2.0 INVENTORY

This chapter documents the type and general condition of the existing facilities at the Durango-La Plata County Airport (DRO or Airport) as of July 2014. It is meant to capture a snapshot in time and it is possible that some items referenced here may change by the completion of the Master Plan. The inventory is a complete compilation of all facilities and systems of the Airport, including airfield, terminal area, navigational aids (NAVAIDs), ground access, parking, pavement conditions, utilities, and other characteristics.

Table 2-1 and **Table 2-2** summarize DRO's major landside and airside components. Key items will be discussed in greater detail throughout this chapter.

TABLE 2-1 – AIRFIELD PAVEMENT INVENTORY

Item	Description
Runway 3/21	– 9,201 feet by 150 feet – 25-foot Paved Shoulders – Consists of Dense Graded Grooved Asphalt – Published Strength: 95,000-lb Single Wheel Gear (SWG), 150,000-lb Dual Wheel Gear (DWG), 210,000-lb Dual Tandem Wheel Gear (DTG)
Taxiways	– Parallel Taxiway A – Connector Taxiways A1 through A9 and C
Aprons	– Commercial: 25,168 square yards – General Aviation (GA) / Fixed Base Operator (FBO): 53,724 square yards – North GA: 25,263 square yards – U.S. Forest Service: 21,780 square yards

Source: Jviation

TABLE 2-2 – AIRPORT FACILITIES INVENTORY

Item	Description
Navigational Aids (NAVAIDs)	– Instrument Landing System (ILS) - Runway 3 – VHF Omnidirectional Range (VOR)/Distance Measuring Equipment (DME) – Area Navigation (RNAV)
Visual Aids	– High Intensity Runway Lights (HIRL) – Precision Markings (3 and 21) – Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) – Runway 3 – Precision Approach Path Indicators (PAPI) – Runway 3 – Visual Approach Slope Indicators (VASI) – Runway 21 – Runway End Identifier Lights (REIL) – Runway 21 – Airport Rotating Beacon – Runway & Taxiway Edge Lights – Runway Distance Remaining Signs (RDR) – Runway & Taxiway Guidance Signs – Segmented Circle / Wind Cone (lighted)
Fixed-Based Operator (FBO) (AvFlight) Hangars	– Hangars (3) – 32,400 square feet – Apron – 53,724 square yards (includes south GA apron)
Terminal Building	– 41,500 square feet (includes temporary departure lounge)
Parking	– Employee – 60 spaces – Credit Card Lot - 267 Spaces – Main Lot – 385 Spaces – Rental Car – 219 Spaces – Overflow Lots - 342

Source: Jviation

2.1 CODE OF FEDERAL REGULATIONS TITLE 14, PART 139

CFR Title 14, Part 139, *Certification of Airports* (Part 139) requires the FAA to issue airport operating certificates to airports serving certain commercial passenger operations to ensure safety in air transportation. Part 139 sets forth regulations for the certification and operation of land airports that serve any *scheduled* passenger operations conducted in aircraft with more than nine passenger seats or *unscheduled* passenger operations conducted in aircraft with more than 30 seats. To obtain a certificate, an airport operator must agree to comply with certain operational and safety standard requirements. These requirements vary depending on whether the airport serves scheduled and/or unscheduled passenger operations and the size of aircraft used for these operations. As DRO serves both scheduled and unscheduled operations, it must comply with all Part 139 requirements as listed in **Table 2-3**.

TABLE 2-3 – PART 139 CONTENTS

Subpart D – Operations	
139.301	Records
139.303	Personnel

Subpart D – Operations	
139.305	Paved areas
139.307	Unpaved areas
139.309	Safety areas
139.311	Marking, signs, and lighting
139.313	Snow and ice control
139.315	Aircraft rescue and fire fighting: Index determination
139.317	Aircraft rescue and fire fighting: Equipment and agents
139.319	Aircraft rescue and fire fighting: Operational requirements
139.321	Handling and storing of hazardous substances and materials
139.323	Traffic and wind direction indicators
139.325	Airport emergency plan
139.327	Self-inspection program
139.329	Pedestrian and Ground vehicles
139.331	Obstructions
139.333	Protection of NAVAIDs
139.335	Public protection
139.337	Wildlife hazard management
139.339	Airport condition reporting
139.341	Identifying, marking, and reporting construction and other unserviceable areas
139.343	Non-complying conditions

Source: 14 CFR Part 139

2.2 ADVISORY CIRCULAR 150/5300-13A, *AIRPORT DESIGN*[1]

In October 2012, the FAA released the first comprehensive update of Advisory Circular (AC) 150/5300-13A, *Airport Design* since 1989, replacing the previous *Airport Design* AC in its entirety. This new airport design guidance is used to assess DRO's facilities in **Chapter 4**, **Facility Requirements**.

The most significant changes from the previous *Airport Design* AC include the new standards and technical requirements of the Runway Design Code (RDC) and Taxiway Design Group (TDG). The AC still uses a design aircraft[2]; however, in most cases the design aircraft is a composite aircraft representing a collection of aircraft classified by three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and TDG. The FAA notes that the critical design aircraft must generate a minimum of 500 operations (takeoffs and landings) per year in order to be classified as the critical aircraft. Occasional operations by larger aircraft occur at DRO, including D-IV charter and military aircraft, but they do not meet the threshold of activity identified by FAA.

The AAC and ADG are combined to form the RDC. The TDG relates to the undercarriage dimension of the aircraft. Taxiway width and fillet standards, and in some instances runway to taxiway and taxiway/taxilane separation standards, are still determined by the ADG. AC 150/5300-13A requires selection of the RDC(s), then the most demanding meteorological conditions for desired/planned levels of

[1] FAA Advisory Circular 150/5300-13A, *Airport Design*

[2] The design aircraft is the aircraft type that is the most demanding on airport facilities that regularly uses the airport (at least 500 annual operations). Based on wing span and approach speeds, the design aircraft determines what design standards must be used, including pavement widths, lengths, and strengths, and separation distances between runways and taxiways.

service for each runway, and then applying the airport design criteria associated with the RDC and designated or planned approach visibility minimums. The associated taxiways are then designed accordingly for the designated TDG.

2.2.1 Runway Design Code

The FAA classifies airport runway facilities with a coding system known as the RDC. This classification helps apply design criteria appropriate to operational and physical characteristics of various aircraft types operating at an airport. As mentioned previously, the RDC of a runway is made up of three components: the AAC, the ADG, and approach visibility minimums.

The AAC is an *alphabetical* classification of an aircraft based upon 1.3 times the stall speed in a landing configuration at its maximum certified landing weight. The approach category for an airport is determined by the approach speed of the fastest aircraft that has at least 500 operations annually, with Category A having the slowest approach speed and Category E the fastest. The categories are:

Category A: Approach speed is less than 91 knots

Category B: Approach speed is 91 knots or more but less than 121 knots

Category C: Approach speed is 121 knots or more but less than 141 knots

Category D: Approach speed is 141 knots or more but less than 166 knots

Category E: Approach speed is 166 knots or more

The ADG is a *numerical* classification of aircraft based on wingspan or tail height. If an airplane's wingspan and tail height are in two categories, the most demanding category is used. Similar to the approach category, the ADG for an airport is determined by the largest aircraft operating at least 500 times per year at the facility. Also, for airports with multiple runways, the published RDC is based on the most demanding aircraft for each runway specifically. ADG details are identified in **Table 2-4.** Examples of RDC aircraft types are shown in **Figure 2-1**.

TABLE 2-4 – AIRPLANE DESIGN GROUP (ADG)

Group	Tail Height (feet)	Wingspan (feet)
I	<20	<49
II	20 ≤ 30	49 ≤ 79
III	30 ≤ 45	79 ≤ 118
IV	45 ≤ 60	118 ≤ 171
V	60 ≤ 66	171 ≤ 214
VI	66 ≤ 80	214 ≤ 262

Source: FAA AC 150/5300-13A

FIGURE 2-1 – RDC AIRCRAFT TYPES
AIRPORT REFERENCE CODE (ARC)

Source: Jviation

The RDC of a runway determines the runway width, shoulder width, runway separation distances from other runways and taxiways, runway safety area (RSA) dimensions, object free area (OFA), obstacle free zone (OFZ), and the width and length of the runway protection zone (RPZ).

2.2.2 Taxiway Design Group

Previously, taxiway design was determined solely on the ADG of a runway complex. An ADG is based exclusively on the wingspan and tail height of the design aircraft, not the dimension of the aircraft undercarriage. With the release of AC 150/5300-13A, taxiway design standards are now based on the TDG and the ADG of a taxiway complex. The TDG of a taxiway complex is determined by the undercarriage dimensions, overall Main Gear Width (MGW), and the Cockpit to Main Gear (CMG) distance of the most demanding aircraft. Taxiway/taxilane width, shoulder width, and fillet standards, *and in some instances*, runway to taxiway and taxiway/taxilane separation requirements, are governed by the TDG. TDG improves the design of taxiways fillets and radii, enabling safe and efficient taxiing by airplanes while minimizing excess pavement.

The ADG of a taxiway complex determines the taxiway separations from other taxiways/taxilanes, the taxiway safety area, the taxiway/taxilane object free area, and wingtip clearances.

DRO meets ADG 5 for taxiway widths but not all fillets currently meet TDG 5 criteria; see **Section 2.4.2** for further detail.

2.3 AIRFIELD DESIGN STANDARDS

The standards established by the FAA are the primary consideration for runway and taxiway design. These standards are based upon the critical aircraft. Runway dimensional design standards define the widths and clearances required to optimize safe operations in the landing and takeoff area. These dimensional standards vary depending upon the RDC for the runway and the type of approach. The most demanding or critical aircraft currently using DRO are C-III.

In accordance with previous FAA airport design standards, DRO was designated with an Airport Reference Code (ARC) of D-IV and currently meets D-IV design standards. Under new design standards, DRO has an RDC of C-III due to the fact that the most demanding aircraft are C-III, as noted previously. The current runway design standards for DRO, as well as C-III design standards, are shown in **Table 2-5**.

TABLE 2-5 – RDC C-III (RW 3/21) FAA RUNWAY DESIGN STANDARDS

Standard	Current Conditions (D-IV)	C-III Design Standards
Runway Width	150′	150′
Runway Shoulder Width	25′	N/A
Runway Safety Area (RSA) Width	500′	500′
RSA Beyond Runway End	1,000′	1,000′
Runway Object Free Area (ROFA) Width	800′	800′
ROFA Beyond Runway End	1,000′	1,000′
Runway Centerline to Parallel Taxiway Centerline	400′	400′
Runway Centerline to Aircraft Parking	500′	500′
Runway Holding Position Markings	317′/a/	250′

Note: /a/C-III and D-IV standard is 250′, however, per FAA AC 150/5300-13A, *Airport Design*, the distance is increased by one foot for each 100 feet above sea level for categories C/D/E-III through VI.
Source: FAA AC 150/5300-13A

2.4 AIRFIELD/AIRSPACE

2.4.1 Runways

DRO's airfield configuration consists of one active runway, designated as Runway 3/21, as depicted on **Figure 2-2**. Runway 3/21 is positioned northeast/southwest, and is 9,201 feet long by 150 feet wide with 25-foot-wide paved shoulders on each side of the runway.

Runway 3/21 is constructed to support a weight-bearing capacity of no greater than 95,000 pounds for Single-Wheel Gear (SWG) equipped aircraft; 150,000 pounds for Dual-Wheel (DWG) equipped aircraft;

and 210,000 pounds for Dual Tandem-Wheel Gear (DTWG) equipped aircraft. The runway is constructed with grooved graded asphalt.

The current Airport Reference Point (ARP) is located at Latitude 37°09'05.47"N and Longitude 107°45'13.57"W. The ARP is the latitude and longitude of the approximate center of the runway. The established airport elevation, defined as the highest point along an airport's runway(s), is 6,689' above Mean Sea Level (MSL), and is located at the end of Runway 21.[3]

Aircraft compasses and runway identifiers utilize magnetic north for directional guidance. For this reason, it is important to evaluate an airport's runway numerals every few years to ensure that the numbers painted on the runway truly represent the magnetic heading of the runway. The magnetic forces across the planet are constantly shifting, and therefore a declination must be applied to a compass to arrive at a true north heading. Although the true bearing of the runway will not change over time, the magnetic bearing will change as the location of magnetic north shifts.

According to the National Geophysical Data Center, as of June 10, 2014, the current declination for DRO is 9°35'7" east and is changing by 7.3' west annually. The current true bearing for Runway 3 is 37°22'22.0" and for Runway 21 it is 217°23'3.7". Applying the declination of 9°35'7" verifies that the current runway designations are correct in accordance with the FAA. The magnetic heading for the runway should be revaluated every year.

Runway pavement condition and strength are discussed in **Section 2.4.4**.

2.4.2 Taxiways

The taxiway system at DRO is constructed of asphalt and consists of one full-length parallel taxiway (Taxiway A) on the west side of Runway 3/21 and 10 connector taxiways (A1-A9 and C). Refer to **Table 2-6** and **Figure 2-2** for an overview of the existing taxiways and for the taxiway layout. Taxiway A and connectors A1 through A9 are 75 feet or greater in width, thus accommodating TDG 5; however, not all fillets currently meet TDG 5 criteria. **Chapter 4**, **Facility Requirements**, evaluates compliance with the *Airport Design* AC.

Taxiway pavement condition and strength are discussed in **Section 2.4.4**.

TABLE 2-6 – TAXIWAY SYSTEM

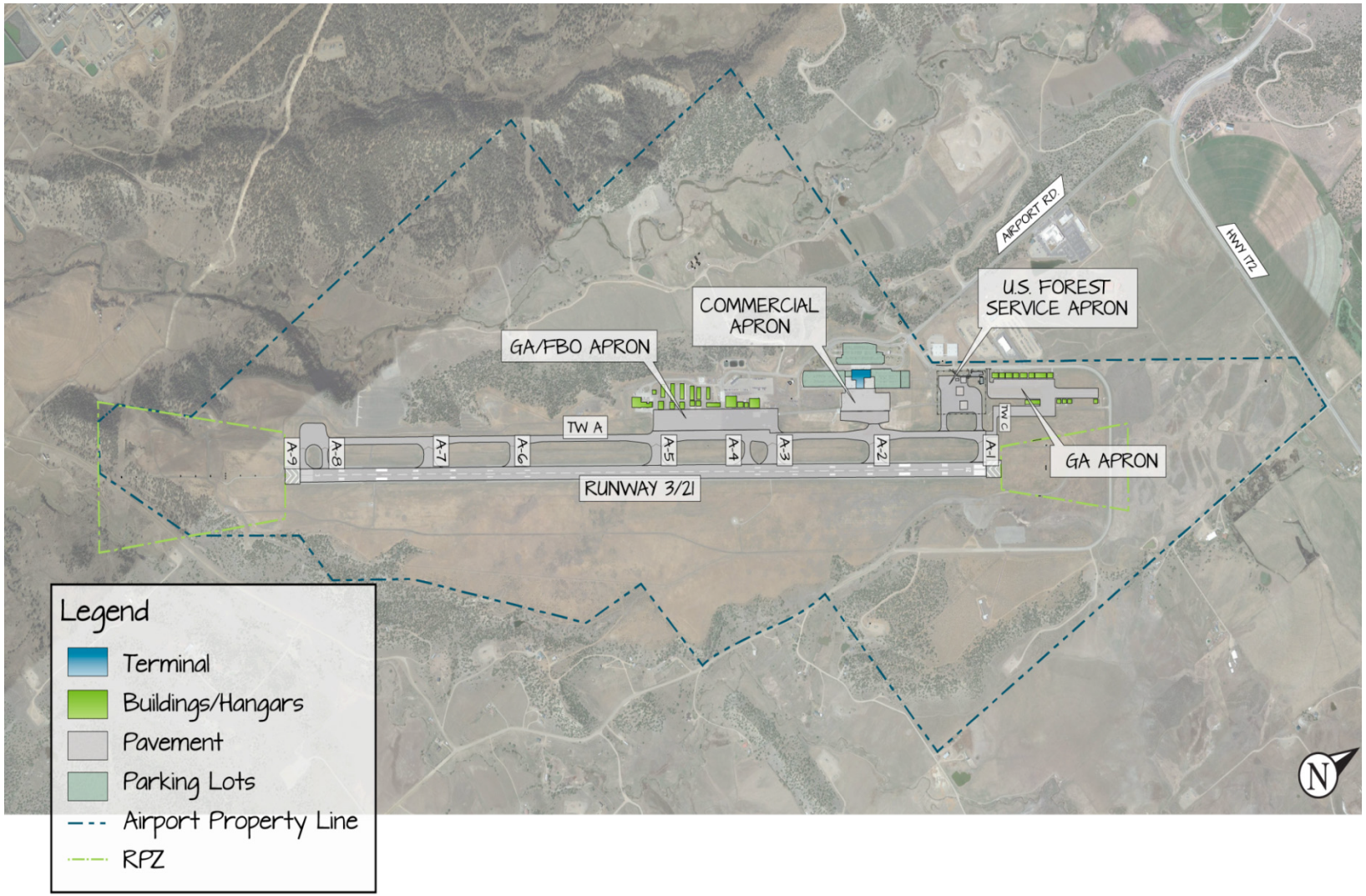
Taxiway	Description	Width (feet)
A	Full length parallel taxiway on the west side of Runway 3/21	75
A1	Taxiway connector from parallel Taxiway A to the threshold of Runway 21	102.5
A2	Taxiway connector from parallel Taxiway A to both Runway 21 and the commercial apron	130
A3	Taxiway connector from parallel Taxiway A to both Runway 3/21 and the FBO apron	130
A4	Taxiway connector from parallel Taxiway A to both Runway 3/21 and the FBO apron	100
A5	Taxiway connector from parallel Taxiway A to the GA apron and the midpoint	130

[3] Geospatial information compiled by Woolpert, Inc. in May 2015.

Taxiway	Description	Width (feet)
	of Runway 3/21	
A6	Taxiway connector from parallel Taxiway A to Runway 3/21	100
A7	Taxiway connector from parallel Taxiway A to Runway 3/21	130
A8	Taxiway connector from parallel Taxiway A to the threshold of Runway 21	130
A9	Taxiway connector from parallel Taxiway A to the Runway 3 end	102.5
C	Taxiway connector from parallel Taxiway A to the GA hangar area	40

Source: Jviation

FIGURE 2-2 – AIRFIELD LAYOUT



Note: Not to scale
Source: Jviation

2.4.3 Aprons

There are several aprons serving different needs at DRO, as depicted on **Figure 2-2**. All aprons are located west of the runway. The total apron area is approximately 100,672 square yards and is a mix of concrete and asphalt, as detailed in **Table 2-7**.

TABLE 2-7 – APRON TYPE, SIZE, AND MATERIAL

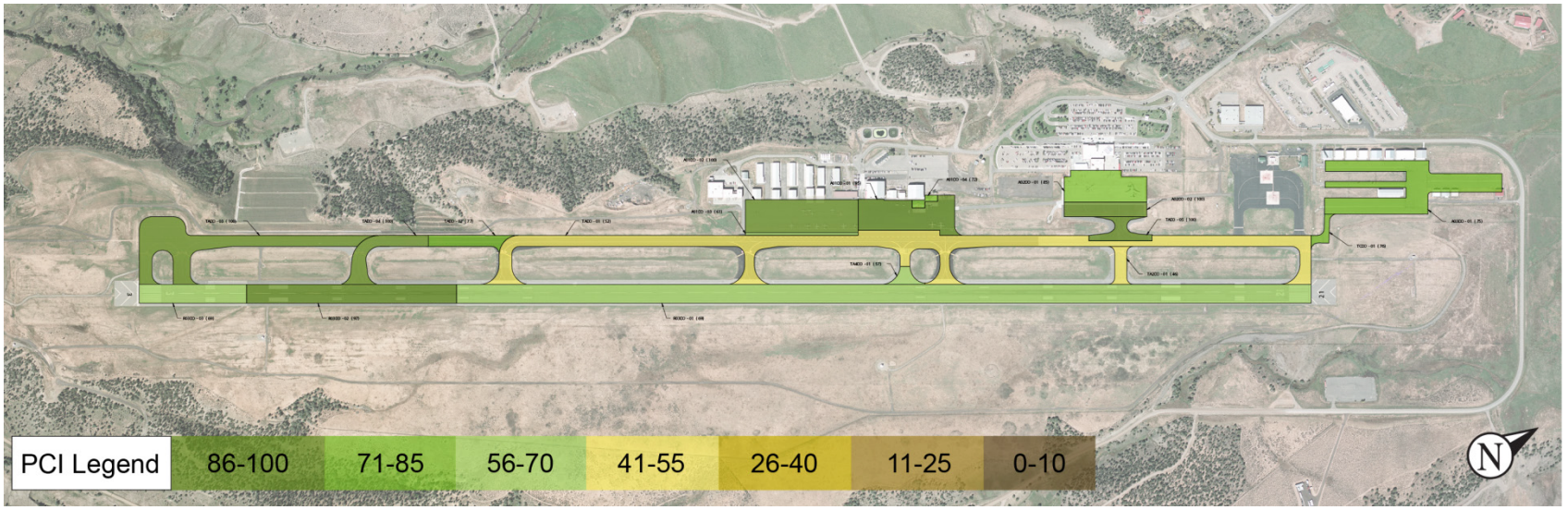
Apron	Size (square yards)	Material
Commercial	25,168	Concrete & Asphalt
GA / FBO	88,987	Asphalt
U.S. Forest Service	21,780	Asphalt with concrete hardstands

Source: Jviation

2.4.4 Pavement Condition and Strength

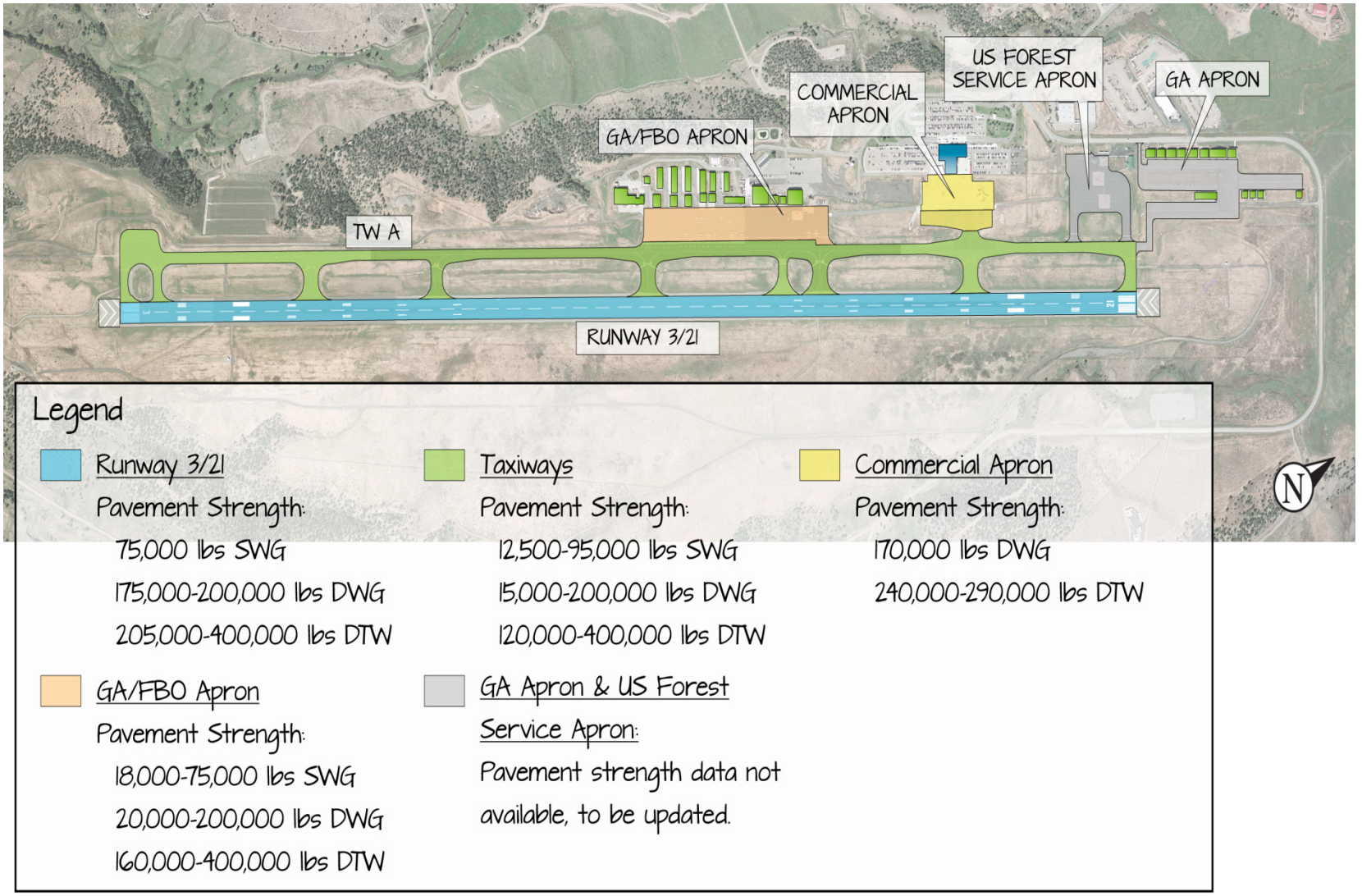
The FAA recommends in AC 150/5380-6b, *Guidelines and Procedures for Maintenance of Airport Pavements,* that a detailed pavement inspection be conducted that follows the American Society for Testing and Materials (ASTM) D 5340, *Standard Test Method for Airport Pavement Condition Index Surveys*. This method employs a visual rating system for pavement distress known as the Pavement Condition Index (PCI). The PCI scale ranges from a value of zero (representing a pavement in a failed condition) to a value of 100 (representing a pavement in excellent condition). The last major PCI study performed by the CDOT Division of Aeronautics for DRO was completed in 2012. Runway 3/21 was rehabilitated in 2003, and a portion below Taxiway A7 was rehabilitated in 2009. Overall, the surfaces at DRO range from a PCI of 46 to 100 as shown on **Figure 2-3**. **Figure 2-4** depicts the existing pavement strengths at DRO.

