of the threatened and endangered species found on Airport property are located in this area or areas directly impacted by the new light sources.

The design concept of Alternative 3, as shown in the 2016 TAMP, is similar to Alternatives 1 and 2 with a condensed, two-level concept that would allow space for all the necessary activities while minimizing the terminal footprint and preserving space for future expansion. Although the concept is condensed, it will change the view of the area and those of the adjacent residences. The change will likely be minimal to the residents on the east side of DRO.

5.12 Water Resources

Water resources include all surface waters and groundwaters—wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers. These resources are crucial in providing drinking water and in supporting recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems. The resources do not function separately but rather as a holistic system; as such, they were evaluated for individual impacts as well as impacts to the system as a whole.

As discussed in Chapter 4:

- There are approximately 57 acres of potentially jurisdictional wetlands on Airport property;
- The western most portion of Airport property is located in Zone A, a Special Flood Hazard Area (SFHA) subject to inundation by the one percent annual flood;
- The Florida River is located west of the DRO; and
- The Florida Mesa aquifer is located below Airport property.

No Action Alternative

The No Action Alternative does not include any changes to the existing condition at DRO; therefore, it would not result in any impacts to wetlands, floodplains, surface waters, groundwater, or wild and scenic rivers.

Terminal Alternative 1: Renovate and Expand Existing Terminal and Terminal Alternative 2: Construct New Terminal Adjacent to Existing Terminal

Terminal Alternatives 1 and 2 would be constructed in an area that is currently developed. This area sits upon the Florida Mesa aquifer which gets its recharge from farm and ranch irrigation water and typically has good



water quality and yield. As the aquifer does not largely recharge from water in the development area, Alternatives 1 and 2 would not result in direct impacts to water resources.

Both Alternatives propose a larger terminal building as well as additional parking spaces, resulting in an increase in impervious surface and stormwater runoff. The stormwater runoff in these areas likely contains contaminants such as fuel and oil from parked cars and compounds used to melt ice and snow during the winter months. The contaminants would be collected in the storm drain which would be modified to accommodate the changes to the terminal and increase in runoff. The Airport's NPDES permit and Storm Water Management Plan (SWMP) would be updated to account for the increase in runoff and associated contaminants.

Generally, a larger terminal building would result in increased water usage. However, it is expected that the new terminal building would employ design concepts that reduce water usage compared to the existing terminal building. As the number of passengers increase as forecasted, the demand for water will also increase. This increase would result regardless of the terminal building and is due to the air service at DRO rather than the new terminal building. Therefore, Alternatives 1 and 2 would not result in an increase in water consumption.

During construction and demolition, Alternatives 1 and 2 would use an increased amount of water compared to what is used on a normal basis. The increase would be short-term, temporary, and would be accommodated by existing water sources without creating a water shortage as the existing sources frequently support other development occurring in the area. Best management practices would be used throughout construction to prohibit contamination to runoff and reduce overall water usage and FAA AC 150/5370-10A, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control would be followed.

Terminal Alternative 3: Construct New Terminal on East Side of Runway

Terminal Alternative 3 would be constructed in an area that sits upon the Florida Mesa aquifer which gets its recharge from farm and ranch irrigation water. As the aquifer does not largely recharge from water in the development area, Alternatives 3 would not result in direct impacts to water resources. The Alternative would include the construction of a new water and stormwater drainage system on the east side of the Airport. These will tie into the existing system currently used by the west side facilities and the airfield; however, the existing system would be modified to accommodate the increase in runoff. The runoff from Alternative 3 will contain contaminants associated surface vehicles and parked aircraft; the contaminants will be collected in the stormwater system, protecting the ground water from contamination. The NPDES permit and SWMP would be updated to include the new area and runoff. The new terminal building and associated landscaping would be built with sustainable design practices to reduce water consumption. As such, Alternative 3 would not result in direct impacts to water resources.

A larger terminal building would generally result in an increase in water consumption; however, the new terminal building would use design concepts that improve water use efficiency when compared to the existing terminal building. The number of passengers using the new terminal building initially would be the same as the current terminal building, resulting the same amount of water demand. As the number of passengers increase as forecasted, the demand for water usage would also increase. This increase in passengers is not a result of the new terminal building but rather a result of the air service offered at DRO. Therefore, Alternative 3 would not result in an increase in water consumption.

