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CHAPTER 2.

# INVENTORY OF EXISTING CONDITIONS

## 2.1 Introduction

This chapter provides a summary of the types of existing facilities at FNL and the general condition of these facilities. This inventory compiles this information for all facilities at the Airport, including the airside, landside, passenger terminal area, navigational aids, ground access, parking, pavement conditions, among others. Existing conditions of key airside and landside facilities at FNL are summarized in **Table 2-1**, **Table 2-2**, and **Table 2-3** and detailed throughout this chapter.

Table 2-1: Airport Pavement Inventory Summary

Item	Description
<b>Runway 15/33</b>	<ul style="list-style-type: none"> <li>8,500 feet x 100 feet</li> <li>Asphalt</li> <li>Published Strength: 50,000 pounds Single Wheel (SW) and 65,000 pounds Dual Wheel Gear (DW)</li> </ul>
<b>Runway 6/24</b>	<ul style="list-style-type: none"> <li>2,273 feet x 40 feet</li> <li>Asphalt</li> </ul>
<b>Taxiways</b>	<ul style="list-style-type: none"> <li>Parallel Taxiway A</li> <li>Connector Taxiways A1 through A5</li> <li>Asphalt</li> </ul>
<b>Apron</b>	<ul style="list-style-type: none"> <li>Passenger Terminal Aircraft Parking Apron: 11,500 square yards</li> <li>GA Aircraft Parking Apron: 45,000 square yards</li> <li>Asphalt and Concrete</li> </ul>

SOURCE: Mead & Hunt.



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**Table 2-2: Airport Facilities Inventory Summary**

Item	Description
<b>Airport Facilities</b>	<ul style="list-style-type: none"> <li>▪ Commercial Passenger Terminal – 4,900 square feet</li> <li>▪ Commercial Passenger Modular Building – 2,600 square feet</li> <li>▪ Apron – 56,500 square yards (terminal and GA)</li> <li>▪ Hangars – 210 units (41 Airport owned)</li> <li>▪ Administration/ARFF building – 7,500 square feet</li> <li>▪ SRE building – 6,400 square feet</li> <li>▪ Fuel storage facilities - One (1) 10,000-gallon above ground 10LL Avgas storage tank; two (2) 10,000-gallon above ground Jet A storage tanks; two (2) Thompson filters; one (1) Permanent Jet A dispenser<sup>1</sup></li> </ul>
<b>Parking</b>	<ul style="list-style-type: none"> <li>▪ Employee, Visitor (Terminal Parking Lot) – approximately 336 marked spaces</li> </ul>

**SOURCE:** Mead & Hunt.

**NOTES:** 1. Off-airport fuel storage includes three (3) private 10,000-gallon tanks and one (1) one private 50,000-gallon tank.

**Table 2-3: FNL Taxiway System**

Taxiway	Description	TDG	Width (feet)
<b>A</b>	Full length parallel taxiway east of Runway 15/33 (400 feet Runway centerline to Taxiway centerline)	3	50
<b>A1</b>	Taxiway connector from parallel Taxiway A to the threshold of Runway 33	5/2	75/35
<b>A2</b>	Taxiway connector from parallel Taxiway A to Runway 15/33	3	50
<b>A3</b>	Taxiway connector from parallel Taxiway A to Runway 15/33	3	50
<b>A4</b>	Taxiway connector from parallel Taxiway A to Runway 15/33	5	75
<b>A5</b>	connector from parallel Taxiway A to the threshold of Runway 15	5	75
<b>B</b>	Taxiway connector from GA apron to parallel Taxiway A	2	40
<b>C</b>	Taxiway connector from commercial apron to parallel Taxiway A	5	90
<b>D</b>	Taxiway connector from commercial apron to GA apron	2	35

**DATA SOURCE:** FAA Advisory Circular 150/5300-13A-Change 1, Airport Design; and existing conditions at FNL.



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### 2.2 Previous Planning Studies

Previously completed planning studies and FAA records, which are current and applicable to the objectives and overall intent of this Master Plan, were reviewed to avoid redundant and unnecessary inventory data collection and include:

- 2007 FNL Airport Master Plan and Airport Layout Plan (ALP)
- 2018 FNL Strategic Plan Update
- FAA Data/Records/Terminal Area Forecasts (TAF)
- FNL Airport Master Records (5010)
- Colorado Division of Aeronautics 2011 State Aviation System Plan and 2013 Economic Impact Study
- 2015 Residential Encroachment White Paper
- 2015 Utility Master Plan
- 2015 Loveland Comprehensive Plan
- 2011 Fort Collins City Plan
- FAA environmental records