FIGURE 2-3 – EXISTING PAVEMENT CONDITION



Note: Not to scale
Source: CDOT 2013 System Update, Pavement Evaluations and Management

FIGURE 2-4 – EXISTING PAVEMENT STRENGTHS



Note: Not to scale
Source: Jviation

2.4.5 Lighting, Markings, and Signage of Runways, Taxiways, and Aprons

DRO's airfield lighting meets FAA standards for lighting of precision approaches. However, the runway pavement markings—centerline, edge stripes, aiming points, threshold, and touchdown zone markings—do not all meet current FAA specifications found in AC 150/5340-1L, *Standards for Airport Markings*, and are in poor condition. The threshold markings, touchdown zone markings, and aiming point markings are one foot too close to the Runway 21 threshold. Also, there are 200-foot-long runway blast pads at each runway end that are painted with chevrons every 100 feet. Since the blast pad is less than 250 feet long, these chevrons should be painted every 50 feet. Runway 3/21 is equipped with a high-intensity runway lighting (HIRL) system. The HIRLs were installed in 1987 and have been maintained since that time. The HIRL system is operational and in fair condition. The runway has runway distance remaining (RDR) signage that was installed in 2002 and is in good condition.

All taxiways are equipped with Medium Intensity Taxiway Lighting (MITL). The MITLs were rehabilitated in 1989 and are operational and in fair condition. However, the MITLs on the newer portion of Taxiway A and connectors A7, A8, and A9 were installed in 2009 and are in good condition. Taxiway edge reflectors were replaced in May 2014 to meet current standards.

The commercial service apron is illuminated by High Intensity Discharge (HID) pole-mounted lights that provide adequate light for the area and are in good condition. The GA and FBO (AvFlight) apron has two pole-mounted lights, one next to the Airport Rescue and Firefighting (ARFF) building and the other adjacent to the AvFlight hangar.

The Airport is equipped with standard airfield signage which is in fair condition and complies with FAA signage standards. Airfield signage provides essential location and direction information used by pilots and vehicle operators, including instruction, location, direction, destination, and information signs.

2.4.6 Visual and Navigational Airport Aids

The Airport has numerous visual and navigational aids (NAVAIDs), summarized in Table 2-8.

TABLE 2-8 – DRO VISUAL AND NAVAIDS SUMMARY TABLE

General	Runway 3/21
Rotating Beacon	HIRL /c/
Lighted Wind Cone and Segmented Circle	PAPI /d/
ASOS/a/	VASI /e/ – Runway 21
VOR/DME/b/	REILs/f/ – Runway 21
UNICOM	MALSR/g/ – Runway 3
	ILS/h/ – Runway 3

Notes:
/a/ Automated Surface Observation System
/b/ Very High Frequency Omni-directional Radio-range/Distance Measuring Equipment
/c/ High Intensity Runway Lighting
/d/ Precision Approach Path Indicator
/e/ Visual Approach Slope Indicator
/f/ Runway End Identifier Lights
/g/ Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
/h/ Instrument Landing System
Source: Jviation

Runway 3 is equipped with a Precision Approach Path Indicator (PAPI) and Runway 21 with a Visual Approach Slope Indicator (VASI), providing a three-degree glide slope to arriving aircraft. Both provide visual descent guidance and are typically located on the left side of the runway, as is the case at DRO. VASI and PAPI lights are visible up to five miles during the day and up to 20 miles at night. The PAPI is owned and maintained by DRO and the VASI by the FAA; both are in good condition.

Runway 3 has a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) which aids pilots in the transition from instrument flying to a visual approach and landing. A MALSR is installed in airport runway approach zones along the extended runway centerline. The MALSR consists of a combination of threshold lamps and steady burning light bars and flashers that provide visual information to pilots to transition from instrument flight to visual flight for landing, including runway alignment, height perception, horizontal references, and roll guidance. The MALSR is owned and maintained by the FAA and is in good condition.

Runway 3 is also equipped with an Instrument Landing System (ILS). The ILS is a ground-based system that provides horizontal and vertical guidance to approaching aircraft using radio signals. The localizer provides the horizontal position of an aircraft relative to the runway centerline, and a glide slope provides vertical guidance to the touchdown point on the runway. The localizer is located 1,000 feet from the departure end of Runway 21 and the glide slope is located east of the Runway 3 threshold. The ILS is owned and maintained by the FAA and is in good condition.

Runway 21 is equipped with Runway End Identifier Lights (REILs). These flashing lights are on both sides of the runway threshold and indicate the beginning of the usable runway for approaching aircraft. The REILs are in good condition and are owned and maintained by the FAA.

DRO's Very High Frequency Omni-directional Radio-range/Distance Measuring Equipment (VOR/DME) is located east of the runway, across from the GA apron and adjacent to the windsock and segmented circle. The VOR/DME transmits radio signals to aircraft, enabling pilots to determine their

location and distance from the equipment. DRO's VOR/DME is only used in the precision and non-precision approaches for Runway 3 (radio frequency of 108.2 MHz[4]) and does not mark any airways.

DRO has an Automated Surface Observation System (ASOS) located opposite the Runway 3 PAPI, adjacent to the glide slope. An ASOS is an automated sensor that transmits weather reports via radio frequency 120.625 MHz (via telephone at 970.259.3579). The ASOS is served by the FAA's Denver Flight Service Station (FSS), frequency 122.35 MHz. The ASOS provides pilots with up-to-date airport weather information such as temperature and dew point in degrees Celsius, wind speed and direction, visibility, cloud coverage and ceiling up to 12,000 feet, freezing rain, thunderstorm (lightning), and altimeter setting; this weather information is required for safe aviation operations.

DRO has a segmented circle marker/wind direction indicator to mark the center of the landing area and provide wind direction information to the pilot. It is located on the east side of the runway across from the GA apron. The airfield also has a standard green and white rotating beacon located on the east side of the runway, across from Taxiway A2. The beacon provides the location of the airport at night and during low visibility conditions.

Additional NAVAIDs within the vicinity of DRO include a VHF Omnidirectional Range with Tactical Air Navigation (VORTAC) in Farmington, New Mexico, approximately 29 nautical miles southwest of DRO. The VORTAC is another type of VOR that provides pilots distance and location information. The Farmington VORTAC can be accessed on frequency 115.3 MHz.

2.4.7 Air Traffic Service Areas and Aviation Communications

FAA air traffic controllers stationed in FAA's Denver Air Route Traffic Control Center (ARTCC), provide air traffic control to pilots flying to and from DRO. The Denver ARTCC, based in Longmont, CO, provides air traffic services to pilots operating in Colorado airspace and sections of Kansas, Nebraska, Wyoming, Utah, Arizona, and New Mexico. The Denver ARTCC is on frequency 118.575.

As there is no airport traffic control tower at DRO, pilots communicate their intentions and obtain airport/traffic information using the Common Traffic Advisory Frequency (CTAF) on frequency 122.8, which is also the frequency used by pilots to activate the runway and taxiway lights, PAPI, VASI, REILs, and MALSR.

As discussed in Section 2.4.6, pilots can access weather information from DRO's ASOS on frequency 120.625 MHz and the FSS, via the Remote Communications Outlet (RCO), on frequency 122.35 MHz.

2.4.8 Instrument Approach Procedures

An instrument approach procedure is a sequence of maneuvers to guide aircraft operating under FAA's Instrument Flight Rules (IFR) from the beginning of the initial approach to a runway to landing. Currently, the FAA recognizes three instrument approach types: precision, approach with vertical guidance, and non-precision. FAA's definitions of these approach types are as follows.

[4] MHz – MegaHertz: one MHz is one million cycles per second; used to measure wave frequencies.

Precision Approach - An instrument approach procedure providing course and vertical path guidance conforming to FAA Order 8260.3B, *U.S. Standard for Terminal Instrument Procedures (TERPS)* requirements. Instrument Landing System (ILS), Precision Approach Radar, and Microwave Landing System (MLS) are examples of precision approaches and are commonly referred to in the context of conventional approach technologies via the use of ground-based NAVAIDs.

Approach Procedure with Vertical Guidance (APV) - An instrument approach based on a navigation system that is not required to meet the precision approach standards of TERPS but provides course (horizontal) and glidepath (vertical) deviation information. Examples of APV approaches include Localizer Directional Aid (LDA) with glidepath, lateral navigation (LNAV)/vertical navigation (VNAV), and Localizer Performance with Vertical Guidance (LPV). Guidance provided for APV approaches via GPS do not require the use of ground-based NAVAIDs.

Non-precision Approach - An instrument approach based on a navigation system which provides course deviation (horizontal) information, but no glidepath deviation (vertical) information. Examples of non-precision approaches include VOR, Non-directional Beacon (NDB), LNAV, and circling minima. Guidance provided for non-precision approaches via GPS do not require the use of ground-based NAVAIDs.

ILS precision approaches are divided into three categories: CAT I, CAT II, and CAT III, based on minimum altitudes an aircraft is capable of descending, as well as minimum visibility. CAT I systems are the most common ILS found at airports, including DRO. CAT II and CAT III systems allow for lower minimum altitudes and lower visibility, therefore requiring increased airport investments in equipment and obstacle clearance in order to protect larger imaginary surfaces and meet additional airport design standards. It is important to point out that use of these ILS approaches is subject to aircraft being properly equipped and certified, and having a properly trained aircrew.

GPS satellite-based instrument approaches follow the same basic guidelines as ground-based systems: the lowest possible minimums for approaches with horizontal-only guidance is 300 feet above threshold and at least one mile of visibility (300-1). With the addition of vertical guidance through Wide Area Augmentation System (WAAS) or Ground Bases Augmentation System (GBAS), the lowest minimums are generally 200-½ when an approach lighting system is installed.

DRO has three published instrument approach procedures: one precision and two non-precision for Runway 3 as noted in **Table 2-9**; Runway 21 does not have any existing published approaches. The table also includes the lowest minimums and decision height or minimum descent altitudes. Two approaches provide standard CAT I ILS minimums of 200-½, which enhance airline and corporate aircraft operations by minimizing the time they either divert to another airport in poor weather or make a missed approach. Minimum descent altitude is associated with non-precision approaches and is the lowest altitude an aircraft can fly until the pilot sees the airport environment. If the pilot has not seen the airport environment by the designated Missed Approach Point (MAP), a missed approach is initiated. Decision Height (DH) is associated with precision approaches and the aircraft is continually descending on final approach. When the aircraft reaches the DH, the pilot must make a decision to land or execute the missed approach procedure. The current instrument approach charts and departure procedures are included in **Appendix B**.

Section 2.4.6 details the equipment associated with these procedures.

TABLE 2-9 – INSTRUMENT APPROACH PROCEDURES

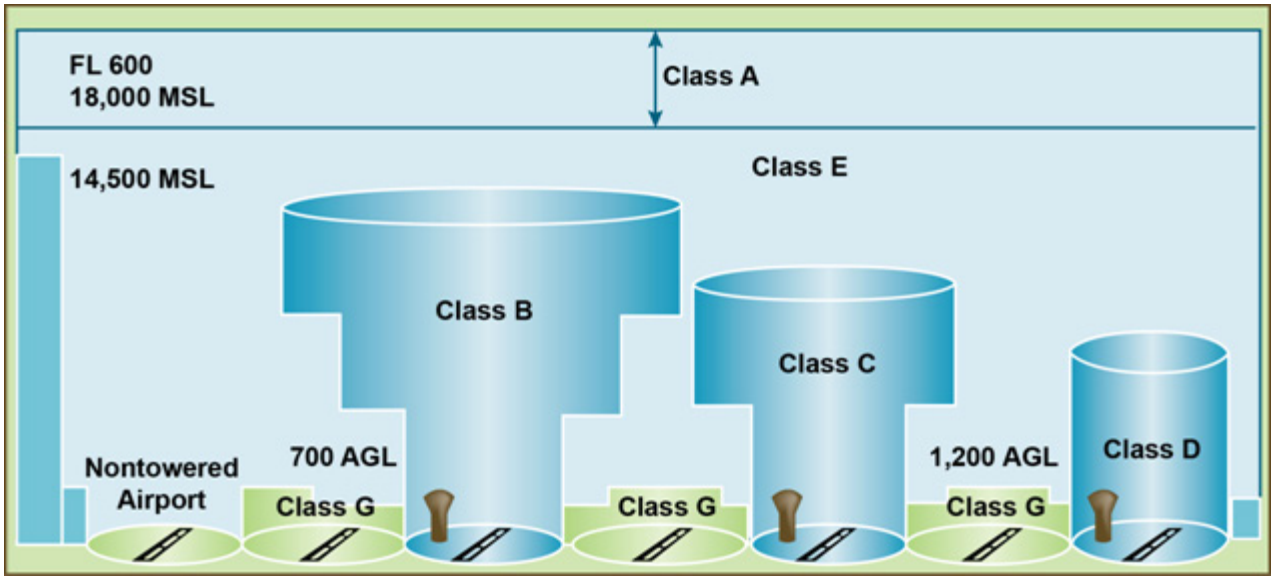
Approach	Lowest Minimums (MSL)[a]	Decision Height or Minimum Descent Altitude (feet – AGL)[b]
ILS or LOC/DME – Runway 3	6,838- ½ mile	200 feet
RNAV (GPS) – Runway 3	6,838 – ½ mile	200 feet
VOR/DME – Runway 3	7,080 – ¾ mile	400 feet

Notes:
[a]MSL – Mean Sea Level
[b]AGL – Above Ground Level
Source: Jviation

2.4.9 Airport Airspace Usage

The FAA designates the airspace surrounding airports using a letter classification ranging from A to E, as depicted in Figure 2-5. The most restrictive of these airspaces is Class A airspace. It exists between 18,000 and 60,000 feet above MSL. Class A is controlled airspace applicable during the enroute part of a flight. Classifications are based on the level and type of aircraft operations for a specific airport. Airspace surrounding the nation's busiest airports, like Denver International Airport, is designated as Class B, and is strictly controlled by air traffic control. Other towered airports are surrounded by Class C and D airspace. For airports such as DRO that have no tower, the surrounding airspace is designated as Class E. Airspace that has not been designated within these classes is classified as Class G (uncontrolled) airspace. This airspace extends from the surface to 1,200 feet above ground level, as described in FAA Order JO 7400.2K, *Procedures for Handling Airspace Matters*.

FIGURE 2-5 – AIRSPACE CLASSIFICATIONS

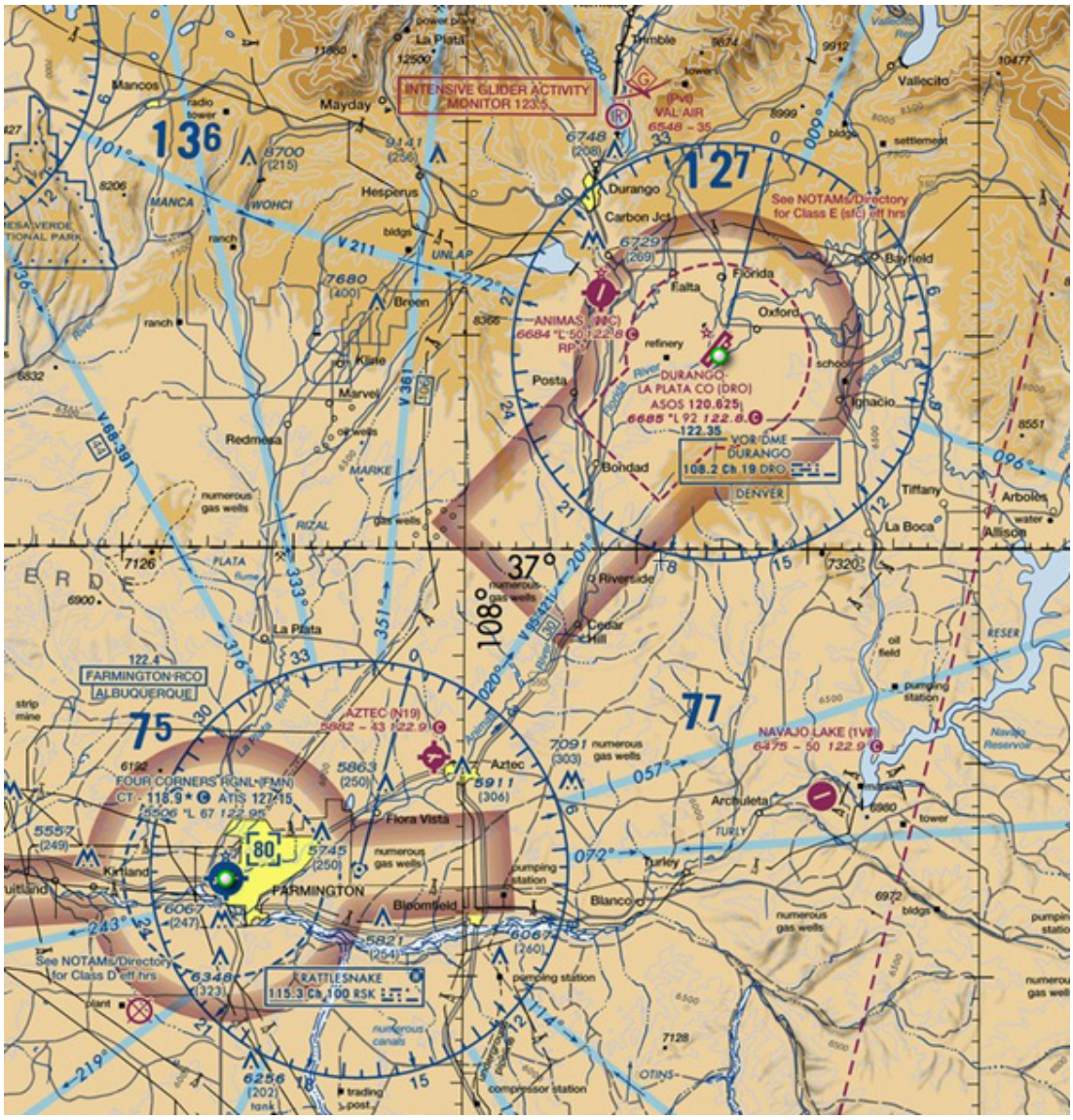


Source: Federal Aviation Administration

As previously mentioned, the Denver ARTCC provides air traffic control for DRO. The airspace surrounding DRO is designated as Class E airspace, with a secondary designation as a surface area. This

secondary designation expands the airspace to surround all instrument approach procedures to the extent practicable[5]. This classification protects a 10-mile radius of airspace surrounding DRO, along with the airspace used for the ILS approach to Runway 3. Airspace classified as Class E is subject to less restrictive air traffic control than that of Classes A through D. The primary restrictions to this airspace are maintaining separation from other aircraft and minimum weather requirements of flight visibility of three statute miles, and remaining clear of clouds by 1,000 feet above, 500 feet below, and 2,000 feet horizontally. **Figure 2-6** depicts the airspace surrounding DRO.

FIGURE 2-6 – AERONAUTICAL CHART



Note: Not to scale
Source: Denver Aeronautical Sectional Chart, 90th edition - January 9, 2014

[5] Federal Aviation Administration, (2014), Order JO 7400.2K, *Procedures for Handling Airspace Matters*, "Chapter 18. Class E Airspace," Section 1, Paragraph b, 18-1-1.

2.4.10 Obstructions to Air Navigation

Obstructions are defined as any object of natural growth, terrain, permanent or temporary construction equipment, or permanent or temporary man-made structures that penetrate an imaginary/protected surface, as specified in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace* (Part 77).

Woolpert, Inc. completed a survey of all objects in the vicinity of DRO. The survey was done in compliance with FAA AC 150/5300-16A, *General Guidance Specifications of Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey*; 150/5300-17C, *Standards for Using Remote Sensing Technologies in Airport Surveys*; and 150-5300-18B, *General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards*.

The survey revealed numerous obstructions including roads, a tree, a building, and terrain as detailed in Table 2-10. Several light poles located in the FBO area are obstructions to the transitional surface; however, each has an obstruction light.

TABLE 2-10 – EXISTING OBSTRUCTIONS

Obstruction	14 CFR Part 77 Surface	14 CFR Part 77 Penetration (feet)	Location
County Road 309A	Approach	1.5 – 4	~1,650 feet from Runway 21 end; west of centerline
Tree	Primary	5	~500 feet southeast of Runway 21 threshold
AvFlight Hangar	Transitional	3.5	~730 feet west of runway centerline
Terrain	Primary	<1	Between runway and taxiway at GA/FBO apron
Service Road	Primary	7.6 - 9	Directly off Runway 3 (west side) and Runway 21 (east side)

Sources: Jviation and Woolpert, Inc.

2.5 Commercial Passenger Facilities

2.5.1 Passenger Service

DRO received service from four airlines in 2014. United provides access via its hub operation at Denver International Airport (DEN), Frontier via flights to its connecting operation at DEN (seasonally in 2014), American Airlines to Dallas/Fort Worth International Airport (DFW), and US Airways to its hub operation at Phoenix Sky Harbor International Airport (PHX). It is important to note that American Airlines and US Airways merged in December 2013 to form American Airlines Group, Inc. The airlines' hub structure was combined, yet the locations preserve the system importance demonstrated by the two separate carriers. The impacts of the merger, e.g. the consolidation of services by both airlines, is not complete. However, once complete, the new American Airlines will offer a consolidated service at DRO.

The number of flights offered by the American Airlines Group, Inc. is not anticipated to change. DRO has limited competition in its region as there are only two other airports with commercial service in the Four Corners region. Cortez, Colorado (CEZ) and Farmington, New Mexico (FMN) are served by 19-seat aircraft. CEZ is served under the US DOT Essential Air Service (EAS) program, and scheduled flights at the airport are limited. FMN destinations include DEN, PHX, Alamosa (ALS), and Show Low (SOW), while CEZ's only destination is DEN. The other alternatives for airline service are Albuquerque International Sunport Airport (ABQ), New Mexico, a three-and-a-half-hour drive, and DEN, a six-hour drive.

2.5.2 Terminal Building Overview

The passenger terminal building serves as the focal point of DRO for both the public and airport staff. The terminal was constructed in 1987 and opened in February 1988. A temporary addition to the terminal was constructed in 2013 to accommodate increased enplanements and expansion of the Transportation Security Administration's (TSA) security checkpoint.

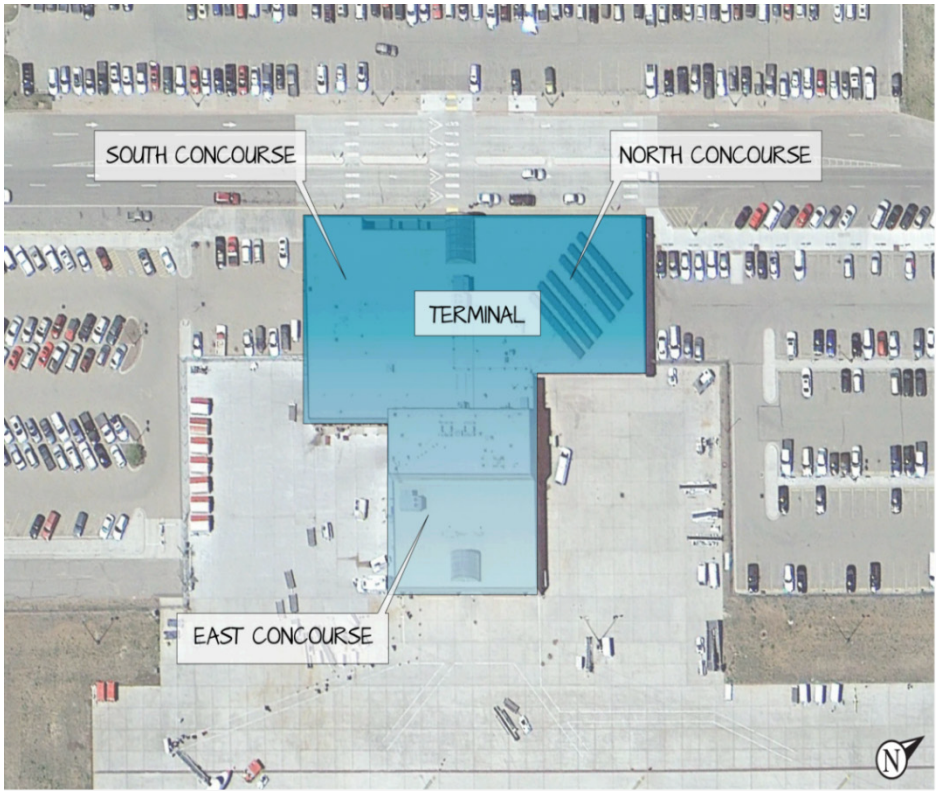
As noted previously, four[6] airlines operate from the terminal building as well as five rental car companies, a privately-owned restaurant, and a privately-owned gift shop. The building also includes public spaces for waiting, check-in and ticketing, vending, a departure lounge, baggage claim, and restrooms. Airport administration and TSA offices are located on a partial second level. **Figure 2-7** depicts the terminal from the commercial apron, **Figure 2-8** identifies the concourses, and **Figure 2-9** illustrates the interior layout of the terminal.