During construction and demolition, Alternative 3 would use an increased amount of water. The increase would be short-term and temporary. Further, the increase in water consumption would be accommodated by existing water sources used by DRO. Best management practices would be used throughout construction to limit the opportunity for contaminants to reach ground water. Best management practices may include:

- Limit ground disturbance to only areas necessary for project-related development.
- Control sediments and erosion through ground cover, sediment capture, and runoff management.
- Develop an oil response plan in the case of an oil or oil-based product spill.
- Follow FAA AC 150/5370-10A, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control.

5.13 Cumulative Impacts

Cumulative impacts are impacts a Proposed Action may have on resources when added to impacts on a resource due to past, present, and reasonably foreseeable actions within a defined time and geographic area. The CEQ, under NEPA regulations (40 CFR 1508.7), defines a cumulative impact as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.”

The following past, present, and future projects, both at DRO and in proximity to Durango were identified and included in the analysis of cumulative impacts:

5.13.1 Past Actions

- On-Airport Actions
 - Rehabilitation of Taxiway A
 - Rehabilitation of Runway 03/21
- Off-Airport Actions
 - US Highway 160/550 Concrete Surface Rehabilitation
 - US 160/US 550 Continuous Flow Intersection
 - US 160 Grandview 4th Lane and Interchange

5.13.2 Current Actions

- On-Airport Actions
 - Interim Terminal Improvements
 - Potential Acquisition of 820 Airport Road
- Off-Airport Actions
 - U.S. Highway 160 and north Main Avenue Smooth and Resurface
 - City of Durango - 13th Street Storm Drain Project
 - City of Durango - Thomas Avenue Reconstruction
 - US Highway 160/550 Concrete Surface Rehabilitation

5.13.3 Long-Term Future Actions

- On-Airport Actions
 - Rehabilitation of Runway 03/21
 - Construct ARFF (Aircraft Rescue Firefighting) Facilities
 - Replace and Expand Airport Storage Hangar
- Off-Airport Actions
 - City of Durango Sewer Replacements



- City of Durango Rehabilitation of Water Treatment Plant 7mg Water Storage Tank

5.13.4 Environmental Consequences

The following sections provide a brief qualitative analysis of the cumulative impacts associated with the aforementioned projects in conjunction with the Action Alternatives. As discussed previously, the following environmental resources do not occur within this EA's study areas and will not be assessed for impacts:

- Coastal Resources: DRO is in Colorado, a state that does not have any coastal resources.
- Department of Transportation Act, Section 4(f): DRO is located in an area without any Section 4(f) resources in proximity.
- Farmlands: None of the land in proximity to DRO is activity being farmed or protected by the FPPA.
- Land Use: The existing designated land use is compatible with future development.
- Socioeconomic, Environmental Justice, and Children's Environmental Health and Safety Risks: None of the alternatives are found to result in social impacts, health and safety risks to children, and socioeconomic impacts; dividing or disrupting established communities; significantly changing surface transportation patterns; disrupting orderly, planned development; or creating a notable change in employment.
- Visual Effects: None of the alternatives are found to result in visual impacts. Wild and Scenic Rivers: As noted in **Chapter 4**, the nearest Wild and Scenic River is more than 70 miles from the study area.

Air Quality

All three proposed Action Alternatives would continue to emit operational emissions as well as generate additional emissions during construction. Although the Action Alternatives are expected to result in short-term construction emissions and operation emissions, the air quality impacts are not expected to be significant as they are generally related to construction and temporary in nature. Other past, present, and reasonably foreseeable project would add emissions, but if considered in combination, the collective impact of this project would be minimal. As a result, cumulative air quality impacts are not expected to be significant.

Biological Resources

Terminal Alternatives 1 and 2 would not result in any impacts to biological resources. As such, no cumulative impacts would occur when compared to other past, present, and reasonable foreseeable future projects.

Terminal Alternative 3 may affect and is not likely to adversely affect the NMMJM and the SWF. There would be no effect to any other listed species due to the absence of habitat in the Action Area. Since Alternative 3 may affect species, Ecosphere completed a thorough analysis of cumulative impacts as part of the 2017 BA (**Appendix D**). Cumulative impacts are not expected to be significant for either species when considering Alternative 3 with other past, present and reasonably foreseeable actions.