The Northern Colorado Regional Airport 2018 Strategic Plan Update provides a basis for the future vision at FNL and is a key driver of this Master Plan. The Vision statement from the Strategic Plan reads as follows: *The Northern Colorado Regional Airport: Unmatched for its service and innovation. The premier destination for aviation centered business, research, development, education and training.* Furthermore, the mission of the Northern Colorado Regional Airport is: *To provide a fiscally sustainable airport to the region with facilities that meet the highest FAA standards for safety and efficiency while ensuring the long-term ability of the Airport to serve Northern Colorado as a transportation hub and a global gateway for commerce.*

The Strategic Plan Update includes five strategic initiatives. Each initiative includes a strategic statement, desired outcomes and tasks necessary to reach the desired outcomes. The five FNL strategic Initiative areas are summarized below:

- **Innovation** – Service as a catalyst and center for innovation focused on aviation, FNL strives to continually explore and support new technologies. Some outcomes of this initiative include being a recognized aviation innovation center, collaborative and engaged partnerships with stakeholders, supportive R&D programs and facilities and to provide a reputable aeronautical and technology-based education research, and training programs.
- **Organization Excellence** – Providing a responsive, forward-thinking, and optimal governance structure with high performing staff is key to FNL’s success. Some outcomes of this initiative include high caliber, well-trained employees, established and effective governance model, responsible, ethical



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## ■ INVENTORY OF EXISTING CONDITIONS

and accountable leadership, and having a supported and funded Strategic Plan.

- **Fiscal Sustainability** – FNL is committed to achieving and maintaining a self-sustaining budget to operate a safe and efficient airport, manage assets, and support industry and economic development. Some outcomes of this initiative include having a self-sustaining budget with diversified revenue streams, fiscally sound financial practices, and responsibly maintained assets.
- **Economic Development** – FNL actively encourages private and public investments to ensure a strong economic platform for both on-Airport development and compatible uses within the Airport Influence Area. Some outcomes of this initiative include a completed Master Plan and Airport Influence Area Plan, a successful Commercial Air Service Marketing Plan, and incentivized development strategies for targeted industries.
- **Regional Collaboration** – Recognized as an active regional partner, FNL supports a collaborative approach to transportation, tourism, training, and marketing with its surrounding partners and communities. Some outcomes of this initiative include being recognized as a regional transportation hub, having a successful marketing plan that maximizes regional partnerships, effective public awareness of this Airport with partners, elected officials, and communities, and having an effective working relationship with elective officials to share vision and achieve outcomes.

### 2.3 Airside

This section summarizes the existing airside facilities at FNL. The existing airfield layout at FNL is illustrated in **Figure 2-1**.

#### 2.3.1 Pavement Condition and Strength

As part of the CDOT Division of Aeronautics Pavement Management Program (PMP), a visual rating system known as the Pavement Condition Index (PCI) is used to evaluate for pavement distress and deterioration. The PCI scale values range from zero (pavement in a failed condition) to 100 (pavement in excellent condition). The CDOT Division of Aeronautics last conducted a major PCI inspection at FNL in 2016. The PCI values from this inspection range from 42 to 100. Runway 15/33 has a PCI of 93 (excellent condition) and is constructed to support a gross weight bearing capacity of 50,000 pounds single wheel and 130,000 pounds double tandem wheel main landing gear configuration. The runway also has a Pavement Condition Number (PCN) of 49 /F/C/W/T.

Runway 6/24, the crosswind runway, is used for small aircraft with maximum certificated takeoff weight of 12,500 pounds or less during crosswind conditions, which occur less than 5% of the time. This Runway does not have a published PCI rating because the primary runway, Runway 15/33, meets the 95% wind coverage benchmark, so while Runway 6/24 is important to the operation of the Airport,



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FNL is not required to have a crosswind runway to provide adequate wind coverage; therefore, Runway 6/24 is recognized as an additional runway by FAA and it is not eligible for funding from FAA or CDOT. This is also why the taxiways associated Runway 6/24 (Taxiway B and Taxiway D) do not have PCI ratings. The Airport independently monitors the condition of these pavements; maintenance and capital improvement projects for the pavements without PCI ratings are funded with Airport revenues.



SOURCE | AERIAL: Google Maps, 2018. AIRFIELD LAYOUT: Mead & Hunt, 2018.



North | Approximate Scale: 1" = 2,000'

FIGURE 2-1 Existing Airfield Layout

Master Plan Northern Colorado Regional Airport





## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.3.2 Navigational Aids, Visual Aids, and Signage

The Airport’s lighting, visual aids, and signage are summarized in **Table 2-4**. Runway 6/24 has only edge reflector lights.