FIGURE 2-7 – PASSENGER TERMINAL

Source: Jviation

[6] The merger of American Airlines and US Airways will reduce the number of airlines that service DRO to three once consolidation of the two companies is complete.

FIGURE 2-8 – TERMINAL CONCOURSES



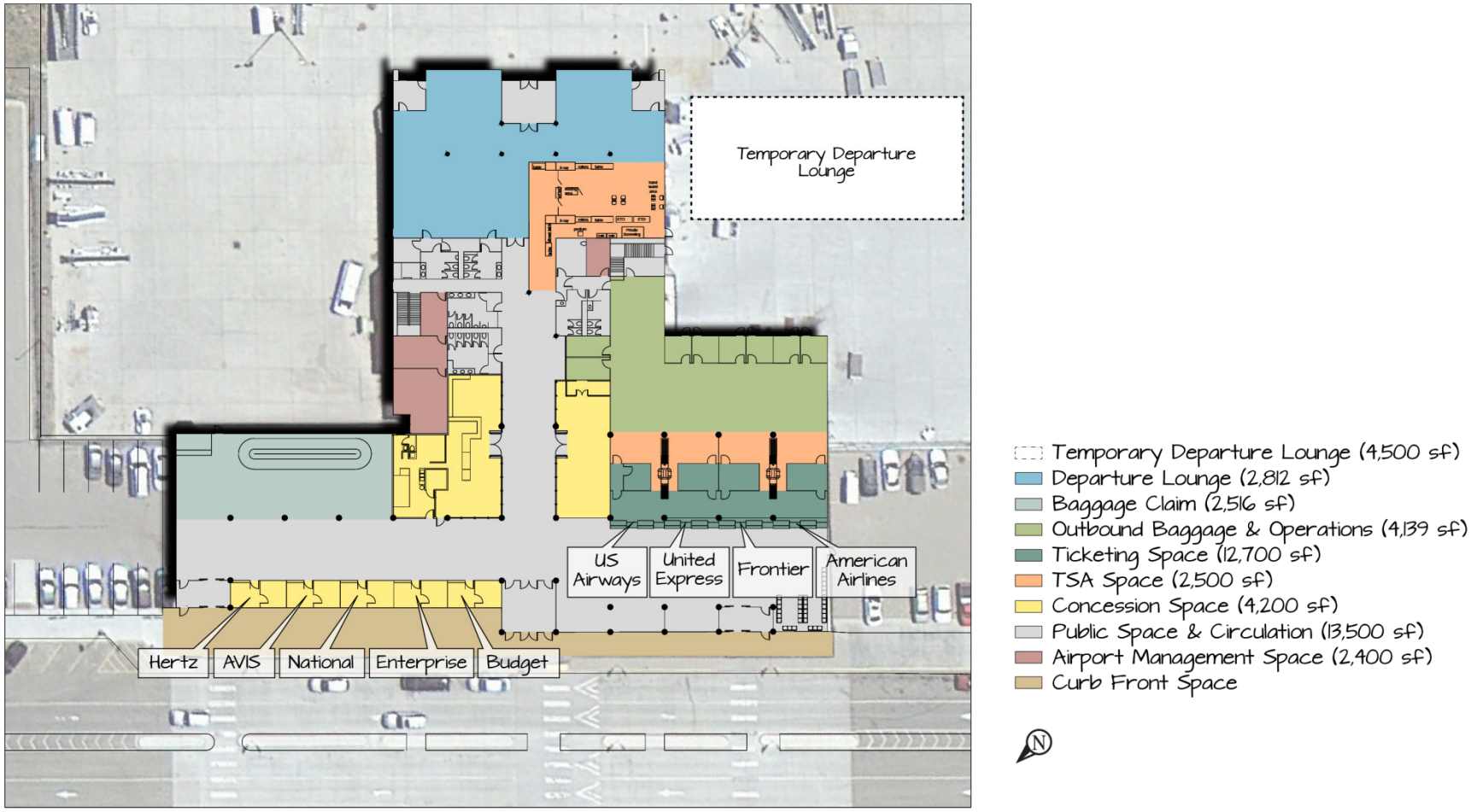
South Concourse
- Ticketing Lobby
- Airline Ticket Offices
- Outbound Baggage/Screening
- Concession Space

North Concourse
- Baggage Claim
- Ground Transportation
- Concession Space

East Concourse
- Departure Lounge
- Passenger Screening

Note: Not to scale
Source: Jviation

FIGURE 2-9 – PASSENGER TERMINAL LAYOUT



Note: Not to scale
Source: Jviation

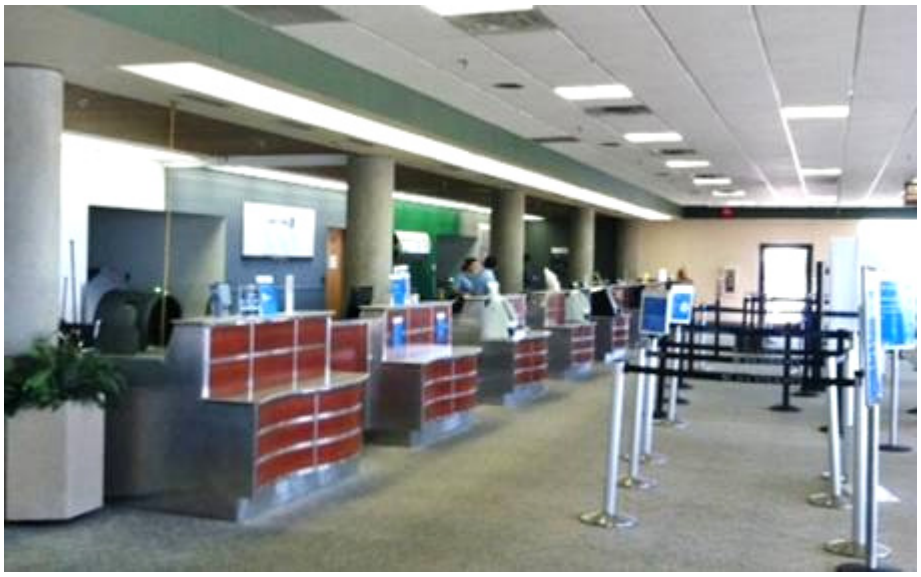
2.5.3 Curbside

The terminal curbside is located on the west side of the terminal and is accessed by four 12-foot-wide, one-way lanes from the south. A central median divides the lanes, with two on each side. The lanes exit to Airport Road to the north. Two sidewalks from the main parking area cut through the concrete median to access the curbside. Each pair of lanes consists of a west drive-through lane and an east drop-off/pick-up lane. Curbside check-in is not currently available.

2.5.4 Ticket Counters

Ticket counters for each of the four airlines are located in the south concourse. The four ticket counter spaces each contain two six-foot-long ticket counters, equipped for a stand-alone agent position (see **Figure 2-10**). Each space has a baggage scale and walkway between the airline ticketing area and the queuing area. Separately located self-check-in kiosks are not currently available.

FIGURE 2-10 – TICKET COUNTERS



Source: Jviation

2.5.5 Airline Ticketing Offices (ATO)

A workspace is behind each of the four ticketing counters, as well as an office. In addition, the airlines occupy six offices at the east side of the baggage area. The airlines also share two baggage imaging areas.

2.5.6 Ticketing Lobby and Circulation

The ticketing lobby and circulation area offers space for passenger queuing, waiting, and circulation. Two designated waiting areas, northern and southern, divided by an entry, are located on the west wall, with windows facing the curbside and main parking lot (see **Figure 2-11**).

FIGURE 2-11 – WAITING AREAS

Source: Jviation

Passenger queuing and circulation space is shared as no division between the two areas exists. Consequently, when the queuing expands, circulation decreases.

2.5.7 Baggage Claim

The baggage claim lobby is located in the north concourse, adjacent to the rental car offices. Passengers can claim their baggage from two devices: a straight conveyor belt or a large bag drop, depicted in **Figure 2-12**.

FIGURE 2-12 – BAGGAGE CLAIM

Source: Jviation

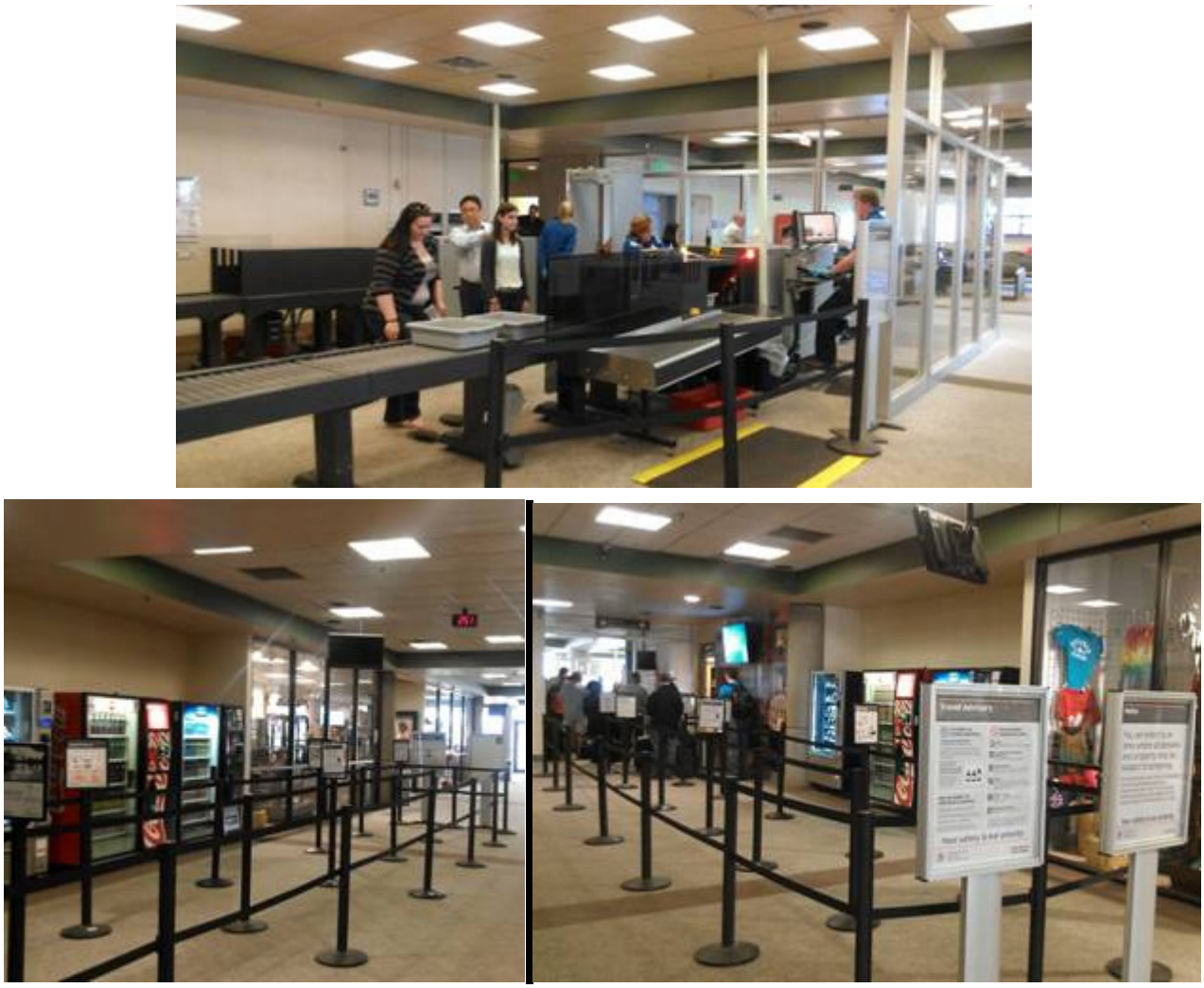
2.5.8 Passenger and Baggage Screening (TSA Facilities)

The TSA occupies three main areas at DRO: passenger screening, baggage screening, and administrative space. The passenger screening area occupies the main central corridor and a large portion of the departure lounge. It is equipped with two checkpoint x-ray scanners and one magnetometer (depicted in **Figure 2-13**).

Two baggage screening areas with two Reveal CT-80 explosive detection systems (EDS) are located between the airline ticketing counters and the outbound baggage make-up area, discussed in **Section 2.5.9**.

The administrative space is located on the second level of the terminal and includes three offices, a staff break room, and a training room.

FIGURE 2-13 – PASSENGER SCREENING



Source: Jviation

2.5.9 Outbound Baggage Make-up Area

The outbound baggage make-up area is located east of the ticketing area. Access is provided directly from the airline offices and baggage imaging areas. Baggage from the imaging machines is moved on manually operated roller tables through an overhead door into the baggage make-up area. The baggage is then loaded onto carts pulled by tugs to the outbound aircraft. The area is also used for storage, but is currently inadequate. Six wood storage sheds were constructed south of the baggage area for each of the airlines, the airport's janitorial storage, and the advertiser's storage. Ground equipment is also stored in this area during the winter.

2.5.10 Restrooms

Restrooms are located on both the unsecure (public) and secure sides of the terminal. The east concourse has three public restrooms: a special-needs restroom that is in good condition, as well as one women's and one men's that were upgraded within the past five years and are in good condition.

Restrooms located in the terminal's secure area are comparable to those in the public area with one women's and one men's. The number of fixtures is adequate but the overall size of the restrooms is well below current industry standards and leads to congestion. Mobile restrooms were added in 2013 as part of the temporary departure lounge, discussed in **Section 2.5.11**.

All restrooms are handicap accessible, with grab rails and wheelchair accessible stalls.

2.5.11 Departure Lounges (Hold Rooms)

The terminal departure lounges are 2,812 square feet and are reserved for scheduled outgoing passengers waiting to access their aircraft through one of four gates. As this area was too small to accommodate existing passengers, a temporary hold room and mobile restrooms were added in 2013 in response to rapid growth and TSA expansion into the departure lounge. **Figure 2-14** depicts the interior of the temporary hold room.

FIGURE 2-14 – TEMPORARY HOLD ROOM

Source: Jviation

2.5.12 Concessions

The Airport has two concession areas in the north and south concourses. Concessions include a news/gift shop, a small café, and vending. The café is located in the north concourse and the news/gift shop is located in the south concourse, directly across from the café. Vending machines are located along the outside wall of the gift shop.

No concessions, other than a few vending machines, exist in the departure lounges after going through passenger screening.

2.5.13 Rental Car Facilities / Ground Transportation

Five rental car companies are located within the terminal: Avis, Budget, Enterprise, Hertz, and National. Each company has a counter area and small office located directly across from the baggage claim area. The rental car lot is located off the north end of the north concourse.

Currently, DRO does not have any ground transportation services with designated office space located within the terminal. However, several private companies provide taxi, limousine, and shuttle service to and from DRO. All companies operate on an on-demand basis.

Passengers are picked up and dropped off at the north end of the north concourse, currently the only area for bus loading.

2.5.14 Aircraft Parking and Gates

Commercial aircraft parking is reserved on the commercial apron east of the east concourse. Four parking positions are reserved for commercial aircraft and are located directly in front of the terminal building. **Figure 2-15** depicts an aircraft parked outside the terminal. The concourse does not have any passenger loading bridges (PLB). Passengers use four gates, specific to each airline, that provide ground access to the aircraft on the apron. Access to the aircraft is by air stairs from the apron.

FIGURE 2-15 – COMMERCIAL AIRCRAFT PARKING

Source: Jviation

2.5.15 Airport Administrative and TSA Offices

The terminal has a partial second level that houses the airport administrative offices, including a conference room, small break room, and restrooms (men's and women's). Access to the second floor is from a corridor north of the east concourse via an elevator or staircase. A second staircase is located at the south end of the second level but is for egress purposes only (exits directly outside).

The second level has nine offices, four of which are used by airport personnel and the other five by TSA, as previously discussed in **Section 2.5.8**. The administrative offices are located directly at the top of the north staircase. The conference room used by the Airport Commission is adjacent to the administrative offices and can be accessed via the break room or hallway. A janitor's office is also located on the second level.

The restrooms are shared by airport administration and TSA; neither are handicap accessible.

2.6 General Aviation (GA) Facilities

GA facilities provide services to GA operators at an airport. GA facilities include the FBO, hangars, and aircraft apron parking and tie-down space.

2.6.1 Fixed-Base Operator (FBO)

An FBO is an aviation-related business that provides services for non-air-carrier pilots, aircraft, and passengers. However, some FBOs fuel air carrier aircraft and provide deicing and light maintenance. FBO services range from GA aircraft fueling, ground servicing, aircraft maintenance and repair, in-flight catering, flight training, and aircraft rental. FBOs may also serve as a terminal for passengers boarding GA aircraft and may include a lobby, restrooms, vending, and rental car services. Pilot lounges, flight planning rooms, weather computers, and pilot shops are also typical in FBOs.

Currently, DRO is served by one FBO, AvFlight Corporation. AvFlight occupies three hangars at DRO, totaling 32,400 square feet, which are located on the north end of the GA apron. AvFlight is open from 7AM or sunrise, whichever is earlier, to 8PM or sunset, whichever is later. On-call fuel services are provided during non-operational hours. The following key services are provided during normal operational hours:

- Fueling (Jet A and AvGas)
- Cargo loading/unloading
- Charter handling
- Pilot lounge / flight planning
- Hangars/storage
- Maintenance (subcontracted)
- De and anti-icing
- Ground-power unit

2.6.2 Airport Hangars

Hangars are enclosed structures for the parking, servicing, and maintenance of aircraft, and are designed to protect aircraft from environmental elements such as wind, snow, hail, ice, and rain. The majority of hangars are either box-style or T-style designs. Box-style hangars, also known as conventional hangars, have a box-shaped or rectangular footprint and range in size from holding one or two single-engine aircraft up to accommodating several corporate jet aircraft. T-style hangars, known at T-hangars, are a series of interconnected aircraft hangars with footprints in the shape of a "T." T-hangars generally store one single- or multi-engine aircraft each.

DRO has both T-hangars and conventional hangars for aircraft storage. **Table 2-11** details hangar size, number of units, condition, and utilities for each. **Figure 2-16** and **Figure 2-17** depict hangar locations.

TABLE 2-11 – EXISTING HANGARS

PRIVATE HANGARS

Legend #	Units	Area (sf)	Condition	Utilities[/a/]
1	3	7,500	Good	W, E, G
2	8	11,000	Good	E
3	6	9,000	Good	E, G
4	4	9,075	Good	W, E, G
5	3	7,000	Good	W, E, G
6	3	6,075	Good	W, E, G
7	1	4,900	Good	W, E, G
8	1	3,600	Good	W, E, G
9	1	3,600	Good	W, E, G
10	1	3,600	Good	W, E, G
11	1	3,600	Good	W, E, G
12	4	8,100	Fair	None
13	0	1,750	Good	W, S, E, G
14	1	4,800	Good	W, S, E, G
15	1	3,900	Good	W, S, E, G
16	1	4,800	Good	W, S, E, G
17	1	3,900	Good	W, S, E, G
18	1	4,800	Good	W, S, E, G
19	1	3,900	Good	W, S, E, G
20	1	8,400	Good	W, S, E, G
21	1	4,320	Good	W, S, E, G
22	8	9,500	Good	W, S, E, G
23	1	2,500	Good	W, S, E, G
24	1	2,500	Good	W, S, E, G
25	1	2,500	Good	E, G
26	1	3,000	Good	W, S, E, G
Total	**56**	**137,620**		

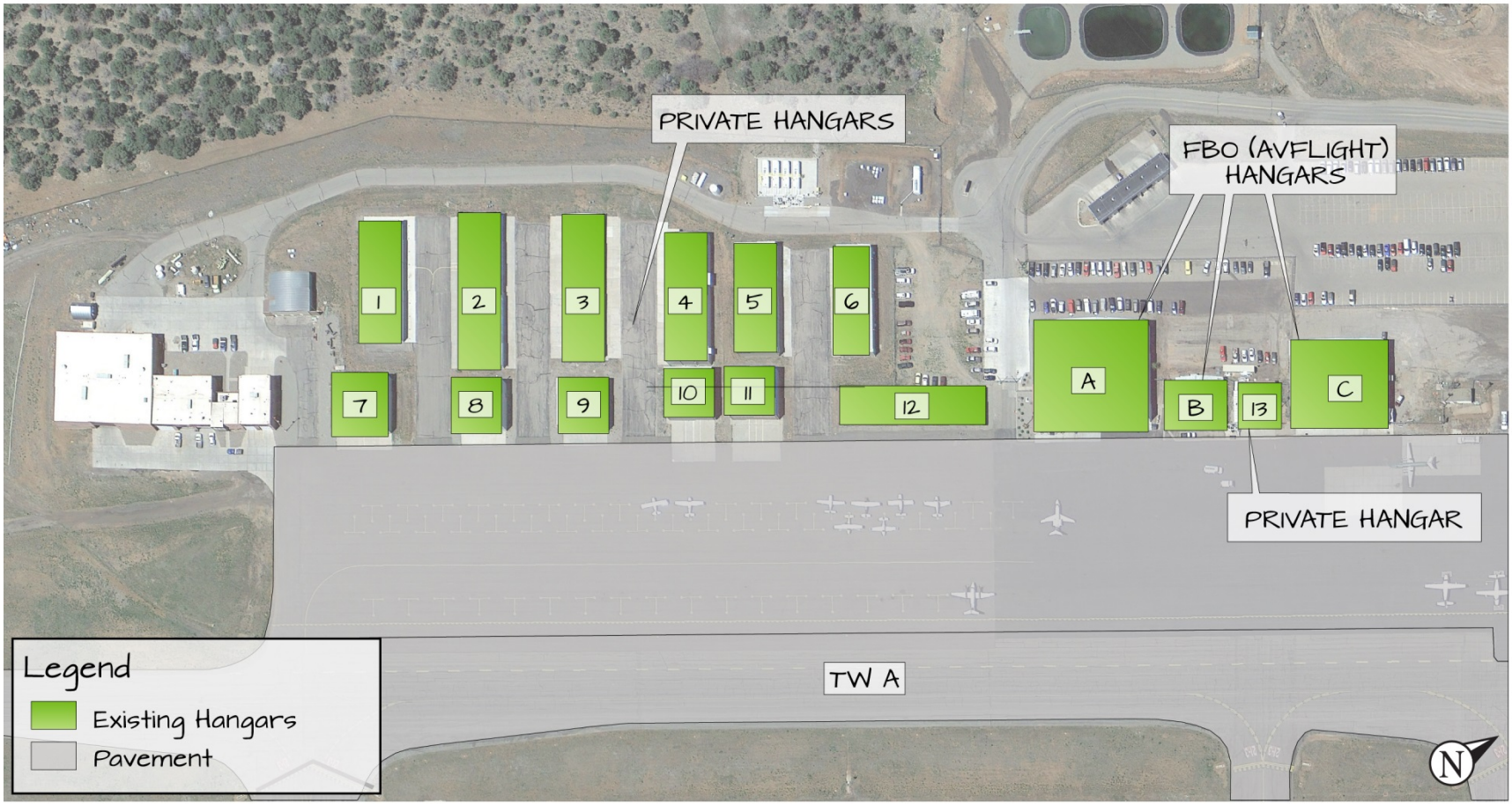
FBO (AVFLIGHT) HANGARS

Legend #	# Based AC	Area (sf)	Condition	Utilities
A	9	16,800	Good	W, S, E, G
B	1	3,600	Fair	W, S, E, G
D	5	12,000	Good	W, S, E, G
Total	**15**	**32,400**		

Note: [/a/] Water (W), Sewer (S), Electric (E), Gas (G)