Climate

The cumulative impact of the Action Alternatives on the global climate when added to other past, present and reasonably foreseeable future actions is not currently scientifically predictable. Aviation has been calculated to contribute approximately 3% of global carbon dioxide (CO₂) emissions; this contribution may grow to 5% by 2050. Actions are underway within the U.S. and by other nations to reduce aviation's contribution through such measures as new aircraft technologies to reduce emissions and improve fuel efficiency, renewable alternative fuels with lower carbon footprints, more efficient air traffic management, market based measures and environmental regulations including an aircraft CO₂ standard. The U.S. has ambitious goals to achieve

carbon-neutral growth for aviation by 2020 compared to a 2005 baseline, and to gain absolute reductions in greenhouse gas emissions by 2050.

At present, there are no calculations of the extent to which measures individually or cumulatively may affect aviation's CO₂ emissions. Moreover, there are large uncertainties regarding aviation's impact on climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., NASA, NOAA, EPA, and DOE), has developed the Aviation Climate Change Research Initiative (ACCRI) to advance scientific understanding of regional and global climate impacts of aircraft emissions, with quantified uncertainties for current and projected aviation scenarios under changing atmospheric conditions.

Hazardous Materials, Solid Waste, and Pollution Prevention

All three Action Alternatives would result in the generation of solid waste during construction and demolition as well as the potential to release pollutants. However, the increase in solid waste would be temporary and generally related to construction. When considered with other past, present, and reasonable foreseeable future projects, the solid waste would be accommodated by the existing landfill. Further, all three Alternatives will incorporate best management practices to reduce the chance of pollution, which is likely included in other development project plans. Therefore, it is unlikely that a significant amount of pollution would be generated and released into the environment.

Historical, Architectural, Archeological, and Cultural Resources

Historical, architectural, archeological, and cultural resources do not occur within the project area for any Action Alternatives. Cultural sites do occur in an area adjacent to the Terminal Alternative 3; however, this area will not be touched during construction nor is it slated for development in the future. When considered with other past, present, and reasonable foreseeable future projects, cumulative impacts to historical, architectural, archeological, and cultural resources would not result.

Natural Resources and Energy Supply

All three Action Alternatives result in an increase in fuel, water, and building materials during remodeling, expansion, construction, and demolition. The increase would be short-term, temporary, and easily accommodated by existing sources without creating a shortage in the resources. No other planned development projects at the Airport or within the area anticipate using an abundance of natural resource or energy that cannot be accommodated by existing sources without creating a shortage in the resource. As such, when compared to other past, present, and reasonable foreseeable future projects; cumulative impacts on natural resource and energy supply will not occur.

Noise and Compatible Land Use

The three Terminal Alternatives would result in localized noise impacts related to construction. Terminal Alternative 3 results in increased noise on residents located east of DRO. However, none of these impacts are considered significant impacts to noise-sensitive areas. When considered with other past, present, and reasonable foreseeable future projects; no other planned projects will result in long-term noise impacts or the construction of sensitive noise receptors near DRO. As such, no cumulative impacts will result.

Water Resources

Water resources, to include wetlands, floodplains, surface waters, and groundwater were not found to be significantly impacted by any of the Action Alternatives. As such, cumulative impacts would not result when considered with other past, present, and reasonable foreseeable future projects.



5.14 Conclusion of Impacts

Based on the information and data presented throughout this chapter, it is found that there would be no significant impacts as a result of the Action Alternatives (see **Table 5-8**).

TABLE 5-8 – SUMMARY OF IMPACTS

Environmental Resource	Terminal Alternatives		
	No Action Alt.	Alt. 1 and 2	Alt 3
Air Quality	None	Not Significant	Not Significant
Biological Resources	None	None	Not Significant
Climate	None	Not Significant	Not Significant
DOT Section 4(f)	None	None	None
Farmlands	None	None	None
Hazardous Materials, Solid Waste, and Pollution Prevention	None	Not Significant	Not Significant
Historic, Architectural, Archaeological, and Cultural Resources	None	None	Not Significant
Land Use	None	None	None
Natural Resources and Energy Supply	None	Not Significant	Not Significant
Noise and Compatible Land Use	None	Not Significant	Not Significant
Socioeconomics, Environmental Justice, and Children's Health and Safety Risks	Impacts to tourism industry	Not Significant	Not Significant
Visual Effects	None	Not Significant	Not Significant
Water Resources	None	Not Significant	Not Significant
Cumulative Impacts	None	Not Significant	Not Significant

Source: Jviation