**Table 2-4: Airport Facilities Inventory Summary**

Item		Description
<b>Navigational Aids</b>		<ul style="list-style-type: none"> <li>Area Navigation (RNAV/Global Positioning System (GPS))</li> <li>VHF Omnidirectional Range/Tactical Air Navigation (VORTAC): Gill VORTAC (114.2 GLL) - 21 NM west; Mile High VORTAC (114.7 DVV) - 33 NM southwest; and Jeffco VOR/DME (115.4 BJC) - 38 NM south</li> <li>Instrument Landing System (ILS)</li> <li>Non-Directional radio Beacons (NDBs): Collin NDB (400 FN) - 5 NM; and Greeley NDB (348 GZW) - 11 NM</li> </ul>
<b>Visual Aids</b>	Lighting	<ul style="list-style-type: none"> <li>High intensity runway lighting system (HIRL) -Runway 15/33</li> <li>Runway End Identifier Lights (REIL) - Runways 15</li> <li>Medium Intensity Runway Lights with Runway Alignment Indicator Lights (MALSR) - Runway 33</li> <li>4-Light Precision Approach Path Indicators (PAPIs), three-degree glide path - Runways 15 and 33</li> <li>Medium intensity taxiway lighting (MITL) system - Taxiway A</li> </ul>
	Markings and signage	<ul style="list-style-type: none"> <li>Precision runway markings - Runway 15/33</li> <li>Basic runway markings - Runway 6/24</li> <li>Standard taxiway markings - Taxiway A system</li> <li>Runway &amp; taxiway guidance signs -instruction, location, direction, destination, and information</li> </ul>
	Misc. Aids	<ul style="list-style-type: none"> <li>Airport Rotating Beacon (green and white)</li> <li>Segmented Circle / Wind Cone (lighted)</li> </ul>

**SOURCES:** Mead & Hunt (2018) and Airport Master Record 5010-1 (2018).

**NOTES:**

**NDBs:** General purpose low- or medium-frequency radio beacons that an aircraft equipped with a loop antenna can home in on or determine its bearing relative to the sending facility.

**VORTAC:** Very High Frequency Omnidirectional Range Station with Distance Measuring Equipment transmitting very high frequency signals, 360 degrees in azimuth oriented from magnetic north

### 2.3.3 Airfield Communications Facilities and Equipment

Pilots at FNL can contact the Denver Flight Service Station (FSS) through the Fort Collins/Loveland Remote Communications Outlet (RCO). RCO’s are remote aviation band radio transceivers, established to extend the communication capabilities of FSS. The RCO facility is located 10.5 miles to the northeast of FNL and serves as the nearest remote communications facility to the FSS.



Pilots at FNL can also use the co-located RCO site at the Gill VOR, located northeast of the Greeley-Weld Airport.<sup>1</sup>

### 2.3.4 Weather Monitoring Equipment

The Airport has an Automated Weather Observing System III Precipitation/Thunderstorm (AWOS III P/T) that measures wind speed, wind gusts, wind direction, wind variable direction, temperature, dew point, altimeter setting, density altitude, visibility, sky condition, and cloud height and type. The system is also capable of tracking precipitation and thunderstorm activity within 30 miles of the Airport. The AWOS III provides minute-by-minute updates to airborne pilots on VHF radio frequency 135.075 MHz and by phone.

### 2.3.5 Airfield Vehicle Access Routes

FNL airfield access routes include a service and perimeter roadway network comprised of paved and unpaved surfaces. The main vehicle service road loops around Runway 15/33, as previously illustrated in **Figure 2-1**.

## 2.4 Airspace System

The control and use of navigable airspace can help determine the capacity and operational utility of an airport. This section describes the three main surface components of FNL's airspace system (*en route*, *transitional*, and *terminal*) and the remote tower system.

### 2.4.1 Airspace Surfaces

**En route** airspace is for aircraft traveling between airports. These aircraft generally follow FAA-defined low altitude "Victor" routes (below 18,000 feet MSL) and high altitude "jet" routes (above 18,000 feet MSL) that navigate between ground-based Very High Frequency (VHF) Omni-Directional Radio Ranges (VOR) and positional fixes. V-81 low altitude route passes over FNL from north to south. Larger commercial and corporate jet aircraft on approach to Denver from the northwest are routed over FNL at altitudes between 12,000 feet and 19,000 feet. **Figure 2-2** depicts airspace in Airport vicinity.

The FAA identifies **transitional** airspace as Class E airspace. **Figure 2-3** illustrates and describes possible airspace class categories. At FNL, the Class E airspace begins at the surface and extends to 18,000 feet above MSL.