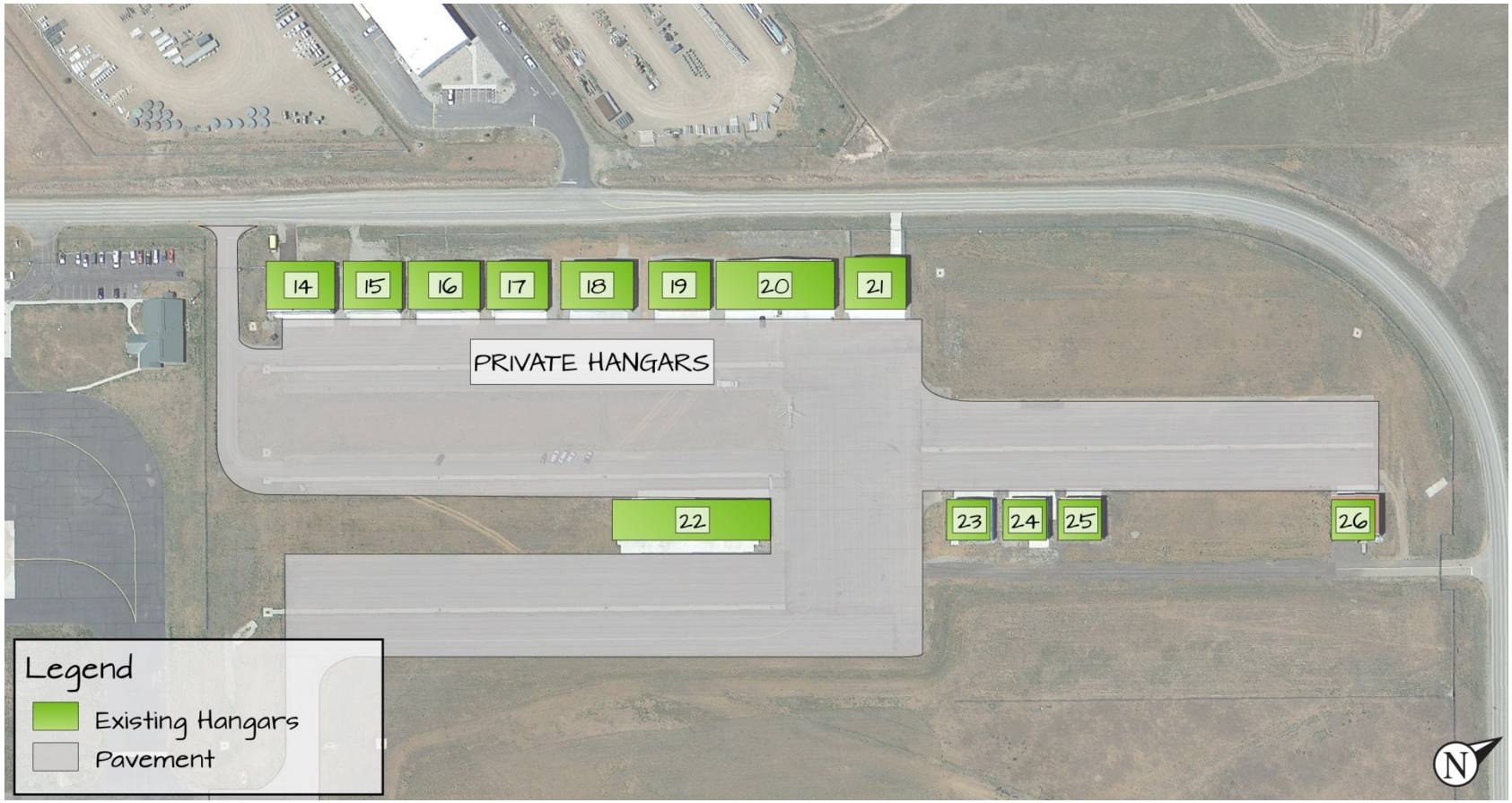
Source: DRO Airport Management Records

FIGURE 2-16 – HANGAR LOCATIONS: SOUTH



Note: Not to scale
Sources: Airport Administration, 2014 and Jviation

FIGURE 2-17 – HANGER LOCATIONS: NORTH



Note: Not to scale
Sources: Airport Administration, 2014 and Jviation

2.6.3 Based Aircraft

DRO has a total of 70 based aircraft that are mostly stored in hangars. There is currently a waiting list for hangars. Table 2-12 is a breakdown of based aircraft by type.

TABLE 2-12 – BASED AIRCRAFT

Aircraft Type	Number
Single-engine	61
Multi-engine	8
Jet	0
Glider	0
Helicopter	1

Source: Airport Administration, 2014

2.6.4 Based and Transient Aircraft Parking Aprons and Tie-downs

Aircraft parking aprons, also known as ramps, are large paved surfaces designed for parking and servicing aircraft. Aprons provide access to terminals, hangars, and FBO facilities; locations to transfer passengers and cargo from aircraft; and areas for aircraft fueling and maintenance. An apron's size and pavement strength varies greatly at different airports and even at the same airport. Factors contributing to size and strength include: aircraft type, available space, special aircraft needs, and the configuration of terminals, hangars, and FBOs. Another factor that can greatly impact an apron's parking capacity is whether aircraft power-in/power-out to parking positions, or if tugs are used to pull in/push out the aircraft.

DRO has four primary aprons that serve the terminal, FBO, and the various corporate and private hangars located on the airfield. The terminal apron (commercial) is approximately 25,168 square yards and is located east of the terminal building. It is intended to serve commercial aircraft exclusively, including passenger and luggage transfer and aircraft servicing, fueling, and deicing. Typically one to two regional jets and a B-737/A-319 size aircraft are parked on the terminal apron at the same time.

The GA/FBO apron is approximately 53,724 square yards and is located on AvFlight's facility, south of the main terminal area. The apron has 56 tie-downs to park based GA aircraft and additional apron for transient aircraft. A second 25,263-square-yard GA apron is north of the terminal.

The fourth apron area is approximately 21,780 square yards and is used exclusively by the U.S. Forest Service.

Pavement type and condition are discussed in Section 2.4.3 and Section 2.4.4, respectively.

2.7 Airport Equipment

DRO owns and operates several pieces of large equipment to perform maintenance, snow removal, and Aircraft Rescue and Fire Fighting (ARFF). ARFF and Snow Removal Equipment (SRE) are eligible for FAA funding, and most other maintenance equipment is eligible for CDOT Aeronautics funding.

2.7.1 ARFF Equipment

ARFF is a special category of fire fighting on airports for response, evacuation, and possible rescue of aircraft passengers and crew. 14 CFR Part 139 specifies ARFF requirements and assigns an ARFF index to each certificated airport based on the largest commercial aircraft with five or more daily flights serving the facility, shown in **Table 2-13**. The ARFF index determines the type and quantity of fire fighting equipment and type of extinguishing agent a certificated airport must provide. In compliance with Part 139, DRO is required to provide ARFF services during air carrier operations, including 15 minutes prior to the arrival and 15 minutes after the departure of an air carrier aircraft.

TABLE 2-13 – ARFF INDEX DETERMINATION

ARFF Index	Aircraft Length (Feet)
A	<90
B	>90 ≤126
C	>126 ≤159
D	>159 ≤200
E	>200

Source: 14 CFR Part 139.315

Because the longest aircraft with more than five daily flights is a mix of aircraft with lengths greater than 90 and less than or equal to 126 feet, FAA certifies DRO under Part 139 as a Class I, ARFF Index B airport. Class I airports can accommodate all commercial aircraft with more than 30 passenger seats; however, ARFF Index B limits commercial aircraft operating at DRO to aircraft between 90 feet and 126 feet in length. That includes the majority of DRO's regularly scheduled airline fleet including the Bombardier Q400, Canadair CRJ700 and CRJ 900 series, and the Airbus A-319/320. In compliance with ARFF requirements, DRO has two ARFF vehicles: a 2002 Oshkosh TI-1500 and a 1985 Oshkosh T-1500--both are in good condition. Also, to comply with Part 139 requirements to have ARFF on-site during air carrier operations, DRO has an on-site fire station that is dedicated to the Airport and houses ARFF personnel and equipment, as discussed in **Section 2.8.1**. Currently, DRO has seven dedicated ARFF personnel.

2.7.2 Snow Removal Equipment (SRE)

Airport snow removal is also regulated under 14 CFR Part 139, and requires DRO to have a snow removal plan that demonstrates to FAA how it will comply with snow removal requirements. Unlike ARFF requirements, Part 139 does not specify the type and quantity of equipment needed for snow removal. Instead, airport operators must develop and comply with a snow removal plan that ensures snow is removed and stored in a manner that ensures airfield safety, and that snow removal and pavement friction conditions are communicated with air carriers. DRO's Snow and Ice Control Plan was last updated on March 8, 2005.

Table 2-14 details DRO's SRE equipment.

TABLE 2-14 – SNOW REMOVAL EQUIPMENT

Year	Model	Use	Condition
2001	Oshkosh H Series	Broom	Good
1998	Oshkosh H Series	Broom	Good
2012	Oshkosh H Series	Blower	Good

Year	Model	Use	Condition
1989	Snowblast MP-3000	Blower	Good
1983	Oshkosh W700015R	Blower	Good
1999	Oshkosh H-2723	Plow Truck	Good
1986	Oshkosh P Series	Plow Truck	Good
1985	Oshkosh P Series	Plow Truck	Good
2010	Volvo 150F	Loader	Good
2001	John Deere 624H	Loader	Good

Source: Airport Administration, 2014

2.8 SUPPORT FACILITIES

2.8.1 Aircraft Rescue and Fire Fighting (ARFF) Station, SRE Storage Building, and Maintenance

The ARFF and SRE building, constructed in 1993, is located on the south corner of the GA apron, south of the terminal building. It is approximately 26,120 square feet. The building includes a 14,400-square-foot SRE area, three central bays for maintenance and repair of equipment totaling 2,603 square feet, and two bays at the north end for fire fighting equipment that total 2,645 square feet. The center of the building has a second level with a weight room, an office, an alarm room, and storage room. The weight room, office, and alarm room total 955 square feet. The 1,808-square-foot storage room has access to a utility room, the south SRE bay, and the roof.

A concrete apron at the front of the building (east side) connects all seven bays, the building's front entrance, and Taxiway A. The west side (back) of the building has concrete driveways connecting the building to Airport Road.

2.8.2 Aircraft Fuel Storage and Use

Aircraft typically use two fuel types: AvGas or Jet A. AvGas, or Aviation Gasoline, is used by aircraft with reciprocating piston engines. The most common grade of AvGas is 100 low lead (LL). Jet A is an unleaded, kerosene-type fuel used for powering jet and turbo-prop engine aircraft. Aviation fuel is currently stored south of the terminal building in the fuel farm that is accessible from Airport Road. The fuel farm has five above-ground storage tanks (AST) that are double-walled with fuel containment. All are owned and maintained by the FBO, AvFlight, and are in excellent condition. A diesel storage tank located adjacent to the ARFF building provides fuel for DRO's diesel vehicles and equipment. Table 2-15 details the sizes and type of fuel in each.

TABLE 2-15 – FUEL STORAGE

Location	Tank Type	Capacity (gallons)	Fuel Type	Condition
Fuel Farm	AST – double-walled	12,000	Jet A	Excellent
Fuel Farm	AST – double-walled	12,000	Jet A	Excellent
Fuel Farm	AST – double-walled	12,000	Jet A	Excellent

Location	Tank Type	Capacity (gallons)	Fuel Type	Condition
Fuel Farm	AST – double-walled	12,000	100 LL	Excellent
Fuel Farm	AST – double-walled	12,000	Gasoline	Excellent
ARFF Building	AST – double-walled	2,000	Diesel	Good

Source: Jviation

Fuel flowage at DRO has steadily increased from 2003 to 2013, with peak usage in 2011 and 2012. **Table 2-16** details the fuel pumped by type from 2003 through 2013.

TABLE 2-16 – FUEL FLOWAGE

Year	Total Jet A Fuel Pumped (gallons)		Total AvGas Pumped (gallons)	Total Fuel (Jet A & AvGas) Pumped (gallons)
	Jet A Air Carrier	Jet A Private		
2003	640,695	469,063	161,621	1,271,379
2004	769,445	503,069	151,845	1,424,359
2005	858,091	416,418	108,042	1,382,551
2006	974,187	382,484	82,329	1,439,000
2007	1,056,509	449,677	75,017	1,581,203
2008	992,859	338,576	59,767	1,391,202
2009	916,306	348,855	48,012	1,313,173
2010	1,046,179	333,209	58,903	1,438,291
2011	1,185,026	369,827	56,194	1,611,047
2012	1,206,558	418,442	62,298	1,687,298
2013	895,316	422,645	63,700	1,381,661

Source: Airport Administration, 2014

2.8.3 Airport Equipment Storage Hangar

The storage hangar is located off the northwest corner of the ARFF building. The building was an aircraft hangar but is now used to store some ground maintenance equipment as well as temporary airfield lights and signs used during construction, including illuminated "X" fixtures used to indicate a closed runway. The building is approximately 2,000 square feet and is generally in good condition.

2.8.4 U.S. Forest Service Fire Fighting Facility

The U.S. Forest Service (USFS) opened a facility at DRO in 2003 based upon a contract signed with La Plata County in 1966 to lease property for a fire fighting facility. The facility serves as a staging area for fighting forest fires in the region, and is able to replenish fire suppressing agent in two tankers at once. The facility is only open during forest fire season, mid-May through September.

Based on a conversation with the DRO USFS base on July 9, 2014, the USFS is in the process of transitioning from legacy aircraft similar to the Lockheed P-2 Neptune to more modern jet aircraft.

It is anticipated that the following aircraft will be used in upcoming seasons: Lockheed C-130J Super Hercules (C130J), McDonnel Douglas MD-87 (MD-87), British Aerospace (BAe) Avro RJ85, and the BAe 146; all of these are jet aircraft with exception of the C130J. A Single-Engine Air Tanker (SEAT) is typically at DRO during the fire season and other aircraft are called in if needed for a larger event.

The facility has a fire suppressant reloading area, a storage warehouse, and an office building. It is located north of the terminal, across from the Runway 21 end. The reloading area includes two 20,000-gallon water tanks that are filled by a water hauling company. There are also four 10,000-gallon tanks for concentrated fire suppressant, which is mixed with water before being pumped onto the tanker planes.

The office building has room for two full-time government employees, as well as contract employees, pilot quarters, and a dispatch room. Currently, no USFS planes are based at DRO, however in the event of high fire danger, i.e. red flag days, the USFS attempts to park a plane at the facility in preparation of a fire.

Airside access to the facility is from Taxiway A via two connector taxiways to the facility's apron, and landside access is via Airport Road to an access road at the western corner of the apron.

2.9 Access, Circulation, and Parking

Adequate vehicular access to DRO, as well as parking facilities, is necessary for effective operation. Due to site limitations, access, circulation, and parking are constrained. The following summarizes DRO's existing road and parking conditions.

2.9.1 Airport Access Road & Circulation Network

The main access network for DRO is via State Highway 172, which connects to County Road 309, also known as Airport Road. Airport Road is a two-lane road that extends from State Highway 172 to the intersection of County Road 309A, just south of the airport boundary. At that point, Airport Road splits into two two-lane roads divided by a landscaped median (see **Section 2.5.3** for terminal curbside details).

The two eastern lanes are one-way southbound and route traffic to DRO's main parking lot. The two western lanes are a two-way service road that continues past the parking lots to the terminal building, FBO, GA hangars, and ARFF building. Signs along Airport Road direct traffic to various parking lots and the terminal.

A secondary access point is from County Road 309A from the south, which connects to Airport Road. This access is rarely used by airport visitors, as the area it connects to is sparsely populated and most of the road is unpaved.

2.9.2 Auto Parking

DRO has six parking lots for various uses. Table 2-17 details the different lots by use and number of spaces, and Figure 2-18 depicts the location of each.

TABLE 2-17 – PARKING LOTS AND SPACES

Lot	Number of Spaces
Main Lot	
– Long-term	323
– 30-minute	52
– Handicap	10
Credit Card Lot	
– Long-term	247
– Administrative	16
– Handicap	4
North Overflow Lot	210
South Overflow Lot	132
Rental Car Lot	219
North Employee	60
TOTAL	**1,273**

Source: Jviation

The main parking lot is for public use and is accessible from Airport Road; of the 385 parking spaces, 52 are designated as 30-minute parking (short-term) and are nearest the terminal building. Two entry gates allow access to the lot at the south end, and a ticket booth provides two exit routes from the north end of the parking lot. One exit has a person in the booth and can accept cash or credit card; the other exit has only a credit card machine. Currently, the lot does not have signage to assist users in locating rows or aisles.

The credit card lot is located further south on Airport Road, past the main parking lot gates. Visitors enter and exit the lot through gates, which require a credit card. Row and aisle signage is not provided. The north overflow lot is east of the credit card lot and accessed via the credit card lot. This lot is not currently paved but is covered with roto-milled asphalt. A second gravel lot, the south overflow lot, is located just south of the north overflow lot and is accessed via Airport Road.

The rental car lot is north of the terminal. The lot is paved and has assigned signage for each of the rental car companies.

Employee parking is located in two locations. The south parking area is located on the north end of the credit card lot, closest to the terminal building. The north lot is located north of the rental car lot and is an unpaved lot covered with roto-milled asphalt.

FIGURE 2-18 – PARKING LOTS

Note: Not to scale
Source: Jviation

2.10 UTILITIES

DRO has a variety of public and private utilities. Public utilities include natural gas, phone service, and electrical service; private utilities include a domestic water distribution system and a sanitary sewer system.

2.10.1 Natural Gas

Natural gas is supplied by Source Gas. A high-pressure gas line owned by Xcel Energy runs roughly north-south along the west side of the terminal building. The gas line tap is located near the intersection of County Roads 309 (Airport Road) and 309A. A steel line runs from the tap past the terminal building to the north development area, as well as south to supply the commercial apron and south development area.

2.10.2 Electricity

Electricity is supplied by La Plata Electric Association. DRO receives power from a junction box located near the intersection of Airport Road and County Road 309A.

2.10.3 Water Supply

DRO's onsite water system consists of a raw water holding tank, a water treatment system, and two treated water holding tanks. The system, operated and maintained by airport staff, 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.

The two water sources are a natural spring and surface runoff water. DRO also has rights to water from the East Tyner ditch, which it purchased in the 1980s. The rights currently allow DRO a one-half cubic foot per minute (CFM) share. Additionally, a one-quarter CFM share is available from the Florida River but a collection structure has not been built to take advantage of this source.

The water is stored in a 10,000-gallon raw water tank that is in fair condition and undersized. Once the water is treated, it is stored in one of two 72,000-gallon treated water tanks.[7]

2.10.4 Waste Water Treatment System

DRO's staff also operates and maintains the waste water treatment system, which consists of three lagoons with a 25,000 gallon per day treatment capacity. The lagoons have a chlorination discharge located southwest of the terminal building. DRO holds a permit to discharge to the Florida River.

A lavatory dump station for aircraft is located on the southwest corner of the terminal apron. The current system works but is inefficient to meet current demand.

[7] Durango-La Plata County Airport Terminal Area Master Plan, February 2012

2.10.5 Fiber Optics and Communications

CenturyLink and Brainstorm Internet provide phone and data services to the Airport. CenturyLink is currently used by several of the airlines and lessees. DRO uses Brainstorm Internet for wireless internet service as well as phone service.

2.11 METEOROLOGICAL DATA

Environmental elements play a significant role in an airport's layout and design. Temperatures impact runway length, and prevailing winds are one of the most important environmental elements as it dictates runway orientation.

2.11.1 Wind Coverage

Each aircraft has an acceptable crosswind component for landing and takeoff, making wind conditions particularly important for runway use. The crosswind component is a calculation of the speed of wind at a right angle to the runway centerline. When the acceptable crosswind component of an aircraft is exceeded, the aircraft must divert to another runway or a different airport.

Per FAA AC 150/5300-13A, *Airport Design*, when the current runway(s) provide less than 95 percent wind coverage for any aircraft that use the airport on a regular basis, a crosswind(s) runway should be considered. The crosswind components of 10.5, 13, 16, and 20 knots were used for this analysis to look at the allowable crosswind component for different sized aircraft. Allowable crosswind component is tied to an airport's RDC and ranges from smaller GA aircraft limited to a 10.5-knot crosswind component up to a 20-knot crosswind component for large jets such as a Boeing 767.

The weather observations taken at DRO from 2000 to 2009 were obtained from the National Climatic Data Center (NCDC). According to the FAA, the desirable wind coverage for an airport is 95 percent during all weather conditions, which means that runways should be oriented so that the maximum crosswind component is not exceeded more than five percent of the time. As shown in **Table 2-18**, Runway 3/21's orientation provides 94.49 percent coverage for a 10.5-knot crosswind, which is too low to meet the FAA crosswind component requirement of 95 percent. "All Weather" includes data on the winds observed for all types of weather conditions during the observation period. The data collected indicates that during Instrument Flight Rules (IFR) conditions, the existing combined runway orientations provide 96.60 percent coverage for a 10.5- knot crosswind, which exceeds the FAA recommendation. The FAA All Weather and IFR weather wind roses are depicted in **Figure 2-19** and **Figure 2-20**.

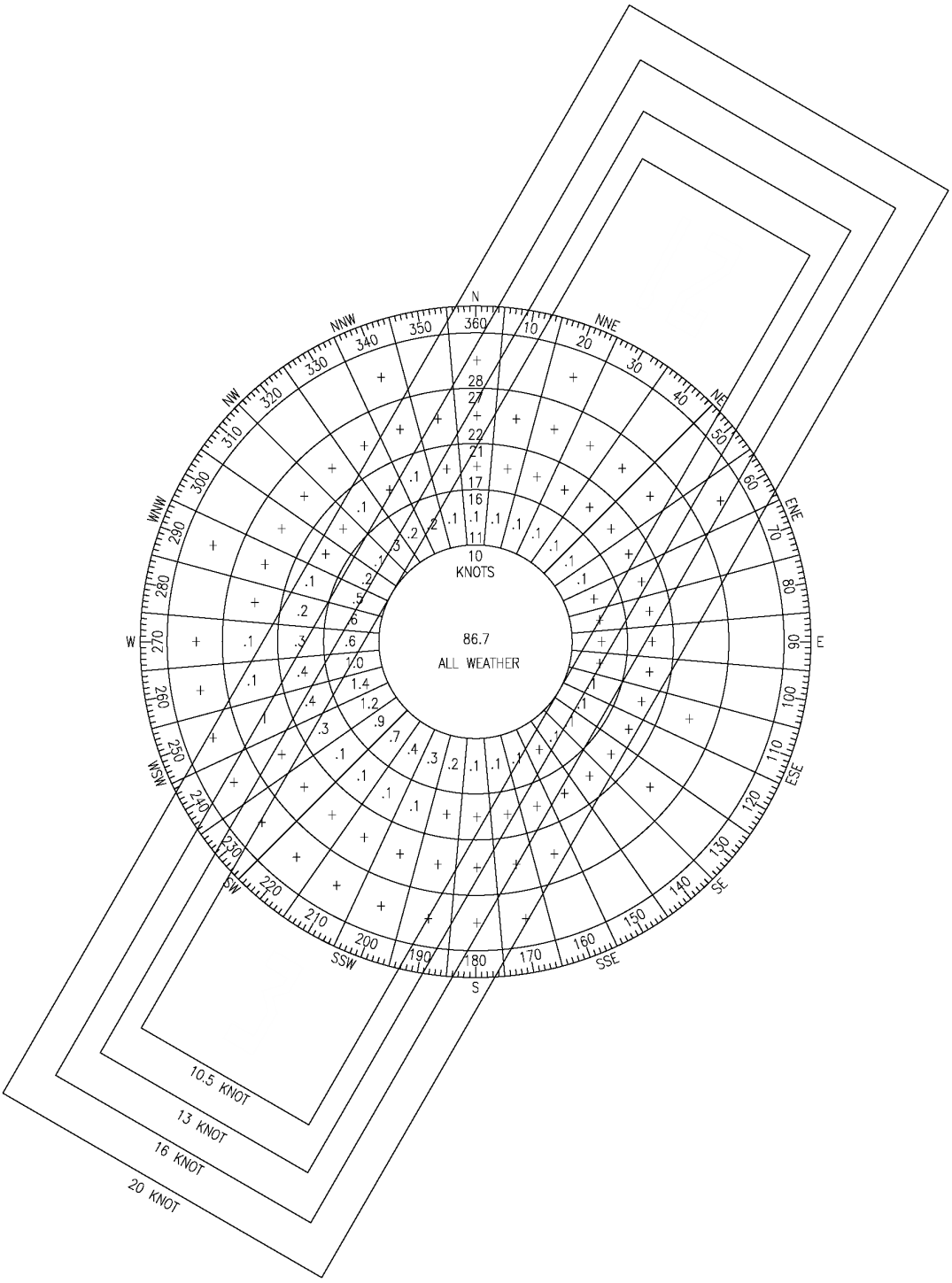
TABLE 2-18 – DRO WIND COVERAGE

All Weather	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 3	77.62%	78.62%	79.65%	80.00%
Runway 21	82.74%	84.88%	86.64%	87.39%
Runway 3/21	94.49%	96.93%	98.90%	99.75%

IFR	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 3	81.67%	82.08%	82.42%	82.56%
Runway 21	87.65%	88.88%	89.85%	90.42%
Runway 3/21	96.60%	98.03%	99.13%	99.75%

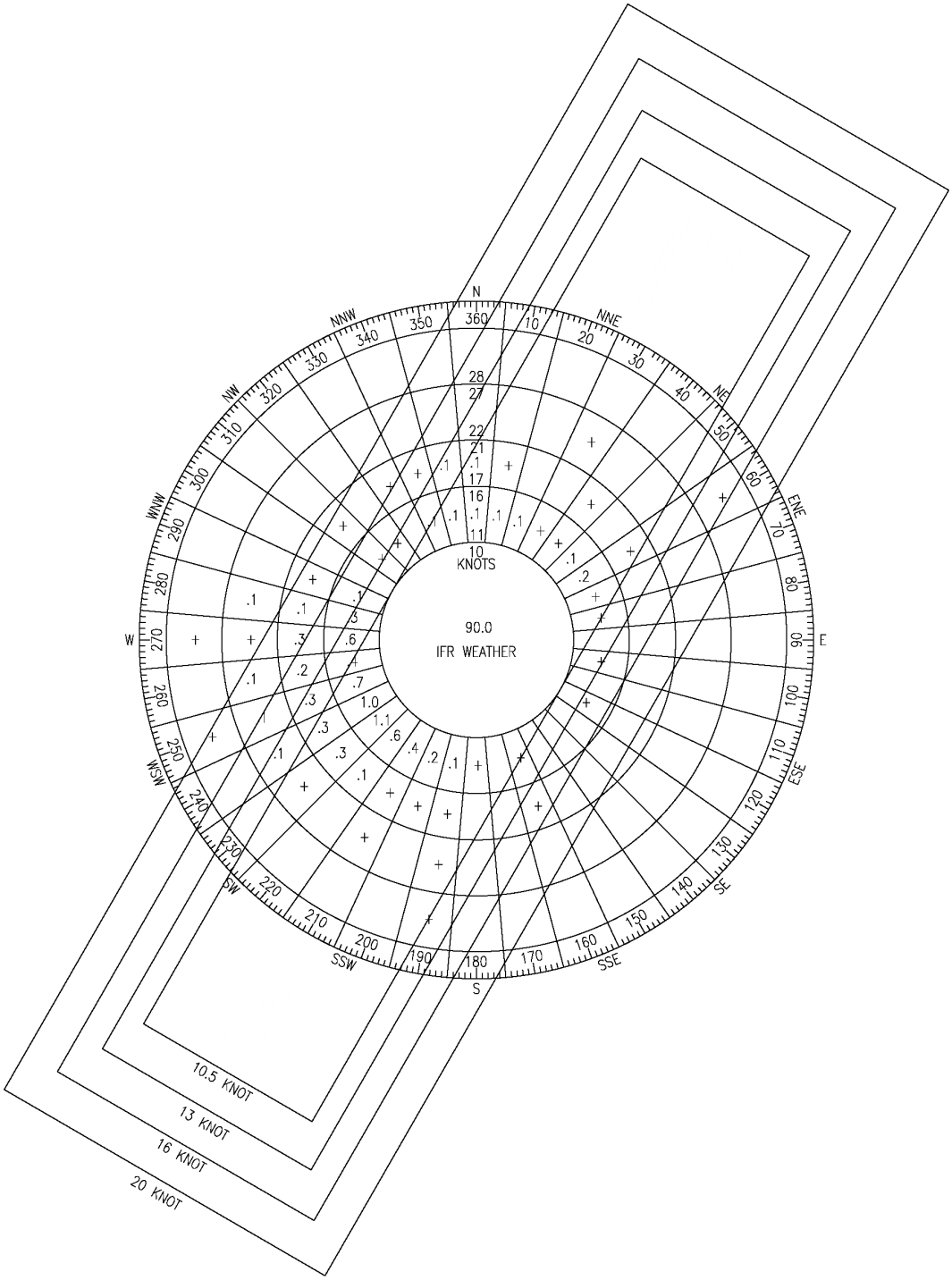
Sources: NCDC and FAA AGIS Wind Rose Form,
https://airports-gis.faa.gov/airportsgis/publicToolbox/windroseForm.jsp

FIGURE 2-19 – ALL WEATHER WIND ROSE



Source: National Oceanic and Atmospheric Administration, National Climatic Data Center, Station #72462 – Durango, Colorado. Period of record – 2000-2009

FIGURE 2-20 – IFR WIND ROSE



Source: National Oceanic and Atmospheric Administration, National Climatic Data Center, Station #72462 – Durango, Colorado. Period of record – 2000-2009

2.11.2 Temperature

Durango enjoys a four-season climate with relatively moderate temperatures year-round. The mean maximum temperature of the hottest month, also known as the airport reference temperature, occurs in July with a temperature of 88.9 ºF. The average temperature in January is 26.7ºF, and in June is 65.1ºF. These temperatures are recorded by the Western Region Climate Center. [8]

2.11.3 Precipitation

August is typically the rainiest month in Durango, and the total precipitation averages 19.1 inches per year. Snowfall for the city averages 68.8 inches per year, with most of the snowfall occurring in December, January, and February.[9] Periodically, March can also have significant snowfall.

2.11.4 Instrument Meteorological Conditions (IMC)

From the information provided by NCDC, Instrument Meteorological Conditions (IMC) occur 2.7% of the time at DRO. IMC is defined as a period when the cloud ceiling is less than 1,000 feet above ground and/or visibility is less than three miles. Instrument Flight Rules (IFR) apply when IMC occurs. A review of the data indicates that periods of IFR mostly occur between December and March, depicted in **Table 2-19**.

TABLE 2-19 – PERCENT OF IMC OCCURRENCES PER MONTH

Month	IMC %
January	7.7%
February	5.8%
March	3.8%
April	1.6%
May	0.5%
June	1.2%
July	1.2%
August	0.5%
September	0.6%
October	1.1%
November	2.7%
December	5.6%
Annual	**2.7%**

Source: National Climatic Data Center

2.12 Airport Property

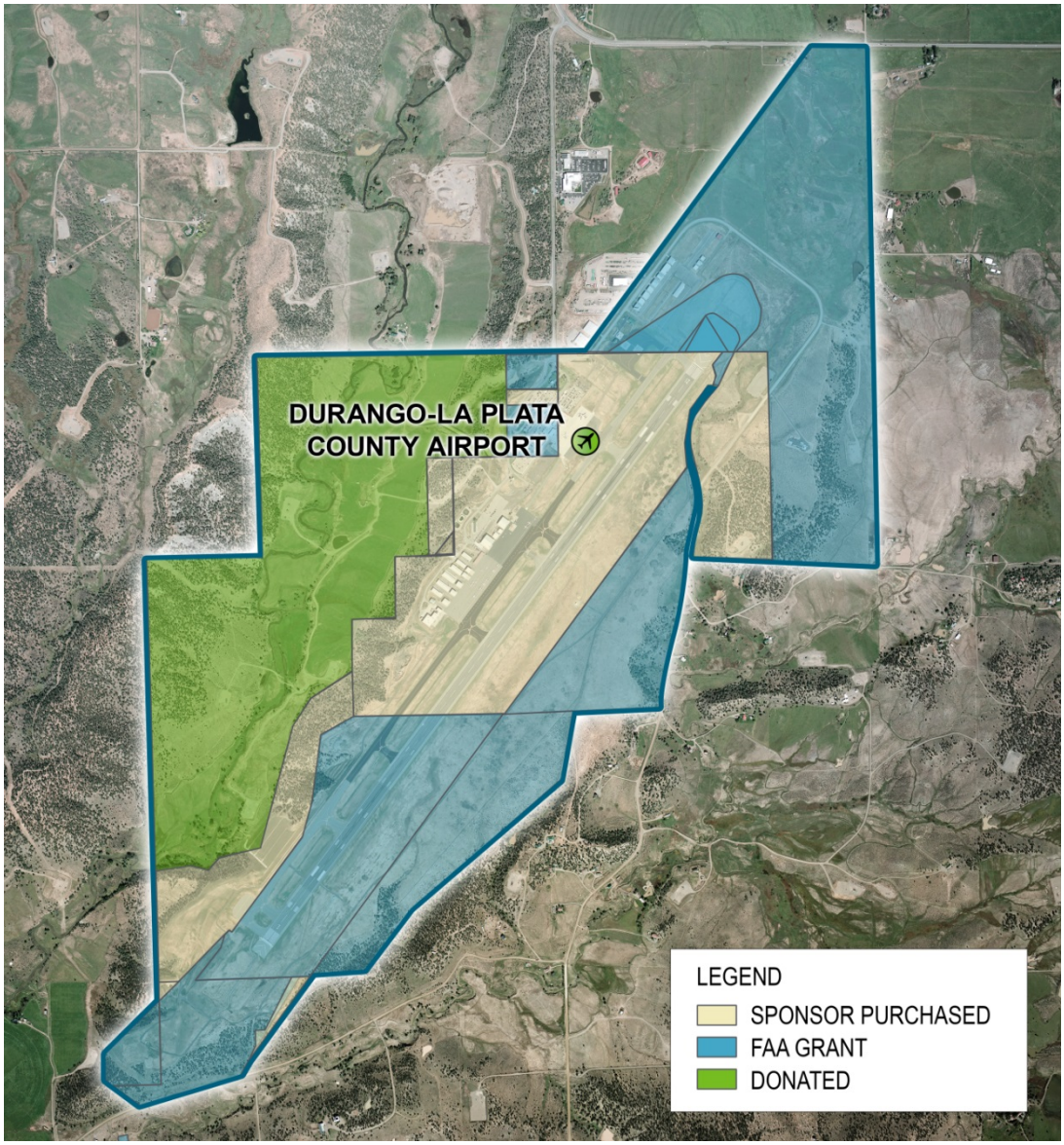
The Airport property is approximately 1,382 acres. The original 257 acres were purchased in 1947, and the remaining 1,125 acres purchased between 1959 and 1992. FAA grant funding was used to purchase a little less than half (45 percent) of the total land. The remaining property was purchased independently by Durango and La Plata County, and 368 acres were donated by a private land owner. The donated property,

[8] Western Region Climate Center, Colorado Climate Summaries. http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?co2432, accessed June 2014.
[9] Ibid.

per records, is to be used only for agricultural purposes without the right to construct improvements. This land is generally well below the airfield elevation and is not suitable for aeronautical use.

The land depicted as the airport on the Exhibit A Property Map must be used in accordance with the Airport Layout Plan. Exhibit A is an inventory of the parcels that comprise dedicated airport property and indicates how the land was acquired and the funding source. Property designated for aeronautical use cannot be used for non-aeronautical purposes except under limited circumstances or with FAA approval. **Figure 2-21** depicts the current airport property broken out by funding source. The existing Exhibit A will be modified as part of the Airport Layout Plan (ALP) set to be developed as part of this Master Plan.

FIGURE 2-21 – AIRPORT PROPERTY BY FUNDING SOURCE



Note: Not to scale
Source: Jviation

2.13 Regional Setting and Land use

The Airport is located approximately 14 miles southeast of Durango (see **Figure 1-2**) and is outside the city's zoning limits. DRO is jointly owned and operated by the City of Durango and La Plata County. **Figure 2-22** and its legend in **Figure 2-23** depicts the City of Durango's zoning.

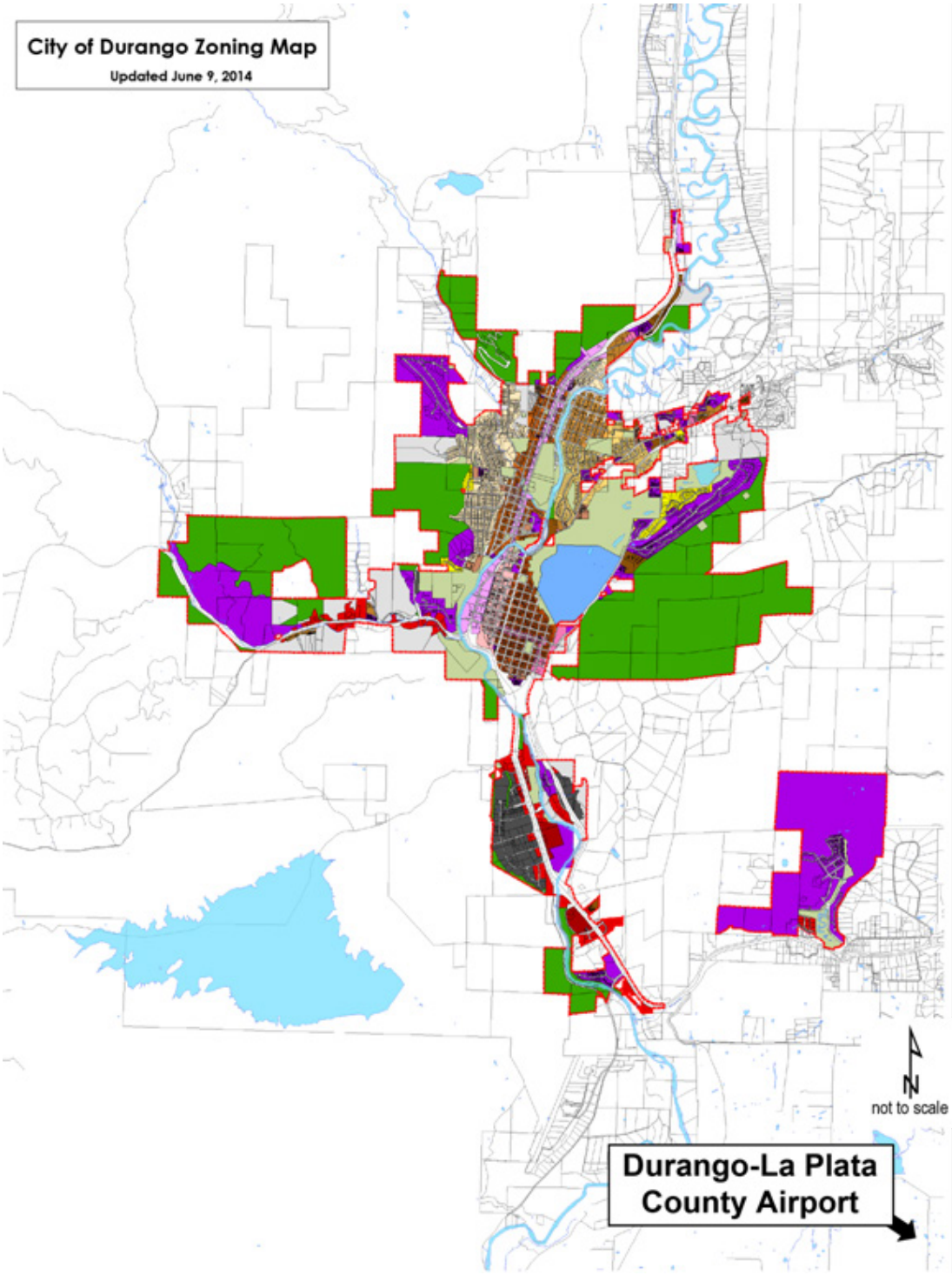
The County is divided into 13 planning districts as shown on **Figure 2-24**. The Airport falls within the eastern edge of the Florida Mesa District, with one small southeastern section in the Southeast La Plata District. **Figure 2-25** depicts the land use classifications for the Florida Mesa District. As shown, DRO is classified as a Public and Community Facility land use. The land 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. Descriptions of these classifications are:

- **Public and Community Facilities** - Public and quasi-public uses, such as schools, government facilities, cemeteries, hospitals and churches, trail heads, recreation facilities
- **Ag Rural Residential** – Private Land that can be developed at a density of one unit per 10 to 20 acres and are typically served by individual wells and septic systems.
- **Office and Light Industrial** – Commercial, office, and light industrial uses
- **Industrial** - Permits gas refineries, gas compressors, concrete batch plants and manufacturing uses with outdoor
- **Tribal Lands** – Southern Ute Tribal lands

Land use classifications in the neighboring Southeast La Plata District do not exist within this District Plan.[10] However, as shown in **Figure 2-26**, existing land uses adjacent to DRO and within the Southeast La Plata District are generally open land. Compatible land uses around an airport increase safety and aid in minimizing the effects of aircraft noise and environmental impacts. Incompatible land uses such as residential, schools, and churches are not located around DRO.

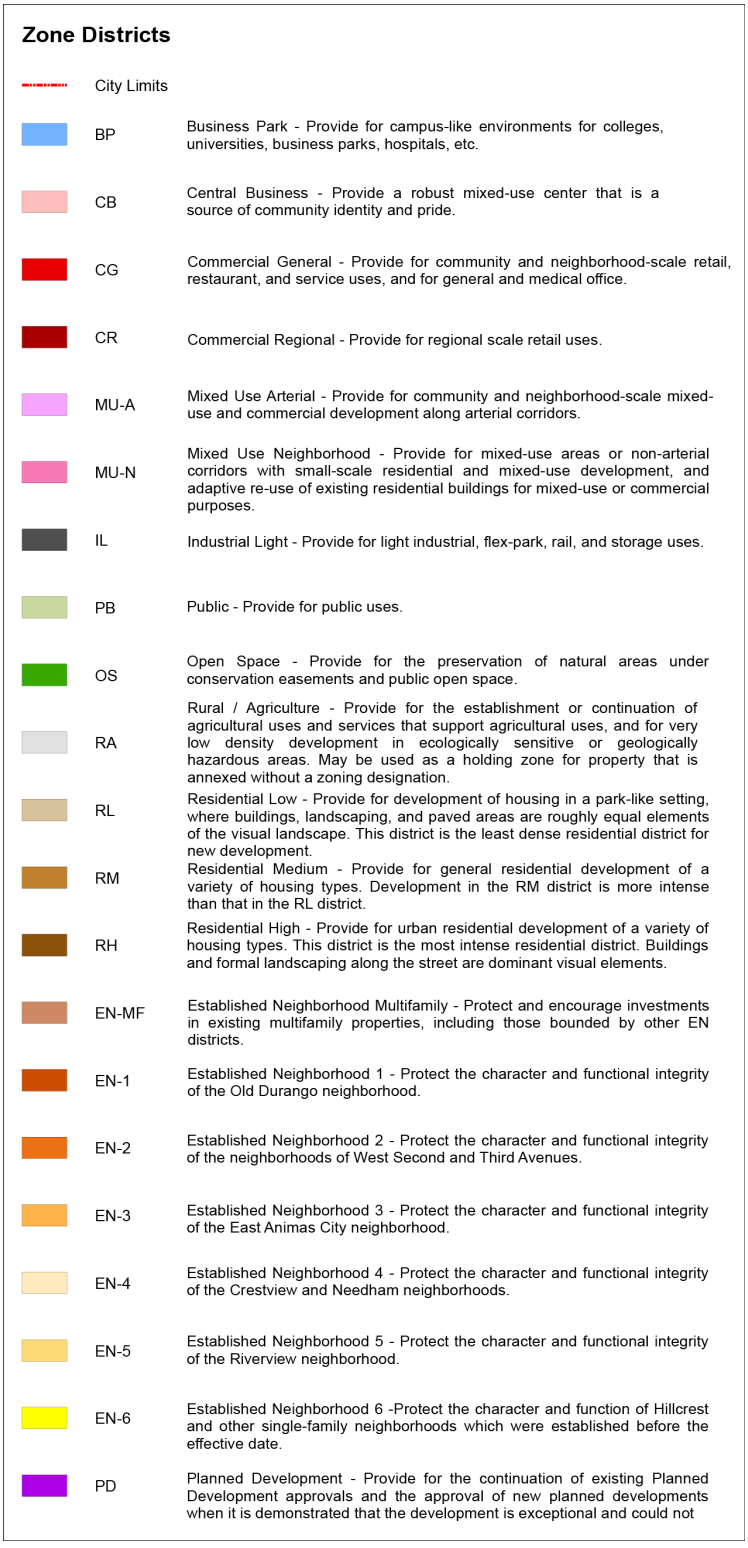
[10] La Plata County, www.co.laplate.co.us, accessed June 2014.

FIGURE 2-22 – DURANGO ZONING MAP



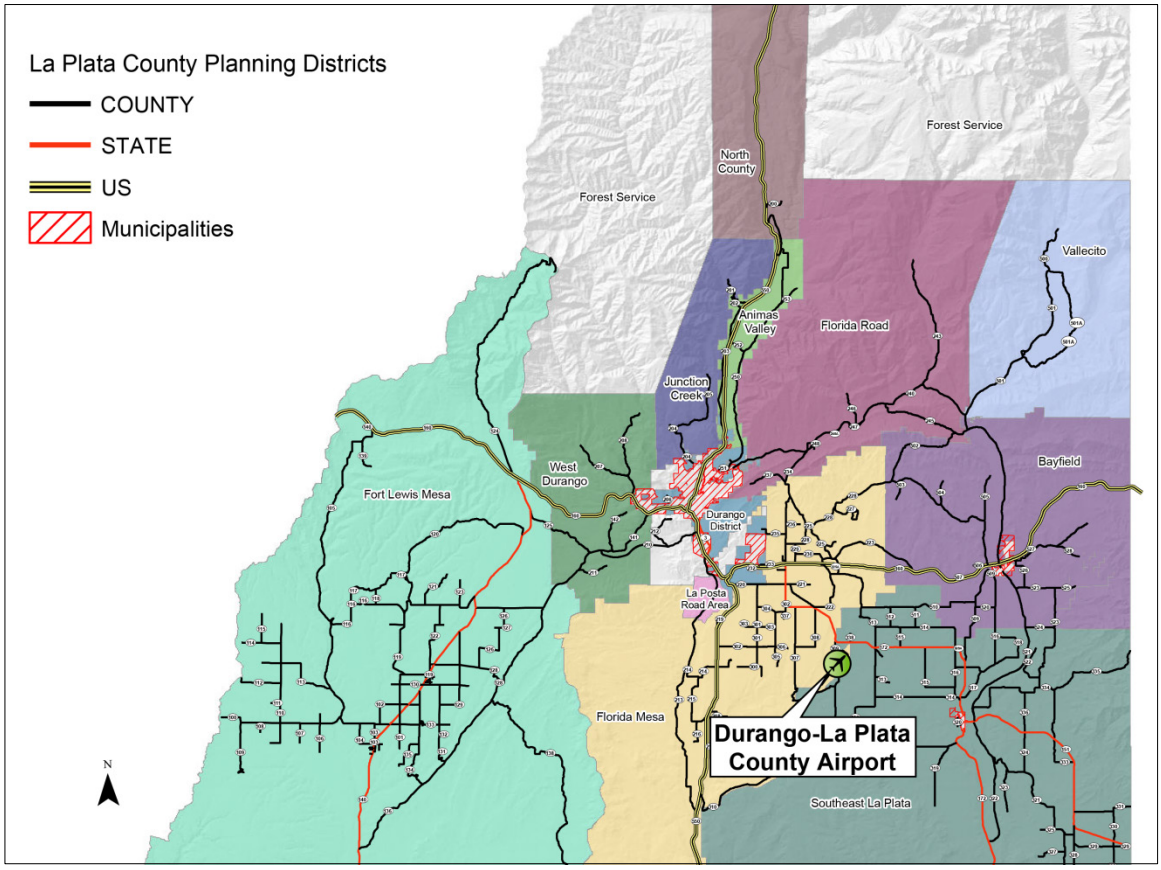
Notes: Not to scale. Please see Legend on the following page.
Source: City of Durango, www.durangogov.org, accessed June 2014