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<sup>1</sup> Pilots can find RCO frequencies on charts or publications for the Airport to make a radio call to the outlet as if the pilot were making the call directly to the FSS. The outlet will relay the call and the briefer's response automatically.



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**Terminal** airspace is the local airspace around an airport. The Airport is in controlled Class E airspace, bordered by uncontrolled Class G airspace to the north and west. The Class E airspace around FNL does not have any extensions to accommodate instrument flight procedures as may typically be found at non-towered facilities. The Class E airspace however, is expanded to include other airports to the north of Denver's Class B airspace. Air traffic control services within the Class E airspace around FNL are provided by the Denver Approach and Departure Control, Denver Air Route Traffic Control Center for IFR traffic, and with the Denver Flight Service Station providing flight planning and advisory services for VFR traffic. The surrounding airspace does not contain designated restricted or special-use airspace, other than traffic patterns reserved for nearby public and private airports. The Airport itself is non-towered airspace and pilots are expected to announce their positions and intentions to other aircraft on the radio frequency known as the Common Traffic Advisory Frequency (CTAF).

Following remote tower certification and commissioning, the Class E airspace is likely to change to Class D airspace.



SOURCE | SECTIONAL CHARTS: Cheyenne Sectional 98th Edition, JULY 2018/Denver Sectional 99th Edition, JULY 2018.