FIGURE 2-23 – DURANGO ZONING MAP LEGEND



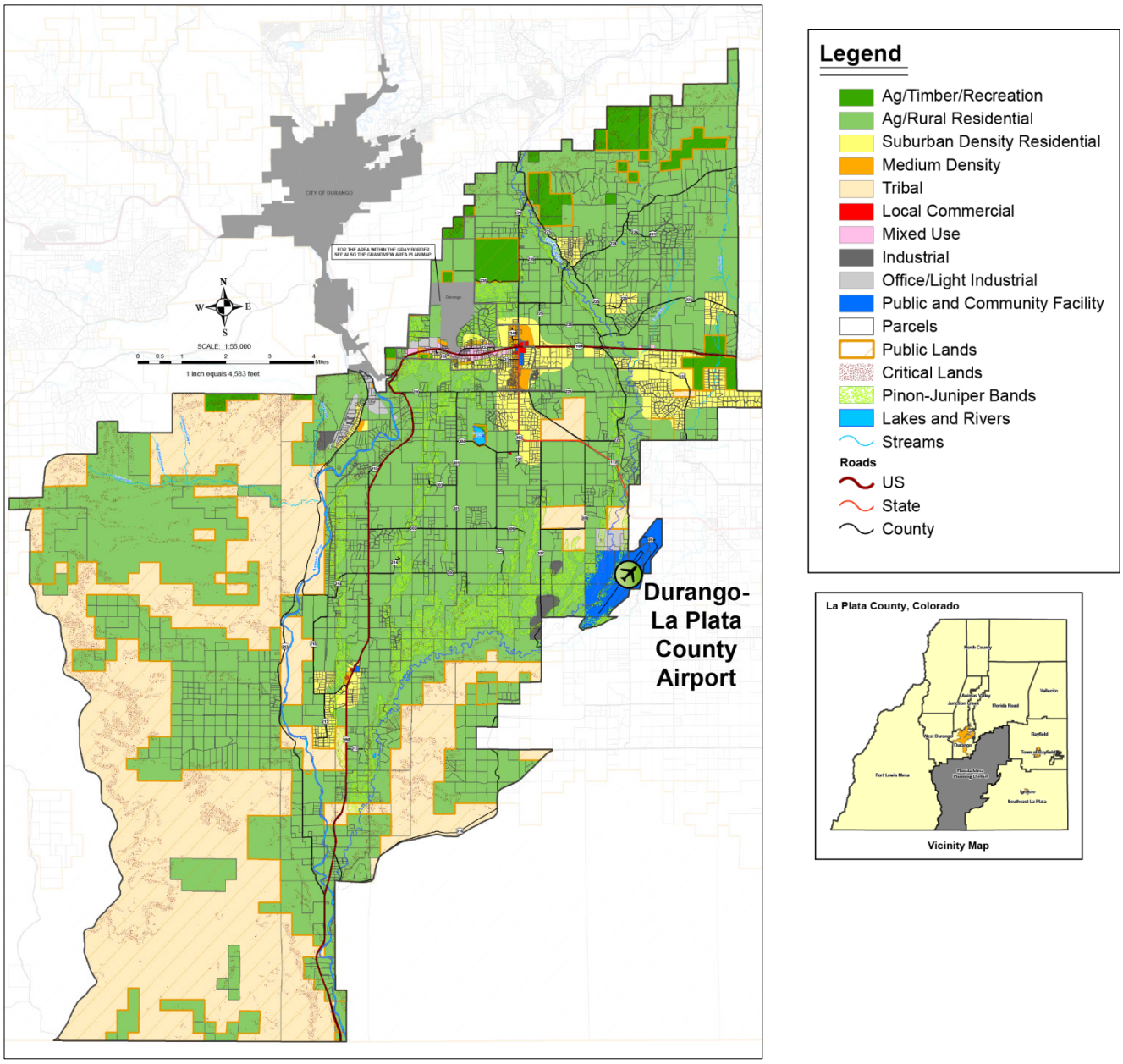
Source: City of Durango, www.durangogov.org, accessed June 2014

FIGURE 2-24 – LA PLATA COUNTY PLANNING DISTRICTS



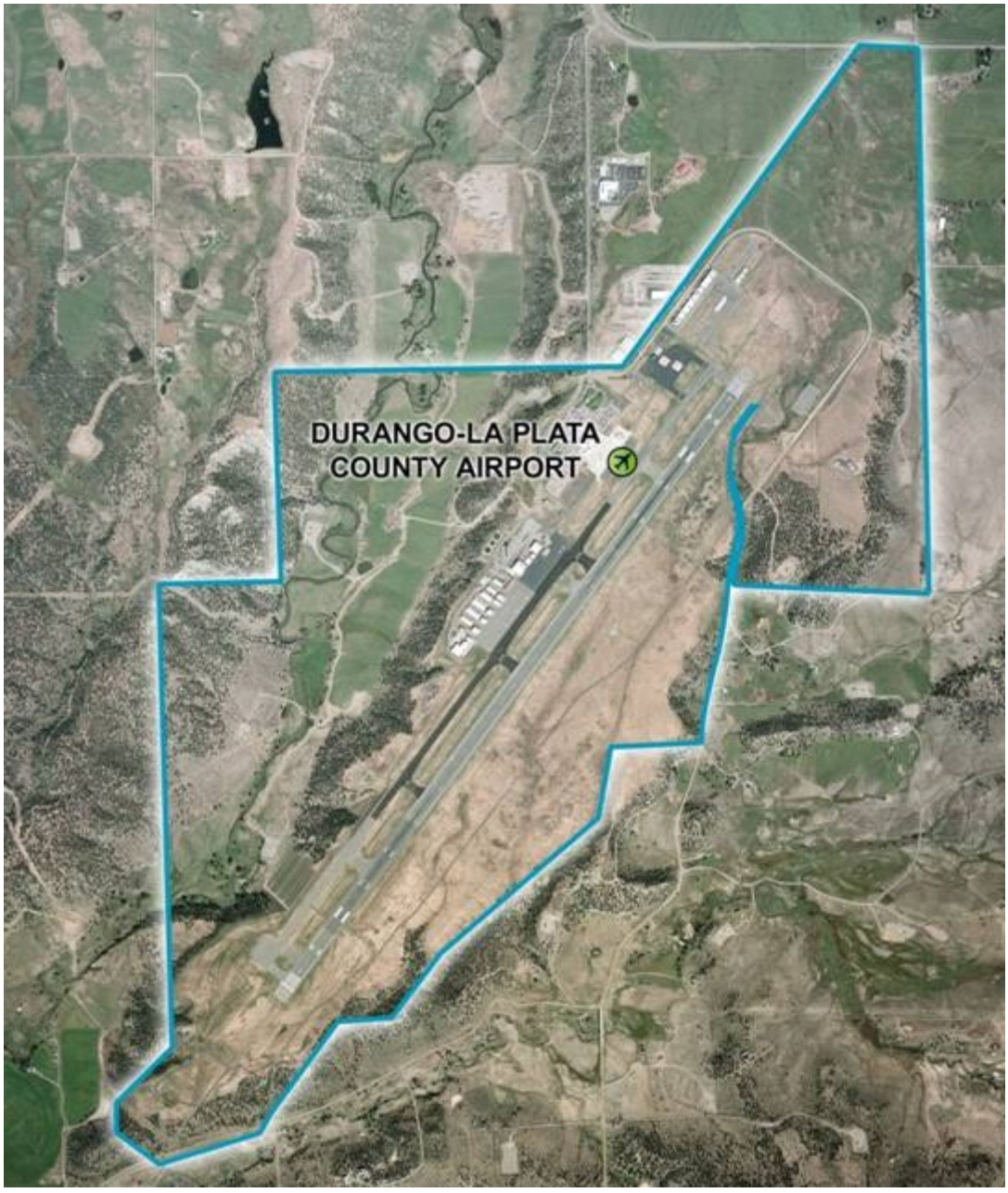
Note: Not to scale
Source: La Plata County, www.co.laplata.co.us, accessed June 2014

FIGURE 2-25 – FLORIDA MESA DISTRICT LAND USE CLASSIFICATIONS



Note: Not to scale
Source: La Plata County, www.co.laplata.co.us, accessed June 2014

FIGURE 2-26 – EXISTING LAND USE SURROUNDING DRO



Note: Not to scale
Source: Jviation

Figure 2-25 illustrates a significant amount of tribal land in the Florida Mesa Planning District. The Southern Ute Indian Tribe people are the oldest dwellers of Colorado and the surrounding mountains. Their bands have traveled across the state, residing among mountain ranges and river systems, and specialize in knowledge of the land. Such wisdom and respect for the land comes with great culture and history. Ute bands harvested only what was required to sustain their units. They were skilled hunters of large and small game, and proficient in basket weaving, gathering, and herbal medicine. Traditions are deeply rooted in their heritage and are accompanied by a rich culture.[12]

Travel routes established by the Ute across the front range have been used by many others, including Spanish explorers in the fifteenth century. The Southern Ute way of life was significantly impacted by European and Spanish quests for land.

Today, Southern Ute tribal land consists of a 1,125-square-mile reservation. The east is predominately timberland on high mountains, while the west is flat arid mesas. A seven-member Tribal Council governs the Southern Ute. The governing body was established by the Indian Reorganization Act by Congress (the Wheeler-Howard Act) in 1934. Their Constitution—approved on November 4, 1936, with the latest amendment made August 27, 1991—authorizes the Southern Ute Indian Tribal Council as the Tribe's governing body.

The Tribe is committed to a comprehensive range of business endeavors and investments. These activities generate millions of dollars for La Plata and Archuleta Counties, and the Tribe is La Plata's largest employer.[11] Predominate influence is provided through support of non-profit organizations in the region, as well as the independent non-profit Southern Ute Community Action Programs, Inc. (SUCAP) corporation and KSUT Public Radio broadcast.

2.14 Environmental Overview

FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, and Order 5050.4B, *National Environmental Policy Act: Implementation Instruction for Airport Actions*, address specific environmental categories that are to be evaluated in environmental documents in accordance with the National Environmental Policy Act (NEPA). This section inventories the applicable environmental categories and their existence at DRO. The following environmental categories are not discussed as they are not relevant to DRO and/or they relate to impacts from a specific project.

- Coastal Resources
- Construction Impacts
- Secondary Impacts
- Socioeconomic Impacts
- Environmental Justice
- Children's Health and Safety Risks

2.14.1 Air Quality

Air quality analysis for federally-funded projects must be prepared in accordance with applicable air quality statutes and regulations that include the Clean Air Act of 1970[12], the 1977 Clean Air Act Amendments[13], the 1990 Clean Air Act Amendments[14], and the National Ambient Air Quality Standards[15] (NAAQS). In particular, the air pollutants of concern in the assessment of impacts from airport-related sources include six

[11] https://www.southernute-nsn.gov/business/ accessed September, 2014.
[12] U.S. Code. The Clean Air Act of 1970. U.S. Congress, Public Law 91-604, 42 U.S.C. §7401
[13] U.S. Code. The 1977 Clean Air Act Amendments, U.S. Congress, Public Law 95-95, 42 U.S.C. §7401
[14] U.S. Code. The 1990 Clean Air Act Amendments, U.S. Congress, Public Law 101-549, 42 U.S.C. §7401
[15] 40 CFR Part 50, Section 121, National Ambient Air Quality Standard

"criteria pollutants:" carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM-10 and PM-2.5), and sulfur dioxide (SO_2).

DRO is within the exterior boundaries of the Southern Ute Indian Reservation (Reservation). The Tribe has an Air Quality Program dedicated to monitoring and ensuring that tribal air remains clear and safe. The Tribe maintains air quality monitoring stations as a part of a monitoring program designed to be responsive to the needs of the Reservation while simultaneously adhering to U.S. Environmental Protection Agency (EPA) guidelines[16].

La Plata County is designated by the EPA as being in attainment status for all parts of the county in all criteria[17].

2.14.2 Department of Transportation Act: Section 4(f)

The Department of Transportation (DOT) Act, Section 4(f)[18] provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land from an historic site of national, state, or local significance unless there is no feasible and prudent alternative and the program or project includes all possible planning to minimize harm resulting from the use.

The FAA adopted the regulations the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued in March 2008 (23 CFR Part 774)[19] to address project-related effects on Section 4(f) resources.

For Section 4(f) purposes, a proposed action would eliminate a resource's use in one of two ways.

- **Physical use**. Here, the action physically occupies and directly uses the Section 4(f) resource. Here an action's occupancy or direct control (via purchase) causes a change in the use of the Section 4(f) resources. For example, building a runway safety area across a fairway of a publicly-owned golf course is a physical taking because the transportation facility physically used the course by eliminating the fairway.
- **Constructive use**. Here, the action indirectly uses a Section 4(f) resource by substantially impairing the resource's intended use, features, or attributes. For example, a constructive use of an overnight camping area would occur when project-related aircraft noise eliminates the camping area's solitude. Although not physically occupying the area, the project indirectly uses the area by substantially impairing the features and attributes (i.e., solitude) that are necessary for the area to be used as an overnight camping area.[20]

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[16] Southern Ute Indian Tribe, http://www.southernute-nsn.gov/environmental-programs/air-quality/, accessed August 2014.
[17] U.S. Environmental Protection Agency, Green Book – Nonattainment Status for Each County by Year, www.epa.gov/airquality/greenbook/astate.html, accessed July 2014
[18] U.S. Department of Transportation Act, Section 4(f), recodified and renumbered as § 303(c) of 49 U.S.C.
[19] Vol. 73 Federal Register, page 13395, Mar. 2008.
[20] A de minimis use cannot occur if a project constructively uses a Section 4(f) property. This is because the substantial impairment associated with a constructive use is more severe than the minor effects to which de minimis provisions apply.

The City of Durango has 33 park and recreation areas; however, none are located adjacent to or near the Airport.[21]

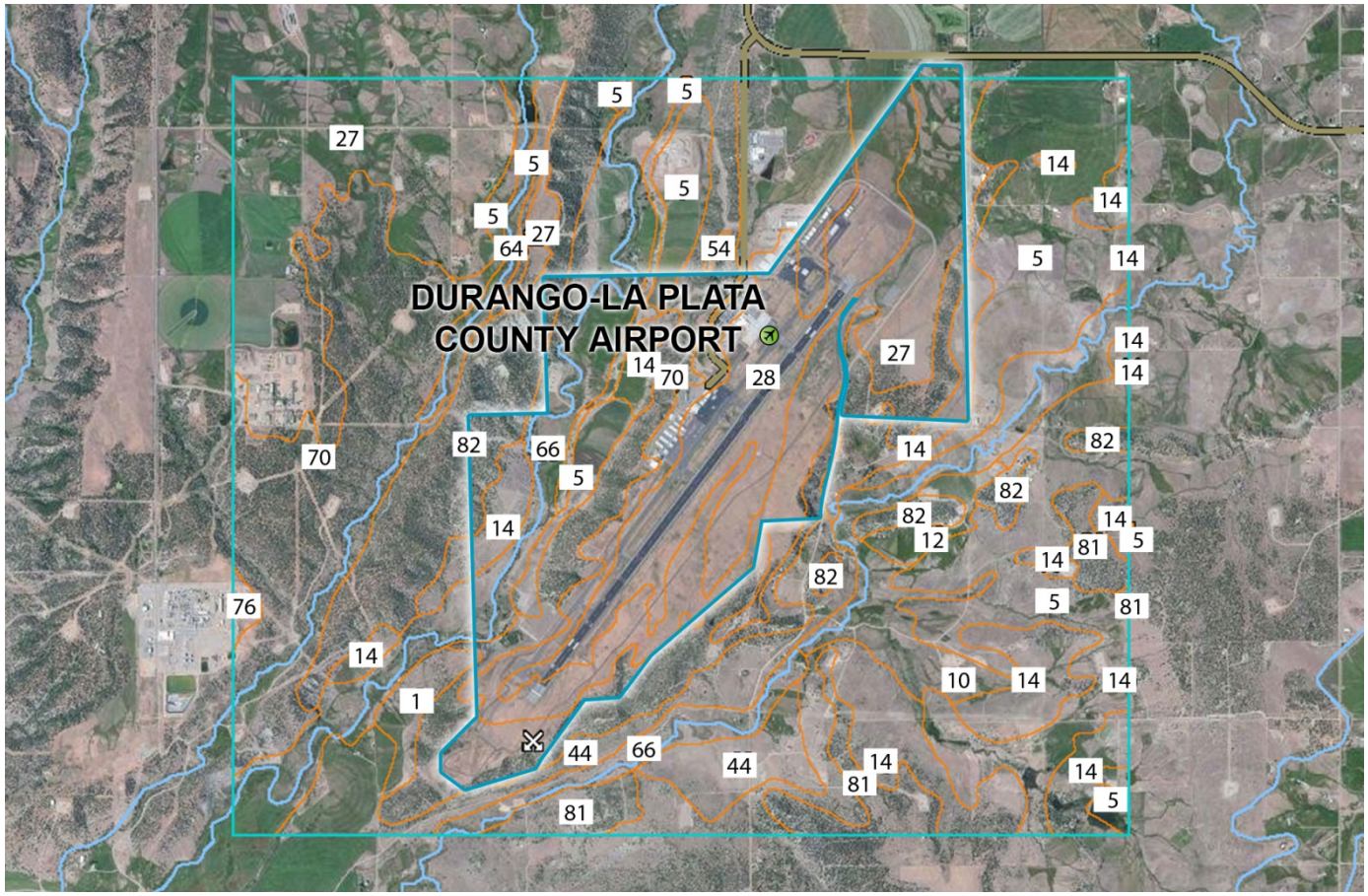
2.14.3 Farmlands

The Farmland Protection Policy Act (FPPA) regulates federal actions that may impact or convert farmland to a non-agricultural use. FPPA defines farmland as "prime or unique land as determined by the participating state or unit of local government and considered to be of statewide or local importance."

The Natural Resources Conservation Service (NRCS) Web Soil Survey was used to review soils on and around DRO. **Figure 2-27** depicts the map unit symbols of the soil types, and **Table 2-20** details the soil types on Airport property; only three are classified as prime farmland (1, 26, and 66). However, the FPPA excludes land dedicated to urban use (including aviation) prior to 1982. Map unit symbols 1 and 26 were dedicated prior to 1982 and are therefore excluded. The area that includes map unit symbol 66, although within the Airport boundary, is dedicated for agricultural use.

[21] City of Durango Colorado, www.durangogov.org, accessed July 2014

FIGURE 2-27 – NRCS SOILS



Note: Not to scale
Source: Natural Resource Conservation Service, Web Soil Survey, www.websoilsurvey.nrcs.usda.gov, accessed July 2014

TABLE 2-20 – ON AIRPORT SOIL CLASSIFICATIONS

Map Unit Symbol	Map Unit Name	Farmland Classification
1	Agua Fria Loam	Prime (if irrigated)
5	Arboles clay, 3-12 percent slopes	Not prime
14	Bodot clay, 3-10 percent slopes	Not prime
26	Falfa clay loam, 1-3 percent slopes	Prime (if irrigated)
27	Falfa clay loam, 3-8 percent slopes	Not prime
66	Tefton loam	Prime farmland (if irrigated and either protected from flooding or not frequently flooded during growing season)
70	Ustic Torriorthents-Ustollic Haplargids complex, 12 to 60 percent slopes	Not prime
82	Zyme-Rock outcrop complex, 12-65 percent slopes	Not prime

Source: Natural Resource Conservation Service, Web Soil Survey, www.websoilsurvey.nrcs.usda.gov, accessed July 2014

2.14.4 Fish, Wildlife, and Plants

Requirements have been set forth by The Endangered Species Act[22], The Sikes Act[23], The Fish and Wildlife Coordination Act[24], The Fish and Wildlife Conservation Act[25], and the Migratory Bird Treaty Act[26] for the protection of fish, wildlife, and plants of local and national significance. A Biological Resource Review was conducted for Airport property by Ecosphere Environmental Services (see **Appendix C**). The review includes both a desktop and field review.

Although 12 federal- and 31 state-listed plant, animal, and insect species are known to occur in La Plata County as described in the report, only three have the potential to occur within the survey boundary (Airport property) based upon the results of the desktop and field reviews, as listed in **Table 2-21**. The remaining listed species were eliminated from further review due to lack of habitat in the survey area or because their known range was outside the survey area.

[22] Endangered Species Act of 1973, U.S. Congress, Public Law 93-205, 16 U.S.C §1531-1544
[23] Sikes Act, Amendments of 1974, U.S. Congress, Public Law 93-452
[24] Fish and Wildlife Coordination Act of 1958, U.S. Congress, Public Law 85-624, 16 U.S.C §661-666c
[25] Fish and Wildlife Conservation Act of 1980, U.S. Congress, Public Law 96-366, 16 U.S.C §2901-2912
[26] Migratory Bird Treaty Act of 1981, 16 U.S.C §703-712

TABLE 2-21 – FEDERAL AND STATE LISTED ENDANGERED AND THREATENED SPECIES

Species	Scientific Name	Federal Status	State Status	Habitat Description
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered	Endangered	Breeds in dense, shrubby riparian habitats, usually in close proximity to surface water or saturated soil.
New Mexico meadow jumping mouse	*Zapus hudsonius luteus*	Endangered	N/A	Herbaceous emergent wetlands, especially dominated by sedges and broad-leaved forbs. Also may utilize riparian communities containing scrub-shrub wetlands along perennial streams.
Burrowing Owl	*Athene cunicularia*	N/A	Threatened	Dry, open, short-grass plains, usually associated with prairie dog towns.

Source: Ecosphere Environmental Services, Biological Resource Review, October 2014

The southwestern willow flycatcher was listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) on March 29, 1995. The willow flycatcher is also listed by the State of Colorado. An area of approximately half an acre on the eastern side of the Airport boundary meets the size and density of habitat needed for willow flycatchers. However, because the area is small, narrow, and disconnected from other willow habitat, the habitat may be used during migration and less likely for breeding.[27]

The New Mexico meadow jumping mouse was listed by the USFWS June 10, 2014. Three areas within the Airport boundary were found to be suitable habitat for the mouse:

- Valley west of the airfield in along the Florida River
- East side of Airport along wetlands and a tributary that flows into Salt Creek
- Large wetland area, north of the Runway 21 end

Burrowing owls are listed as threatened by Colorado but are not federally listed. Burrowing owls occur infrequently in La Plata County yet they have been confirmed nesting. No burrowing owls have been detected in the survey area during past wildlife surveys.[28] In the survey area, prairie dog colonies are active on and around the runway and terminal, the irrigated fields north of County Road 309A, and the valley adjacent to the Florida River.

Migratory birds were also reviewed due to their protection by the Migratory Bird Treaty Act. The Airport is within Bird Conservation Region (BCR) 16, Southern Rocky Mountains/Colorado Plateau. Of the 24 Birds of Conservation Concern (BCC), five are known to occur within the survey area and six have the potential to occur, detailed in **Table 2-22**. Two of the five known to occur, the bald and golden eagles, are also protected under the Bald and Golden Eagle Protection Act.

A golden eagle nest is located in the southwestern section of the survey area in a tree on the slope between the mesa top and the Florida River. This golden eagle territory was first documented in 2006 and has been noted as active in several subsequent years. Airport staff observed golden eagles in the vicinity of the Airport

[27] Ecosphere Environmental Services, Biological Resource Review, October 2014.
[28] Ibid.

in 2014; a biologist from Ecosphere monitored the nest in early 2014 and determined it was inactive. Ecosphere observed the nest in poor condition during the field review in August 2014.

Colorado Parks and Wildlife (CPW) identifies the survey area as bald eagle winter concentration with winter roost sites straddling CR 309A. A winter concentration area is defined by CPW as areas within an existing winter range where eagles concentrate between November 15 and April 1. These areas may be associated with roost sites. Roost sites are defined as individual trees or groups of trees that provide diurnal and/or nocturnal perches for less than 15 wintering bald eagles, and includes a buffer zone extending one-quarter of a mile around these sites.[29]

While conducting surveys of potential wildlife hazards as part of the Wildlife Hazard Assessment (WHA), Ecosphere documented bald eagles roosting in three tree snags in the area in 2011 and 2012.[30] Airport staff have since removed the trees closest to the runway; however, a group of three partially dead cottonwood trees are present in the northeastern portion of the airfield. These trees possess the large, open-branch structure preferred for roosting and are likely to attract eagles. No bald eagle nests are known to occur in the survey area; however, good nesting trees are present along the Florida River in the valley below DRO.[31]

The Airport area also has several other unique wildlife habitats, including a winter range for both elk and mule deer.[32,33] An elk highway crossing, where elk movements traditionally cross roads and present potential animal-vehicle collisions, is also identified near the Airport entrance.[34]

[29] Ibid.
[30] Wildlife Hazard Assessment, Ecosphere Environmental Services, 2013.
[31] Ecosphere Environmental Services, Biological Resource Review, October 2014.
[32] Colorado Parks and Wildlife, 2013
[33] Severe winter range is defined as that part of the range where 90 percent of the individuals are located when the annual snowpack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten.
[34] Colorado Parks and Wildlife, 2013

TABLE 2-22 – USFWS BIRDS OF CONSERVATION CONCERN – KNOWN OR POTENTIAL TO OCCUR WITHIN AIRPORT BOUNDARY (SURVEY AREA)

Species	Scientific Name	Habitat Description	Potential to Occur/Known to Occur
American bittern	*Botaurus lentiginosus*	Cattails, rushes, grasses, or sedges of wet meadows or marshes.	Potential to occur. Northeastern, past irrigated fields contains dense and tall marshy habitat.
Bald Eagle	*Haliaeetus leucocephalus*	Found around lakes, reservoirs, and rivers. Large branched trees used for nesting, roosting, and foraging.	Known to occur. Survey area within CPW/a/defined bald eagle winter concentration area and a known winter roost. Individuals regularly observed in roost trees north of survey area during 2012 surveys conducted for the WHA./b/
Brewer's sparrow	*Spizella breweri*	Sagebrush shrublands, sagebrush obligate species.	Potential to occur. Sagebrush is present east of the runway.
Cassin's finch	*Haemorhous cassinii*	Conifer forests of the high country (8,000 to 11,000 feet), but also will use pinon-juniper woodlands.	Potential to occur. Pinon-juniper woodlands provide habitat.
Ferruginous hawk	*Buteo regalis*	Flat or rolling terrain in grassland, shrub-steppe, and desert habitats.	Potential to occur. Grassland, shrub-steppe, or desert habitats occur in survey area. Prairie dog towns provide prey base.
Golden eagle	*Aquila chrysaetos*	Open habitat with grasslands, shrublands, and farmland for foraging. Nests on cliffs or in trees.	Known to occur. Nest occurs in survey area and prairie dog towns provide foraging.
Grace's warbler	*Setophaga graciae*	Ponderosa pine forest with a scrub oak understory.	Potential to occur. Some ponderosa pine present on the southwestern slopes, but not extensive.
Gray vireo	*Vireo vicinior*	Pinon-juniper woodlands with an open, grassy understory.	Potential to occur. Slopes to the mesa contain pinion-juniper woodlands.
Juniper titmouse	*Baeolophus ridgwayi*	Pinon-juniper woodlands.	Known to occur. Southwestern survey area.
Lewis's woodpecker	*Melanerpes lewis*	Open pine forests, areas with abundant snags and stumps, riparian areas with cottonwoods, and pinon-juniper woodlands.	Known to occur. Northeastern survey area.
Pinon jay	*Gymnorhinus cyanocephalus*	Pinon-juniper woodlands.	Known to occur. Southwestern survey area.

Notes: /a/ CPW = Colorado Parks and Wildlife
/b/ WHA = Wildlife Hazard Assessment
Source: Ecosphere Environmental Services, Biological Resource Review, October 2014

Three ponds were observed in the fields northeast of the runway and across CR 309A. These ponds provide habitat for migratory waterfowl and amphibians, and a potential food source for bald and golden eagles. The irrigated fields northeast of the runway provide suitable nesting habitat for marsh-birds such as the American bittern.[35]

A suspected stick raptor nest was observed in a cottonwood tree in the southeast survey area on August 29, 2014. Raptors commonly re-use nests year to year.

Figure 2-28 depicts the CPW wildlife habitats in and around the Airport and **Figure 2-29** depicts unique wildlife habitats observed during the field review.

Due to the numerous species known to occur or with the potential to occur, as well as the unique habitats found within and adjacent to the Airport boundary, the following recommendations were made by Ecosphere:

"Potential breeding habitat for southwestern willow flycatcher occurs along CR 309A; therefore, Ecosphere suggests the following:

- Conduct USFWS protocol surveys by a permitted biologist to determine the presence or absence of any southwestern willow flycatcher.
- Initiate discussions with the USFWS to determine the extent of survey requirements: surveys are only valid for one year.

Potential habitat for New Mexico meadow jumping mouse occurs at three locations within the survey area and was documented on the Florida River in 2007 (Frey 2008). Therefore, to determine presence or absence of the species in those areas Ecosphere suggests the following:

- Conduct USFWS protocol survey for Mexico meadow jumping mouse by a permitted biologist.
- Contact USFWS for "Interim Survey Guidelines for the New Mexico Meadow Jumping Mouse," which are currently in preparation.

In 2009, a golden eagle nest in the survey area blew down presumably from natural causes. A pair of golden eagle was observed in 2010; in 2011 the nest was rebuilt and a nesting attempt was made, but failed. In 2012 the nest was again successful. Therefore, even though the nest was inactive in 2014 and the nest is in somewhat dilapidated condition, the pair have demonstrated they could repair the nest and successfully breed again in the future. Golden eagles typically maintain more than one nest in a territory so an alternate golden eagle nest may also occur in vicinity of the airport.

Consequently, Ecosphere suggests the following:

- Monitor the known golden eagle nest beginning this breeding season (January/February).
- Pedestrian surveys to locate alternate golden eagle nests within the known territory.

[35] Ecosphere Environmental Services, Biological Resource Review, October 2014.

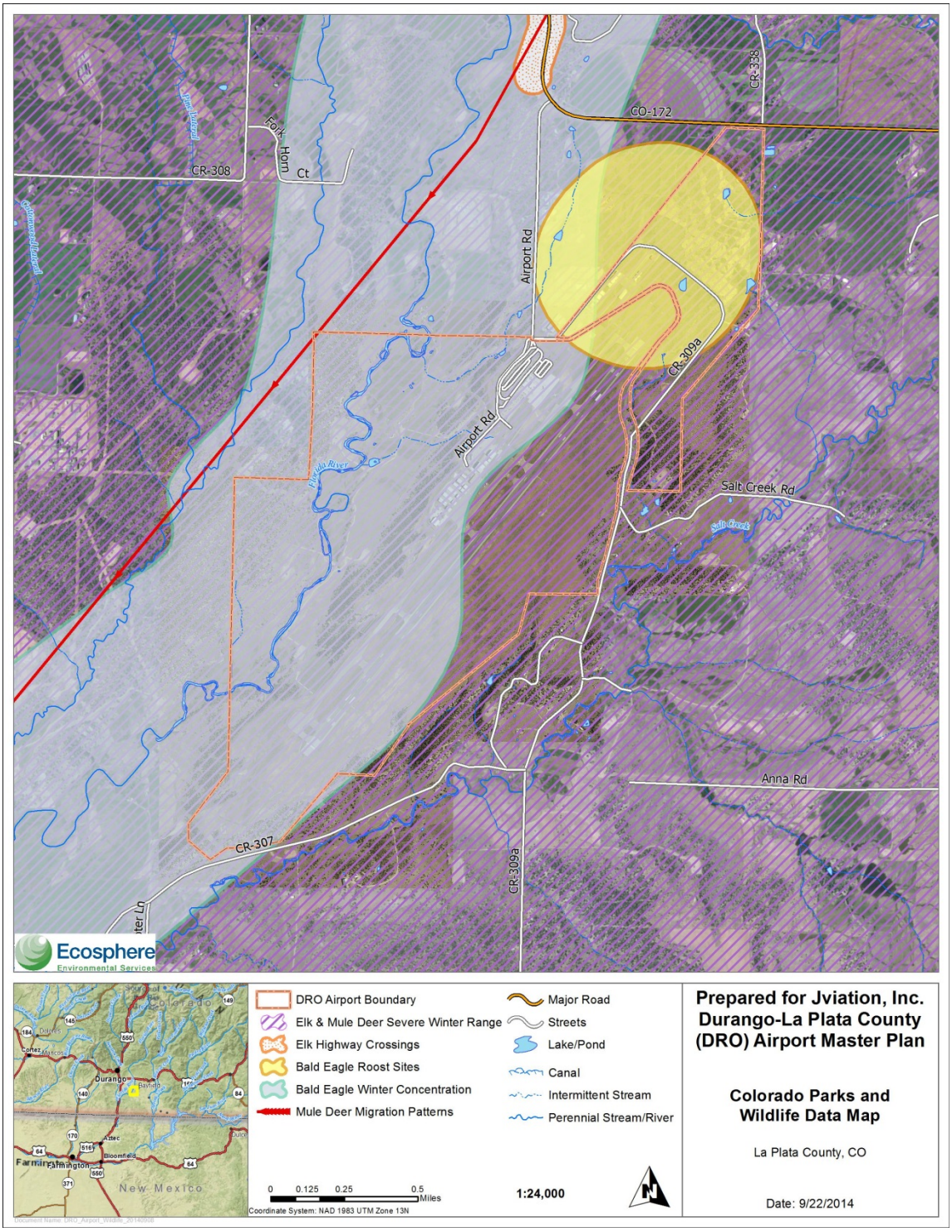
To avoid the potential for bald eagles to roost near the project during construction and avoid seasonal restrictions on construction activity, Ecosphere suggests the following:

- Remove the two cottonwood trees that are potential bald eagle winter roosts. It is appropriate to do this only outside the bald eagle roosting period from March 16 to November 14.

For other raptors, including burrowing owls and breeding birds all protected by the Migratory Bird Treaty Act, Ecosphere suggests the following to avoid non-compliance:

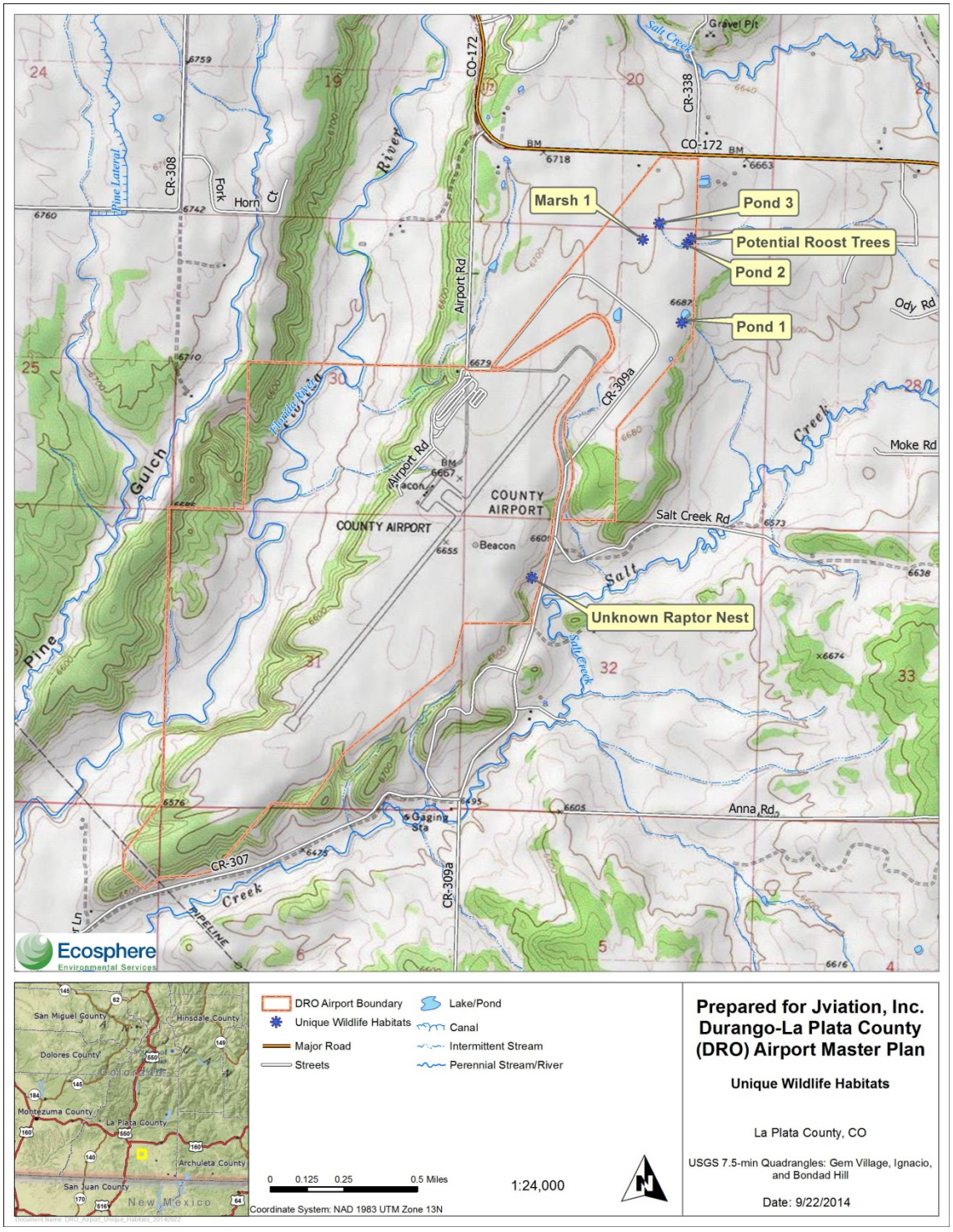
- Conduct a nesting raptor survey the year of construction to determine active nests (including burrowing owls). Surveys should begin in April to capture the most raptors.
- Avoid ground disturbance or vegetation clearing during the breeding bird season, from approximately May 1 through August 1.
- If ground disturbance/vegetation clearing cannot be avoided in the May 1 to August 1 timeframe, use a qualified biologist to conduct a nest clearance survey of the project area no more than 5 days prior to construction. If active nests are found, options are available to avoid impacts to migratory birds while allowing activities to continue; however, agency coordination may be required."

FIGURE 2-28 – COLORADO PARKS AND WILDLIFE DATA MAP



Note: Not to scale
Source: Ecosphere Environmental Services, Biological Resource Review, October 2014

FIGURE 2-29 – DRO UNIQUE WILDLIFE HABITATS



Note: Not to scale
Source: Ecosphere Environmental Services, Biological Resource Review, October 2014

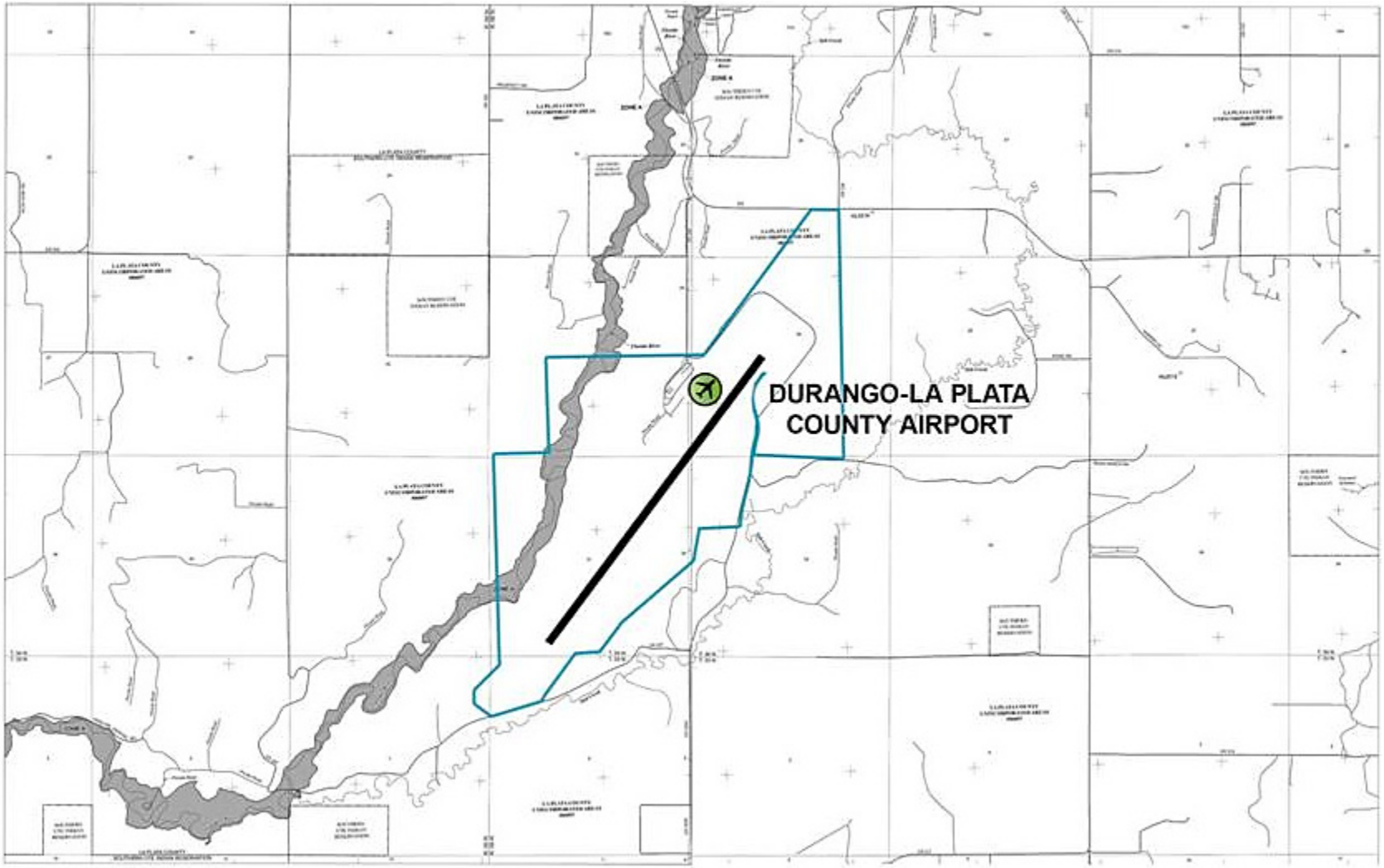
2.14.5 Floodplains

Executive Order 11988, *Floodplain Management*[36] directs federal agencies to "avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative."

The Airport falls on two Flood Insurance Rate Map (FIRM) Panels, 08067C0720F and 08067C0740F, both with effective dates of August 19, 2010. The majority of Airport property is not within a flood hazard area; however, the western most portion of the property is located in Zone A (no base flood elevations determined), a Special Flood Hazard Area (SFHAS) subject to inundation by the one percent annual flood, as shown on **Figure 2-30**.

[36] Executive Order 11988, *Floodplain Management*, 1977

FIGURE 2-30 – FLOOD INSURANCE RATE MAP



Note: Not to scale
Source: FEMA, Flood Insurance Rate Map, Panels 08067C0720F and 08067C0740F, August 19, 2010

2.14.6 Hazardous Materials, Pollution Prevention, and Solid Waste

The Resource Conservation and Recovery Act (RCRA)[37], Comprehensive Environmental Response, Compensations, and Liability Act (CERCLA)[38], Superfund Amendments and Reauthorization Act (Superfund)[39], and the Community Environmental Response Facilitation Act (CERFA)[40] are the four predominant laws regulating actions related to the use, storage, transportation, or disposal of hazardous materials, chemicals, substances, and wastes. Federal actions that pertain to the funding or approval of airport projects require the analysis of the potential for environmental impacts per the regulating laws. Furthermore, property listed or considered for the National Priority List (NPL) should be evaluated in relation to the Airport's location. According to the NPL, no sites are located near the Airport.

A Phase I Environmental Site Assessment (ESA) was completed by Ecosphere Environmental Services in October 2014 (see **Appendix D**). The ESA concluded that the Airport has a low environmental risk from potential contamination associated with hazardous substances or petroleum hydrocarbons. The basis for the assigned low-risk level is summarized below:

- Environmental records in the general vicinity did not contain records of active industrial facilities, active remediation, or spills with the ASTM[41] radius of the Airport.
- Current land uses in the general vicinity of the Airport represent a low risk for potential contamination to the property.
- All fuel storage tanks at the Airport are within appropriate secondary containment, and are regularly monitored for spills and leaks. The Airport has emergency response staff and equipment to provide immediate and appropriate response to any spills or releases that may occur.

2.14.7 Historical, Architectural, Archaeological, and Cultural Resources

The National Historic Preservation Act[42] and the Archaeological and Historical Preservation Act[43] regulate the preservation of historical, architectural, archaeological and cultural resources. Federal actions and undertakings are required to evaluate the impact on these resources.

For purposes of this Master Plan Update, historic, archaeological and cultural resources are districts, sites, buildings, structures, objects, landscapes, and Native American Traditional Cultural Properties (TCPs) that are on or eligible for listing on the National Register of Historic Places (NRHP) will be discussed. The NRHP currently lists five districts and eight properties for Durango as noted in **Table 2-23** and **Table 2-24**, respectively.

[37] U.S. Code, 1976, Resource Conservation and Recovery Act, 42 USC, §6901
[38] U.S. Code 1980, Comprehensive Environmental Response, Compensation and Liability Act, 42 USC, §9601-9628
[39] U.S. Code 1986, Superfund Amendments and Reauthorization Act, 42 USC
[40] U.S. Code 1992, Community Environmental Response Facilitation Act, Public Law 102-426
[41] American Society for Testing Materials
[42] U.S. Code, 1966, National Historic Preservation Act of 1966, Public Law 89-665
[43] U.S. Code, 1974, Archaeological and Historical Preservation Act of 1974, 16 USC 469

TABLE 2-23 – NATIONAL REGISTER OF HISTORIC PLACES – DISTRICTS IN LA PLATA COUNTY

District Name	Location	Size/Description	Year Added to Registry	Distance from Airport
Durango-Silverton Narrow-Gauge Railroad	Right-of-way between Durango and Silverton	0 acres, 5 buildings, 1 structure	1966	n/a
East Third Avenue Historic Residential District	East Third Avenue between 5th and 15th streets	380 acres, 98 buildings	1984	~15 miles northwest
Main Avenue Historic District	Main Avenue, Durango	340 acres, 86 buildings	1980	~15 miles northwest
Ute Mountain Ute Mancos Canyon Historic District	Address Restricted, Durango	2,080,000 acres	1972	n/a
Spring Creek Archaeological District (Zabel Canyon Indian Ruins)	Address Restricted, Bayfield	33,600 acres	1983	~16 miles northeast

Source: National Register of Historic Places, www.nationalregisterofhistoricplaces.com, accessed July 2014

TABLE 2-24 – NATIONAL REGISTER OF HISTORIC PLACES – PROPERTIES IN LA PLATA COUNTY

Property Name	Location	Year Added to Registry	Distance from Airport
Colorado Ute Power Plan	14th Street & Animas River, Durango	1983	~15 miles northwest
Denver and Rio Grande Western Railroad Locomotive No. 315	479 Main Avenue, Durango	2008	~15 miles northwest
Durango High School	201 E. 12th Street, Durango	2001	~15 miles northwest
Durango Rock Shelters Archaeology Site	Address Restricted	1985	n/a
Newman Block	801-813 Main Avenue, Durango	1979	~15 miles northwest
Ochsner Hospital	805 5th Avenue, Durango	1995	~14 miles northwest
Rochester Hotel	726 E. Second Avenue, Durango	1996	~15 miles northwest
Smiley Junior High School	1309 E 3rd Avenue, Durango	2002	~15 miles northwest

Source: National Register of Historic Places, www.nationalregisterofhistoricplaces.com, accessed July 2014

A Phase I Cultural Resource Survey by Stratified Environmental and Archaeological Services, LLC was completed. The survey documented 14 newly recorded archaeological sites and 28 isolated finds. Historic building documentation was not a part of the study as DRO was constructed in 1973 and no other standing historic structures were within the survey area (DRO boundaries). The survey concluded that none of the isolated finds are eligible for inclusion on the NRHP due to their small size, lack of cultural context, and lack of archaeological depth, or further information potential. The study did find seven potentially eligible sites. Additional survey work will be required to determine eligibility. The report is not included as part of this document as public release of potentially eligible archaeological sites is not allowed per federal regulations.

2.14.8 Light Emissions and Visual Impacts

Federal regulations do not specifically regulate airport light emissions; however, the FAA does consider airport light emissions on communities and properties in the vicinity of airports. A significant portion of light emissions at airports are a result of safety and security equipment and facilities. The Airport has six primary sources of light:

- **Runway/Taxiway Lighting**: lights outlining the runway and taxiways; classified by the intensity or brightness the lights are capable of producing.
- **REILs**: two synchronized flashing lights located one on each corner of the runway landing threshold.
- **PAPIs/VASIs**: system of lights on the side of an airport runway threshold that provides visual descent guidance information during approach.
- **MALSR**: a combination of threshold lamps, steady burning light bars and flashers (that provide visual information to pilots on runway alignment), height perception, role guidance, and horizontal references.
- **Airport Beacon**: a rotating light used to locate the airport.
- **Apron/Parking Lights**: pole lighting on aprons and parking areas.

All sources of light aid in the safety of operations at the airport and produce an insignificant amount of light on the surrounding area.

2.14.9 Noise

Aircraft noise and noise surrounding airports are two of the most notorious issues related to the environment at airports. The FAA examines actions and development that may change runway configurations, airport/aircraft operation and/or movements, aircraft types, and flight patterns, all of which could ultimately alter the noise impacts on the communities in the vicinity of the airport.

The extent of noise as a result of aircraft operations at DRO was determined using the FAA-approved computer simulation model *Integrated Noise Model (INM-Version 7.0d)*. The INM produces Day-Night Average Sound Level (DNL) contours (i.e., lines of equal noise exposure). **Appendix E** provides an overview of the DNL metric and the INM input data used to prepare the DNL contours for DRO. **Table 2-25** presents DRO's 2013 aircraft operational activity by category while **Table 2-26** and **Table 2-27** provide the 2013 local aircraft and aircraft fleet of itinerant operations, respectively, by time of day.