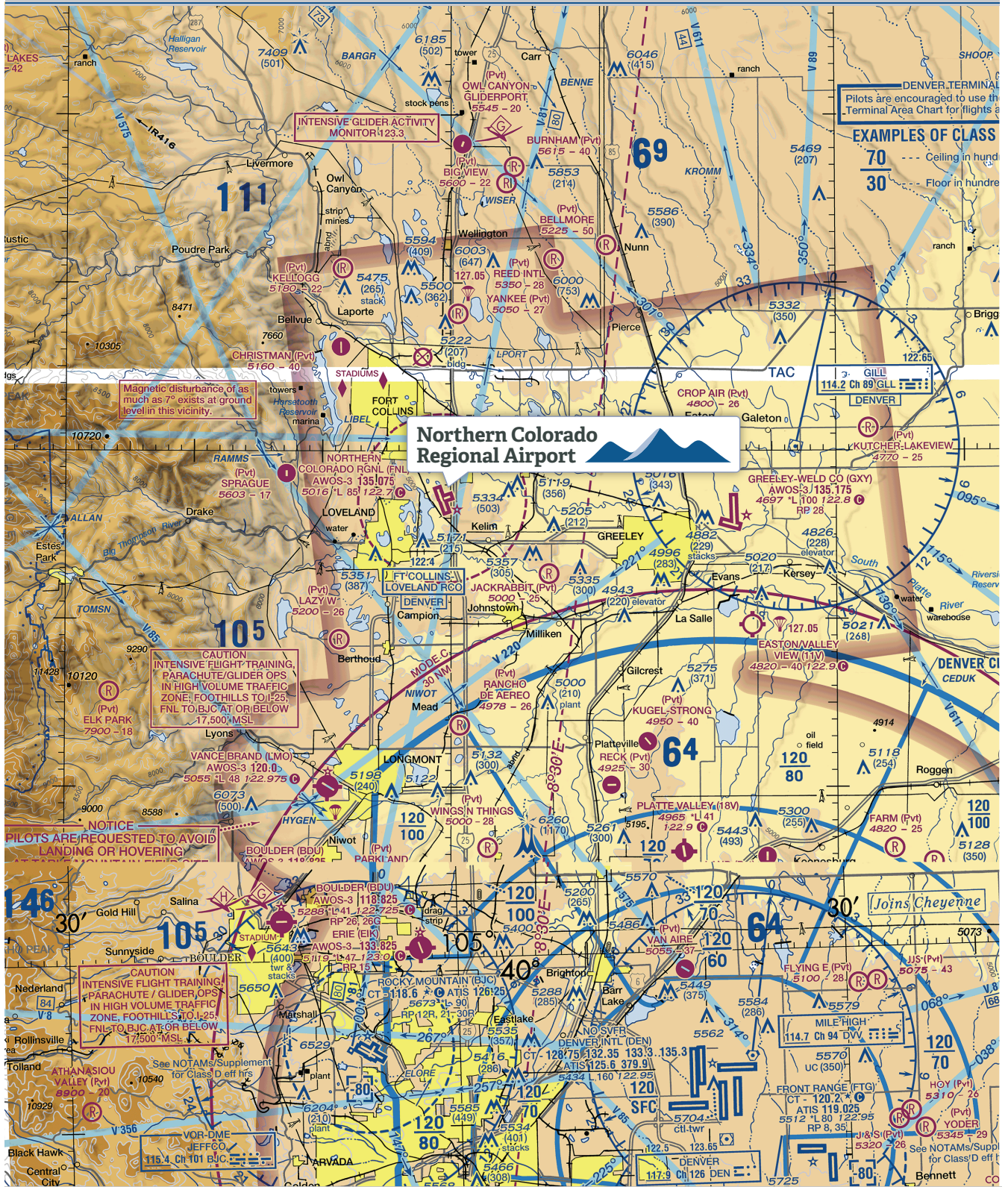
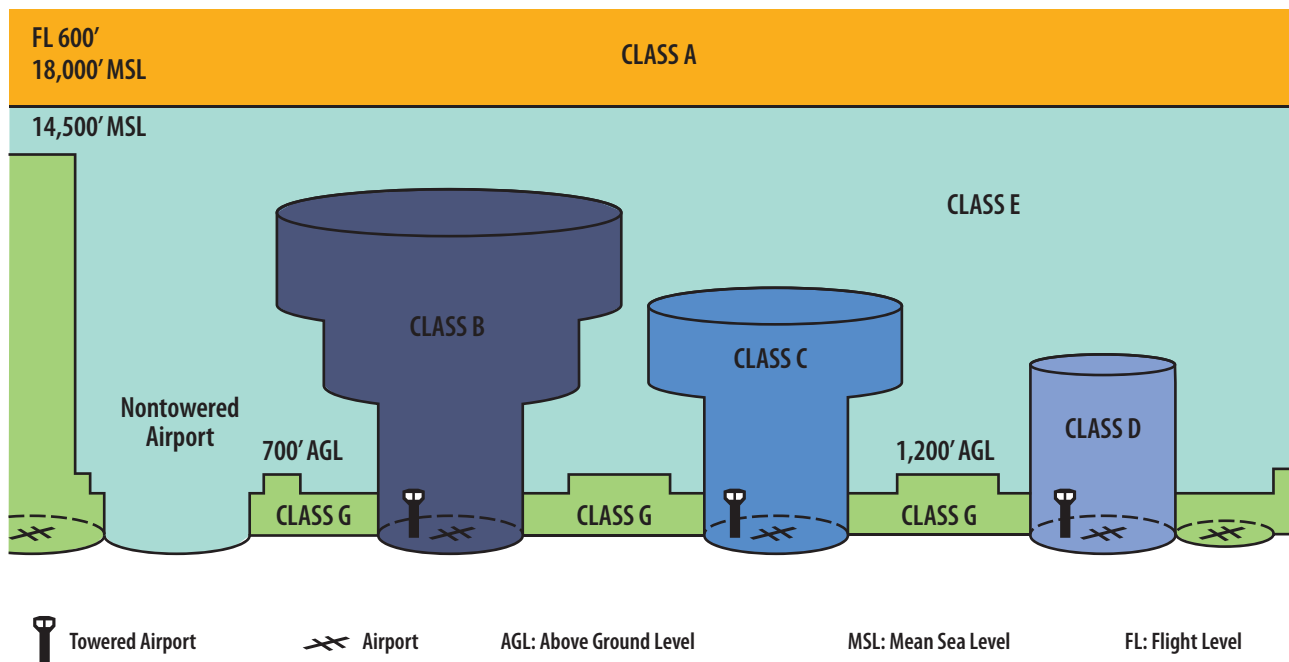


FIGURE 2-2

**Airspace/  
NAVAIDS Summary**

**Master Plan  
Northern Colorado  
Regional Airport**





Airspace Class	Communication with Air Traffic Control (ATC)	Entry Requirements	Separation Services	Special VFR in Service Area
<b>A</b>	Required for All Operations	ATC Clearance	All	N/A (No Surface Area)
<b>B</b>	Required for All Operations	ATC Clearance	All	Yes
<b>C</b>	Required for All Operations	Two-way Communications Required Prior to Entry	VFR/IFR	Yes
<b>D</b>	Required for All Operations	Two-way Communications Required Prior to Entry	Runway Operations	Yes
<b>E</b>	Required for All Operations	Required for IFR Operations	Required for IFR Operations Only	Yes
<b>G</b>	Not Required	None	None	N/A (No Surface Area)

FIGURE 2-3

**Airspace Classifications**



### 2.4.2 Remote Tower

The Airport is currently undergoing installation and testing of a first of its kind remote tower system. The remote tower system uses leading-edge technology to combine camera/visual data and aircraft tracking data. The tower system consists of one centrally located 360-degree view tower and two shorter towers located near runway end 15 and 33 respectively. The central tower uses approximately 14 stationary cameras and the shorter towers employ three stationary cameras on top and two mobile cameras just below the stationary cameras. The towers transmit communication to an onsite facility adjacent to terminal building. Tower locations are previously depicted in **Figure 2-1**. The central and tallest tower is depicted in **Figure 2-4**.

Figure 2-4: Central Remote Tower Camera



IMAGE SOURCE: CDOT Division of Aeronautics, 2018.



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## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.5 Landside Facilities

Landside facilities at FNL include the aircraft parking aprons, GA facilities, and the commercial passenger terminal, which are described below.

#### 2.5.1 Aprons

The main aircraft parking apron is east side of the parallel taxiway and consists of approximately 56,700 square yards of aircraft parking and movement space. Approximately 10,300 square yards are associated with the passenger terminal building, with the remainder being utilized for GA. The apron has three designated areas for the terminal, Fixed Base Operator (FBO), and transient aircraft tie-downs, located in the GA area previously illustrated in **Figure 2-1**. The terminal apron is used for charter operations; the FBO apron is operated by the Fort Collins-Loveland jetCenter and used for jet and large aircraft parking; and the transient and tie-down apron is used for smaller GA aircraft.

#### 2.5.2 GA Facilities

GA facilities include Fixed Base Operators (FBOs), aircraft hangars, and apron aircraft parking/tie-down spaces, and are described below.

##### *FBO*

A FBO is an aviation related business that provides services for non-air carrier pilots, aircraft, and passengers. However, some FBOs fuel air carrier aircraft, as well as 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 often serve as a terminal for GA passengers and 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, FNL has one full-service FBO: the Fort Collins-Loveland jetCenter. The FBO is operated year-round, 24 hours a day. The FBO operates two box/community hangars and 48 tie-downs.

##### *Commercial Aviation Businesses*

FNL thrives with a variety of business located on-airport and off-airport in the business park. Some of the services include aircraft flight training, aircraft repair and maintenance, avionics, robotics, manufacturing, fashion, consulting, and biotech.



### *Airport Hangars*

Hangars at FNL are primarily located in the area south and east of the FBO. There are also through-the-fence (TTF) aircraft storage units off-airport property on the east end of Runway 24. There is a total of 210 hangars at FNL, 40 of which are T-hangars that are owned and leased by the Airport. T-hangars generally hold one aircraft, while box hangars can hold multiple aircraft. Cooperate hangars are typically accommodating larger aircraft and have more amenities such as office space and restrooms. All Airport owned hangars have asphalt floors and electricity. The remaining hangars are a combination of privately-owned and managed T-hangars, box, and cooperate hangars. Amenities of the privately-owned hangars are unknown; however, FNL maintains a Master Hangar Database to catalog basic information on age, general condition, and square footage of all hangars on the Airport,

### **2.5.3 Passenger Terminal Building**

Passenger terminal building's location is depicted in **Figure 2-1**. The building is a general-purpose facility used for charter operations by casino charters and local sport teams. The main structure is approximately 4,900 square feet with an additional 2,600 square feet of hold room space in the modular building immediately south of the terminal; 1,300 square feet of the modular building has been repurposed as the temporary remote tower facility.

## **2.6 Airport Support Facilities and Equipment**

The Airport owns and operates several pieces of large equipment to perform maintenance, snow removal, and Aircraft Rescue and Fire Fighting (ARFF).

### **2.6.1 ARFF Station/Administration Building**

Aircraft Rescue and Fire Fighting (ARFF) is a special category of firefighting on airports for response, evacuation, and possible rescue of passengers and crew in an aircraft. Since FNL is a Federal Aviation Regulations (FAR) Part 139 airport, it is required to provide ARFF services. The Airport administration building, which is located east of the FBO on Pitts Dr., includes Airport staff offices and the FNL's Index B ARFF facility. The Loveland Fire Rescue Authority (LFRA), through the City of Loveland, provides the Airport with fire protection.

ARFF facility location is identified in **Figure 2-1**. The facility was built in 1993 and is approximately 7,500 square feet. The list of equipment is listed in **Table 2-4**.