TABLE 2-25 – 2013 ANNUAL AIRCRAFT OPERATIONS

Year	Commercial	GA Itinerant	GA Local	Military	Total
2013	7,128	6,902	13,398	500	27,928

Source: Jviation

TABLE 2-26 – 2013 AVERAGE DAY LOCAL OPERATIONS

Aircraft Category	Aircraft Types	INM Aircraft	Daytime Operations	Nighttime Operations	Total Operations
ME Piston	Beech Baron 55/58 Cessna 401/402/414/421	BEC58P	9.94	1.10	11.04
SE Piston	Piper P-46 Malibu/Beech 33/Mooney M20K/M20L/M20J/Cirrus SR-22	GASEPV	16.55	1.84	18.39
	Cessna 180/185/206/210	CNA206	3.98	0.44	4.42
	Cessna 182	CNA182	1.70	0.19	1.88
	Cessna 172/177	CNA172	0.58	0.06	0.65
	AA5A Grumman Cheetah	GASEPF	0.29	0.03	0.32
	Total Local Operations[a]		33.04	3.67	36.71

Note: [a]Numbers may not sum due to rounding
Source: FAA Traffic Flow Management System Count, KB Environmental Sciences, Inc., INM 7.0d

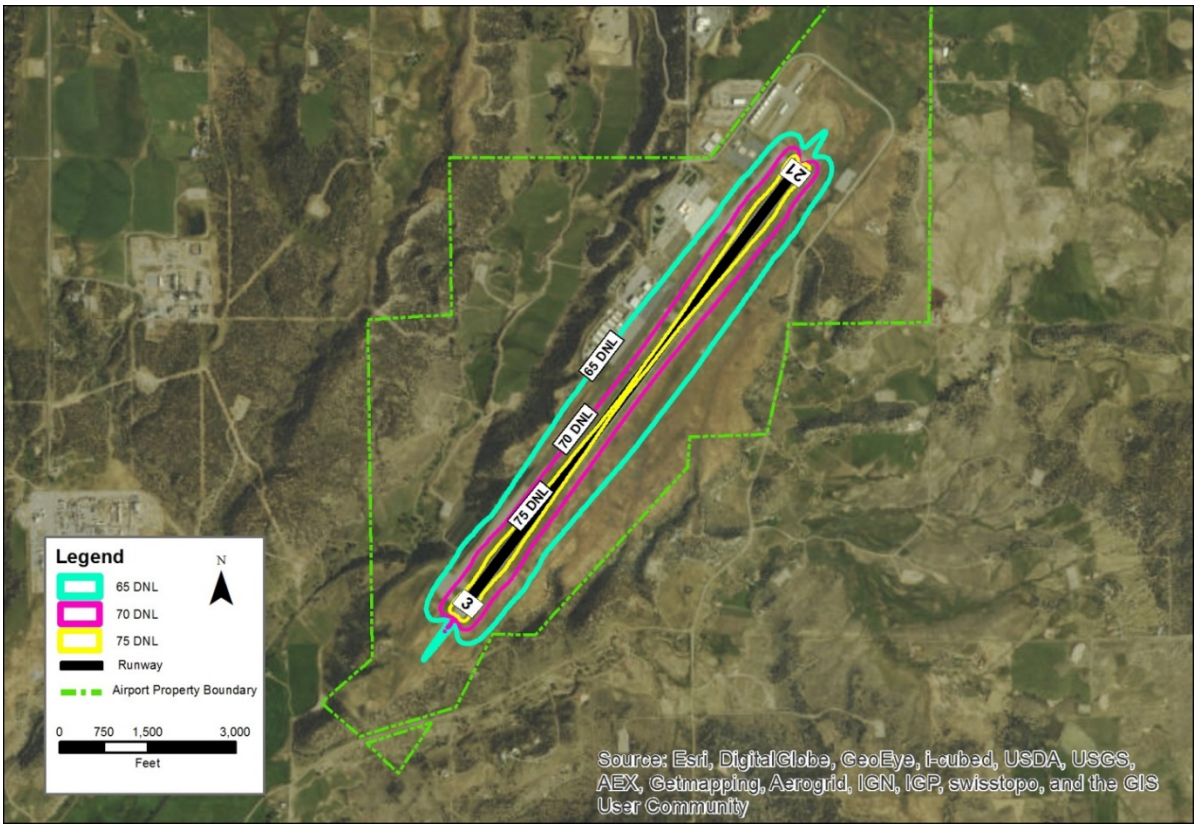
TABLE 2-27 – 2013 AVERAGE DAY ITINERANT OPERATIONS

Aircraft Category	Aircraft Types	INM Aircraft	Daytime Operations	Nighttime Operations	Total Operations
Commercial	Bombardier Q-400	DHC830	6.92	1.73	8.65
	Bombardier CRJ	CL601	4.48	1.12	5.61
	Embraer Regional Jet 135/145	EMB145	2.26	0.57	2.83
	Airbus A-319	A319-131	1.09	0.27	1.37
	Embraer Regional Jet 145 EX	EMB14L	0.73	0.18	0.92
	Embraer 190	EMB190	0.12	0.03	0.16
Jet	Bombardier Learjet 35/45/55	LEAR35	1.05	0.26	1.32
	Cessna Citation II/Bravo	CNA55B	0.34	0.08	0.42
	Mitsubishi Diamond I	MU3001	0.29	0.07	0.36
	Cessna Citation CJ2/3	CIT3	0.28	0.07	0.35
	Bombardier Challenger 600/601	CL600	0.25	0.06	0.31
	Cessna Citation Ultra/Encore	CNA560E	0.51	0.13	0.64
	Eclipse 500	ECLIPSE500	0.24	0.06	0.30
	Cessna Citation Sovereign	CNA680	0.16	0.04	0.20
	Cessna 500/Citation I	CNA500	0.14	0.03	0.17
	Cessna Citation X	CNA750	0.12	0.03	0.15
	Dassault Falcon 900	F10062	0.11	0.03	0.13
	Cessna Citation Jet/CJ1	CNA525C	0.10	0.03	0.13
	IAI Astra 1125	IA1125	0.07	0.02	0.08
	Bombardier Global Express	GV	0.06	0.02	0.08
	Gulfstream IV	GIV	0.06	0.01	0.07
	Cessna Citation Mustang	CNA510	0.04	0.01	0.05
	Gulfstream II/III	GIIB	0.01	0.00	0.02
	Learjet 25	LEAR25	0.00	0.00	0.01
Turboprop	Cessna 208 Caravan/Pilatus PC-12	CNA208	2.64	0.66	3.30
	Cessna 441/Super King Air 200/300	CNA441	3.83	0.96	4.79
	Dash-6/Swearingen Merlin IV	DHC6	1.22	0.30	1.52
	Shorts 330	SD330	0.06	0.02	0.08
ME Piston	Beech Baron 55/58; Cessna 401/402/414/421	BEC58P	1.07	0.27	1.34
SE Piston	Piper P-46 Malibu/Beech; 33/Mooney; M20K/M20L/M20J/Cirrus SR-22	GASEPV	1.79	0.45	2.23
	Cessna 180/185/206/210	CNA206	0.43	0.11	0.54
	Cessna 182	CNA182	0.18	0.05	0.23
	Cessna 172/177	CNA172	0.06	0.02	0.08
	AA5A Grumman Cheetah	GASEPF	0.03	0.01	0.04
Military	C-130	C130E	1.10	0.27	0.04
	Total Itinerant Operations		31.85	7.96	39.81

Source: FAA Traffic Flow Management System Count, KB Environmental Sciences, Inc., INM 7.0d

The 2013 65 DNL contour remains primarily within the DRO property boundary. **Figure 2-31** shows that no residences or other noise sensitive land uses are within the 65 DNL.

FIGURE 2-31 – 2013 65-75 DNL CONTOURS



Note: Not to scale
Source: KB Environmental Sciences, Inc.

2.14.10 Water Quality

The Clean Water Act[44] provides the federal government the "authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, location with regard to an aquifer or sensitive ecological area such as a wetland area, and regulate other issues concerning water quality."

Three major watersheds exist around DRO: Upper San Juan, Animas, and Middle San Juan. As discussed in **Section 2.10.3**, the Airport's water supply is obtained onsite via a natural spring and runoff.

Water quality permits are coordinated and issued by both the EPA and Colorado Department of Public Health and Environment, Water Quality Control Division.

[44] U.S. Code, 1977 The Clean Water Act, 33 U.S.C. §1251-1387

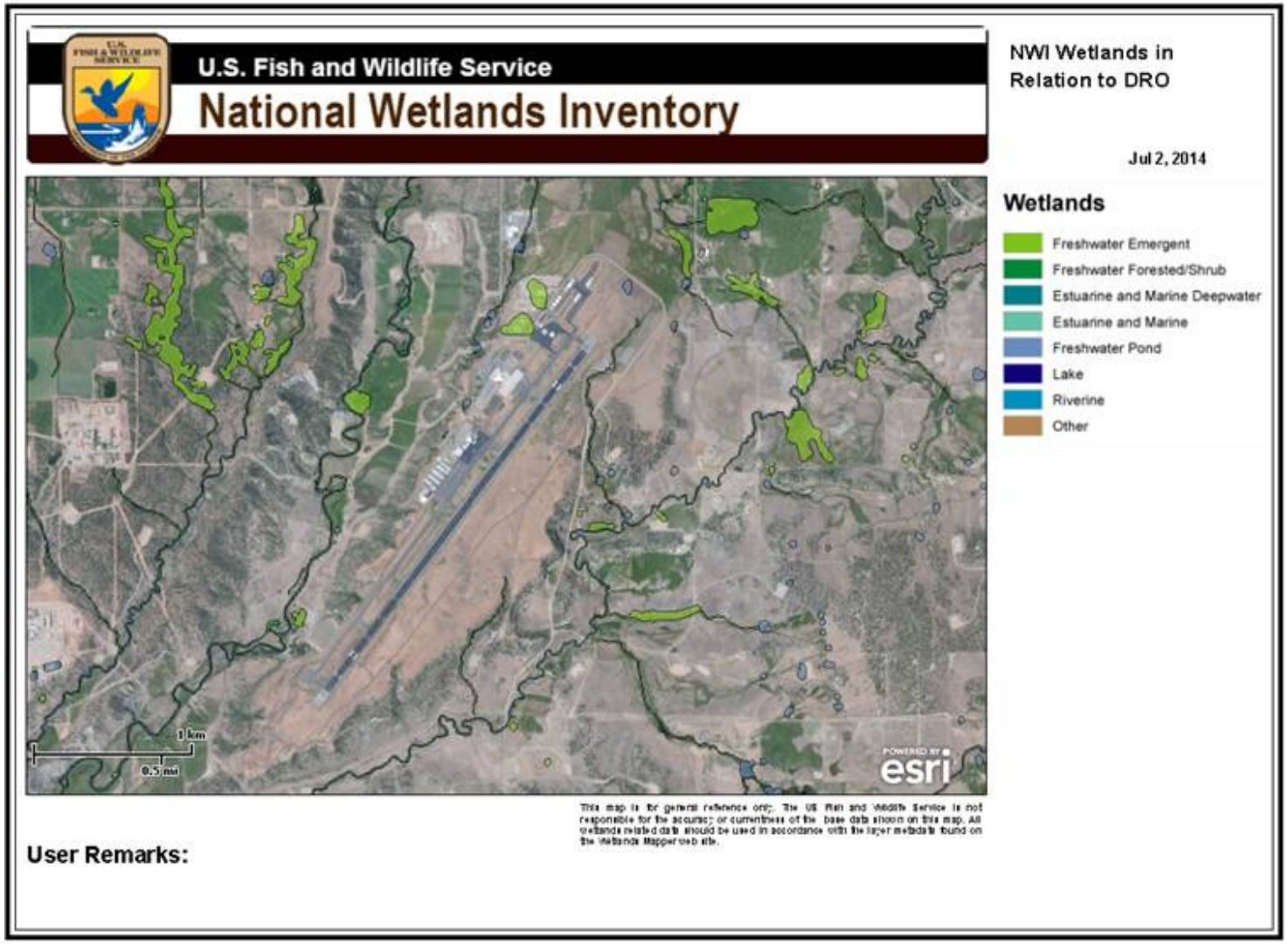
2.14.11 Wetlands

Executive Order 11990, Protection of Wetlands, defines wetlands as "those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction." Federal agencies are required to minimize the destruction, loss, or degradation of wetlands.

According to the National Wetlands Inventory (NWI), wetlands exist both around and on Airport property. **Figure 2-32** illustrates wetlands as identified in the NWI. A wetland delineation, on Airport property, was conducted by Ecosphere Environmental Services. The Wetland and Waters of the U.S. Preliminary Jurisdictional Delineation Report is in **Appendix F**. A total of six wetland verification areas were delineated as depicted on **Figure 2-33**. Other wetlands within the study area, totaling approximately 37 acres, were identified using the NWI classification method[45]. In total, approximately 57 acres of potentially jurisdictional wetlands were delineated and mapped in the study area.

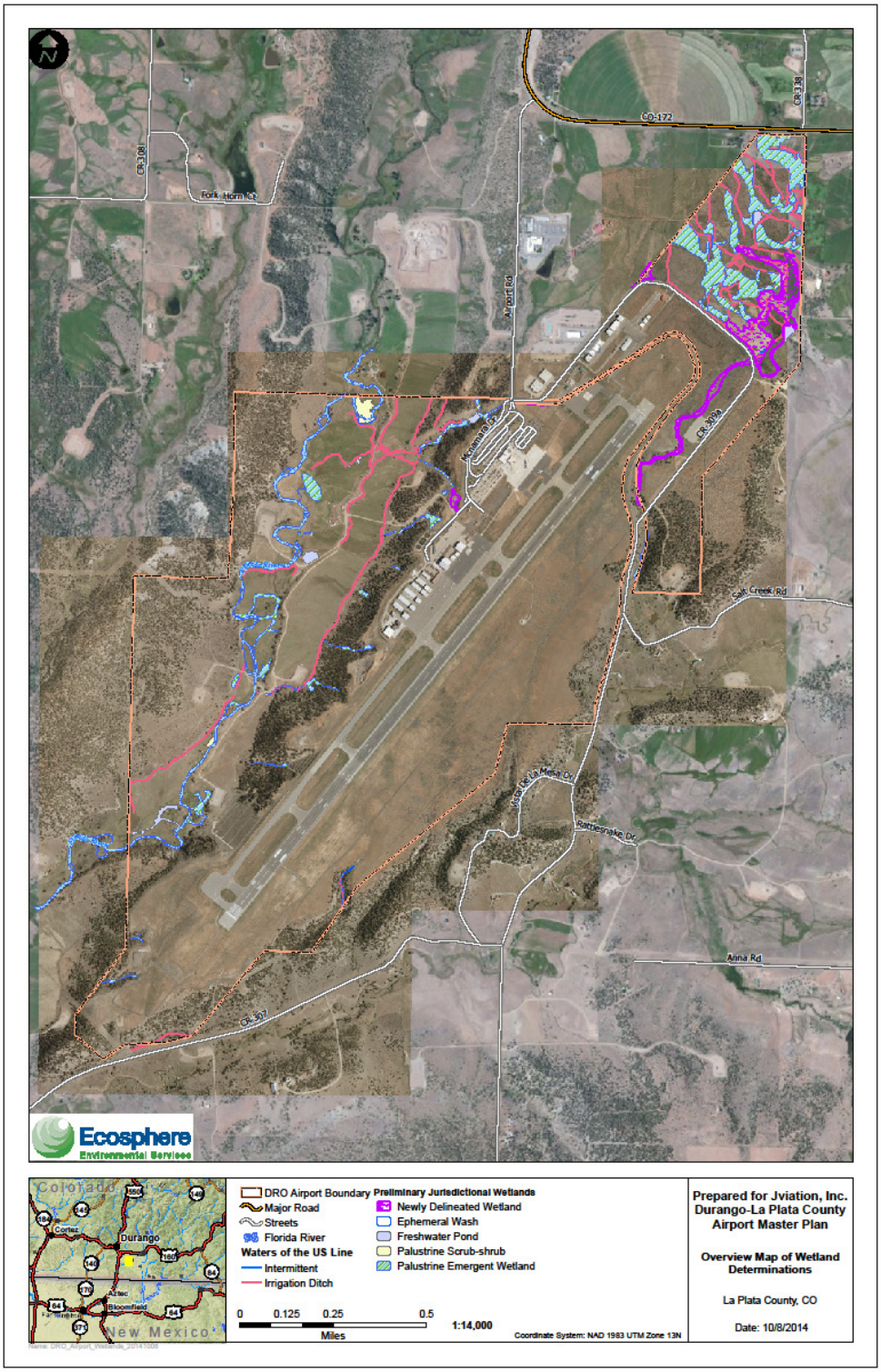
[45] See **Appendix F**, Wetland and Waters of the U.S. Preliminary Jurisdictional Delineation Report, Section 3. Methodology, page 4, October 2014.

FIGURE 2-32 – NATIONAL WETLAND INVENTORY MAP



Note: Not to scale
Source: U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, www.fws.gov/wetlands/Data/Mapper.html

FIGURE 2-33 - WETLANDS



Note: Not to scale
Source: Ecosphere Environmental Sciences, 2014

2.14.12 Wild and Scenic Rivers

The Wild and Scenic Rivers Act of 1968, as amended[46], describes those river segments designated as, or eligible to be included in, the Wild and Scenic Rivers System. Impacts to designated rivers should be avoided or minimized to the extent possible. In addition, the President's 1979 *Environmental Message Directive* on Wild and Scenic Rivers[47] directs federal agencies to avoid or mitigate adverse effects on rivers identified in the Nationwide Rivers Inventory as having potential for designation under the Wild and Scenic Rivers Act.

Rivers are classified as wild, scenic, or recreational. **Table 2-28** describes each classification. However, regardless of classification, each river in the National System is administered with the goal of protecting and enhancing the values that caused it to be designated. A designated river is neither prohibited from development nor does it give the federal government control over private property. Protection of the river is provided through voluntary stewardship by landowners and river users and through regulation and programs of federal, state, local, or tribal governments. In most cases not all land within boundaries is, or will be, publicly owned, and the Act limits how much land the federal government is allowed to acquire from willing sellers.[48]

As of July 2011, the National System protects 12,598 miles of 203 rivers in 38 states and the Commonwealth of Puerto Rico; this is less than one-quarter of one percent of the nation's rivers.[49]

TABLE 2-28 – WILD & SCENIC RIVER CLASSIFICATIONS

Classification	Description
Wild	Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
Scenic	Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
Recreational	Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Source: National Wild and Scenic Rivers System, www.rivers.gov, accessed July 2014

As DRO is located in the Four Corners Region, the locations of wild and scenic rivers in Colorado, Utah, New Mexico, and Arizona were reviewed. **Table 2-29** lists the four nearest wild and scenic rivers to DRO. **Figure 2-34** depicts designated rivers in the four states and those closest to DRO.

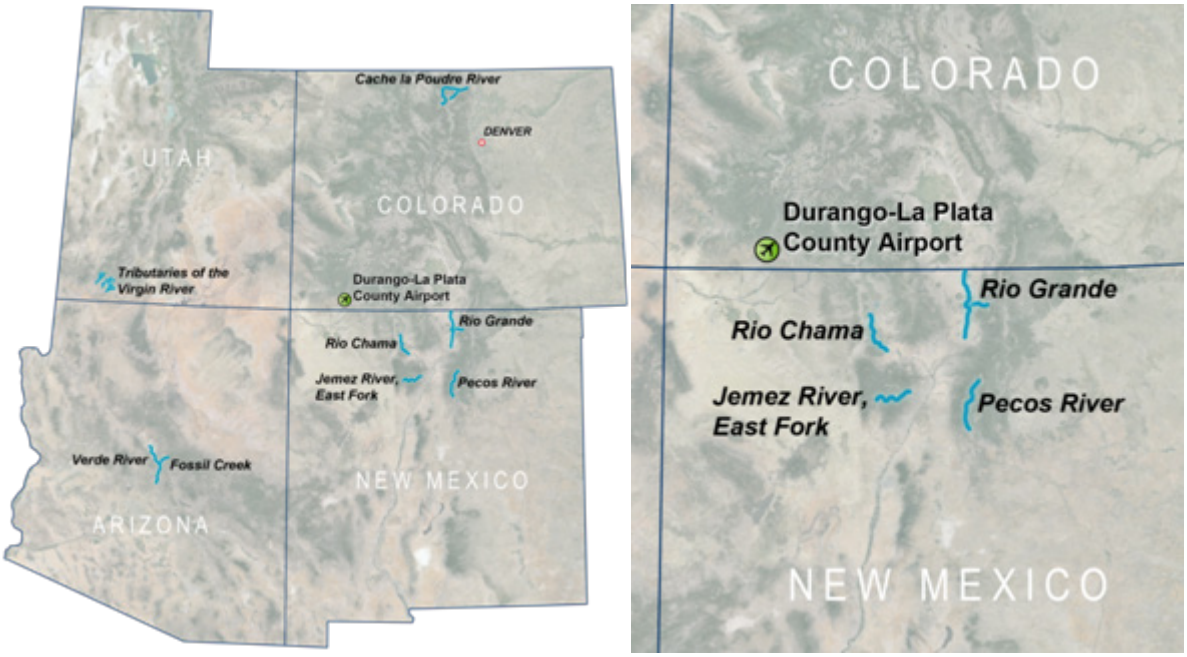
[46] U.S. Code, The Wild and Scenic Rivers Act of 1968, 16 USC 1271-1287, 1977
[47] Office of Environmental Policy, 1979, *Policy Guidelines for Wild and Scenic Rivers*, 1980
[48] National Wild and Scenic Rivers System, www.rivers.gov, accessed July 2014
[49] Ibid.

TABLE 2-29 – WILD & SCENIC RIVERS

River	State	Miles Designated	Nautical Miles from DRO
Rio Chama	NM	24.6 (21.6 wild; 3.0 scenic)	~73
Jemez River, East Fork	NM	11.0 (4.0 wild; 5.0 scenic; 2.0 recreational)	~100
Rio Grande[/a/]	NM	68.2 (54.9 wild; 12.5 scenic; 0.8 recreational	~108
Pecos River	NM	20.5 (13.5 wild; 7.0 recreational)	~122

Note: [/a/]Portion of designated river is located in southern Texas
Source: National Wild and Scenic Rivers System, www.rivers.gov, accessed July 2014

FIGURE 2-34 – WILD & SCENIC RIVER LOCATIONS IN RELATION TO DRO



Note: Not to scale
Source: National Wild and Scenic Rivers System, www.rivers.gov, accessed July 2014

2.14.13 Sustainability Initiatives

Sustainability can be defined as "meeting the needs of the present without sacrificing the ability of future generations to meet their own needs." The aviation industry has developed numerous sustainable initiatives that are utilized throughout the country. These initiatives can be federal, state, or local mandates; however, they are more effective when an airport independently realizes sustainability makes good business sense. A few of the various benefits airports can gain from embracing sustainability are:

- Reduced capital asset life cycle costs
- Reduced operating costs
- Better customer service and satisfaction
- Enhanced relationships with the community

For the purpose of Master Plans, sustainability is the ideas, actions, and processes implemented to reduce the overall impact an airport has on the environment. An airport can reduce its impact on the environment by using water, energy, land, and materials efficiently; protecting the health and improving the productivity of the employees and passengers; and by reducing waste and pollution.

Local Sustainability Initiatives

Both La Plata County and the City of Durango have sustainability programs. The County's missions is to "promote and incorporate social, environmental, and economic sustainable best practices, concepts and technologies into the workings of La Plata County government that are socially practical, environmentally sound, and economically feasible." Together, the County and City have four programs:

- Household Hazardous Waste Collection[50]
- Energy Savings and Resource Conservation Initiatives[51]
- Computer and Electronics Recycling[52]
- Commercial and Large Quantities[53]

Durango's Sustainability Division assists with enhancing the County programs by holding events designed to enhance the city's energy efficiency and waste reduction efforts. The Division serves as point of contact for the community on the City's recycling event, the household hazardous waste collection event, and other community sustainability events and activities.

Durango recently implemented single-stream recycling as part of its garbage collection services. The new program allows all recyclables except glass to be recycled in one container. Non-city residents are able to recycle at the Durango Recycle Center.

[50] County program sponsored by both the City and County.
[51] La Plata County Colorado, Sustainability Programs, www.co.laplata.co.us, accessed July 2014.
[52] City program only.
[53] Ibid.

Airport Sustainability Initiatives

The Airport has a number of existing sustainable initiatives including recycling and energy conservation initiatives. In July 2010, DRO entered into an Energy Performance Contract (EPC) with Ameresco to install Energy Conservation Measures (ECMs) designed to reduce energy consumption in the terminal and ARFF facility. The ECMs included:

- A lighting retrofit utilizing high-efficiency T8 and LED fixtures with occupancy sensors was performed.
- Boilers in the terminal were replaced with high-efficiency condensing boilers.
- The 7.5-ton condensing unit in the terminal was replaced with a new model with a higher Energy Efficiency Ratio (EER).
- The 15-ton rooftop unit at the ARFF building was replaced with a high-efficiency 12.5-ton unit.
- Existing system optimization was performed at the terminal.
- Split-system air conditioning was installed at the ARFF building.
- A 20-kW solar photovoltaic system was installed in the terminal.
- Window coatings were applied to the terminal windows to reduce solar heat gain.
- Direct Digital Control (DDC) building automation systems were installed in the terminal and ARFF facility.
- Garage door switches were installed in the ARFF building to lock out heaters while the doors are open.
- Walk-through doors were installed in the ARFF building garage doors, enabling personnel to enter or exit without opening the main garage door.

The EPC guaranteed a total annual utility cost savings of $22,287; however, each of the past three years has exceeded the guaranteed savings; 2013 had a verified costs savings of $42,459.[54]

[54] Durango La Plata County Airport Energy Performance Contract, Reconciliation Report, Year 3, June 1, 2013 – May 31, 2014

Airport Solid Waste and Recycling

The Airport currently collects co-mingled recyclables (mixed paper, corrugated cardboard, plastic, aluminum) throughout the terminal. Recycling and solid waste is picked-up on site by the City.

2.15 Airport User Surveys

To further assess the adequacy of the airport facilities and desired improvements, surveys were sent to local aircraft owners and pilots, corporate businesses that have operated at DRO in the past year, the car rental and ground transportation companies at DRO, passengers, and the airlines. The surveys are in Appendix G.