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Table 2-4: ARFF Response Vehicles

Year	Model	Water (gal)	Dry Chem (lbs)	AFFF <sup>1</sup> (lbs)	Condition
2015	Titan	1,585	500	205	Excellent
1993	Titan	1,500	500	200	Fair
1996	Spartan	500	500	70	Fair

**DATA SOURCES:** FAA Certification and Compliance Management System (2018).

**NOTES:** <sup>1</sup> AFFF (Aqueous Film Forming Foam)

### 2.6.2 SRE Storage Building and Maintenance Building

FNL uses snow removal equipment (SRE) to clear the runway, taxiways, and aprons. The equipment is stored in a 6,400 square foot building. Building location is depicted in **Figure 2-1Error! Reference source not found..** SRE equipment includes the following:

- 2013 Western Star
- 2012 Oshkosh Snow Blower
- 1985 International Paystar 5000 Dump/Plow
- 2008 Volvo Multiuse Vehicle
- 2006 Sweepster
- 1997 International Tandem Dump
- Other Miscellaneous Vehicles and Attachments

### 2.6.3 Aircraft Fuel Storage and Use

On-airport fuel storage and equipment includes:

- One (1) 10,000-gallon above ground 10LL Avgas storage tank
- Two (2) 10,000-gallon above ground Jet A storage tanks
- Two (2) Thompson filters
- One (1) Permanent Jet A dispenser

Off-airport fuel storage includes three (3) private 10,000-gallon tanks and one (1) private 50,000-gallon tank.

## 2.7 Airport Access and Circulation Network

The main access road to the Airport is Earhart Rd., which connects to I-25 via NW Frontage Rd. and Crossroads Blvd. Earhart Rd is a two-lane road that terminates at the Airport and FBO auto parking lots. Business park circulation roads feed into Earhart Rd. from North and South.



## 2.8 Auto Parking Lots and Transportation

There is one public parking lot at FNL, which is located at the end of Earhart Rd., on the east side of the passenger terminal. This parking lot has approximately 336 marked spaces of which approximately 168 are leased to green ride and the rest are used for charter flights. Overnight parking is currently \$5 per space. The parking lot for the Fort Collins-Loveland jetCenter is located south of the passenger terminal parking lot and has 125 spaces. It is unknown whether parking facilities at jetCenter adequately accommodate existing demand.

Green Ride provides charter ride services to the Airport and can accommodate pickups anywhere from one person to a large group of a few hundred people or more. The Loveland Jet Center provides crew cars as one of their amenities.

## 2.9 Emergency Response

The Northern Colorado Regional Airport is an FAA Part 139 commercially certificated airport and is required to have an Airport Emergency Plan (AEP) that outlines response expectations to incident and accidents that may occur on the Airport. The Airport is responsible for implementation of the emergency plan and coordination with all responding agencies. Initial response to an aircraft incident on the Airport will come from the on-site Loveland Fire station #4 that houses the Airport Rescue Firefighting (ARFF) equipment and personnel. The Loveland Fire Rescue Authority (LFRA) has full authority over any accidents or incidents that occur at the Airport. The LFRA is responsible for incident command, incident stabilization, rescue, fire suppression and the Mass Casualty Incident (MCI) program. In addition to ARFF response, the LFRA is also responsible for primary response involving Hazardous Materials (HAZMAT). Mutual aid for fire suppression, ARFF and HAZMAT are provided to the Airport by the Poudre Fire Authority (PFA) and the Windsor Severance Fire Rescue (WSFR). The Northern Colorado Bomb Squad is also housed in the Airport Fire Station.

Depending upon the needs of the incident command for response there is a list of organizations and agencies in the Airport Emergency Plan that are relied upon to provide emergency services support. Organizations identified in the emergency plan include City, County, State and Federal agencies.



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## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.10 Utilities

FNL utilities include: a potable/fire water system, sanitary sewer, power, natural gas, communications, and drainage. Brief descriptions for each utility are provided below. The *2015 Utility Master Plan*<sup>2</sup>, which summarizes the existing infrastructure at FNL and includes proposed utility upgrades that correspond with the phased development recommended in the 2007 Master Plan.

#### *Potable/Fire Water System*

Fort Collins – Loveland Water District (FCLWD) owns utilities within airport property. FNL water system consists of 12- and 8-inch lines. Abandoned waterline exist under Taxiway A1.

#### *Sanitary Sewer*

The South Fort Collins Sanitation District (SFCSD) owns utilities within Airport property. Sanitary Sewer utilities consist of 10- and 8-inch lines.

#### *Power/Natural Gas/Communications*

All power on the Airport is owned by City of Loveland, except for any power feeds connecting FAA-owned navigational aid (NAVAIDS) equipment shelters to navigational antennas. The City of Loveland owns the overhead power and underground utilities. Xcel Energy owns the natural gas utilities. Century link owns the telecommunication and fiber optic utilities. Generally, dry utilities run along on-airport roads at FNL. The City of Loveland plans to implement broadband services to the airport and the rest of the city in 2019.

### 2.11 Airport Environs

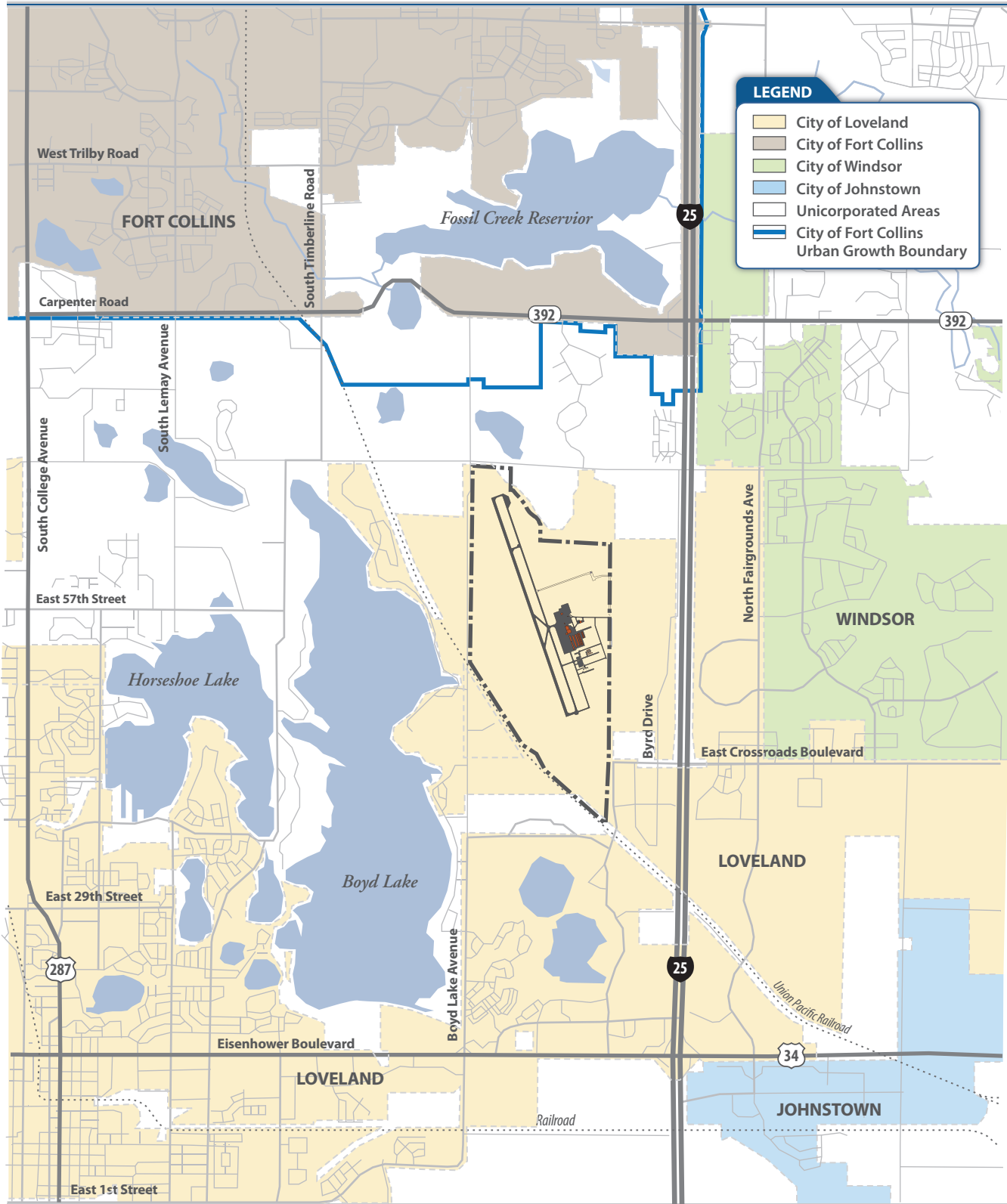
While the FNL property is entirely contained within the jurisdictional boundary of the City of Loveland, some of the land near the Airport is in the City of Fort Collins and some is in unincorporated Larimer County. Relatively small parcels are within the City of Windsor (East) and the City of Johnstown (Southeast). The Airport property boundary and surrounding incorporated areas are illustrated in **Figure 2-5**.

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<sup>2</sup> One of the primary purposes of the *2015 Utility Master Plan* was to outline the primary potable water distribution and sanitary sewer collection mains associated with the future FNL planned hangar developments. As a secondary exercise, dry utilities communications, gas, electric, access control) were also laid out to show interaction between the various utilities.



SOURCE | BASE MAP: Google Maps, 2018



North | Approximate Scale: 1" = 1 Mile

FIGURE 2-5 **Airport Environs**

**Master Plan  
Northern Colorado  
Regional Airport**



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## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.11.1 Existing Zoning

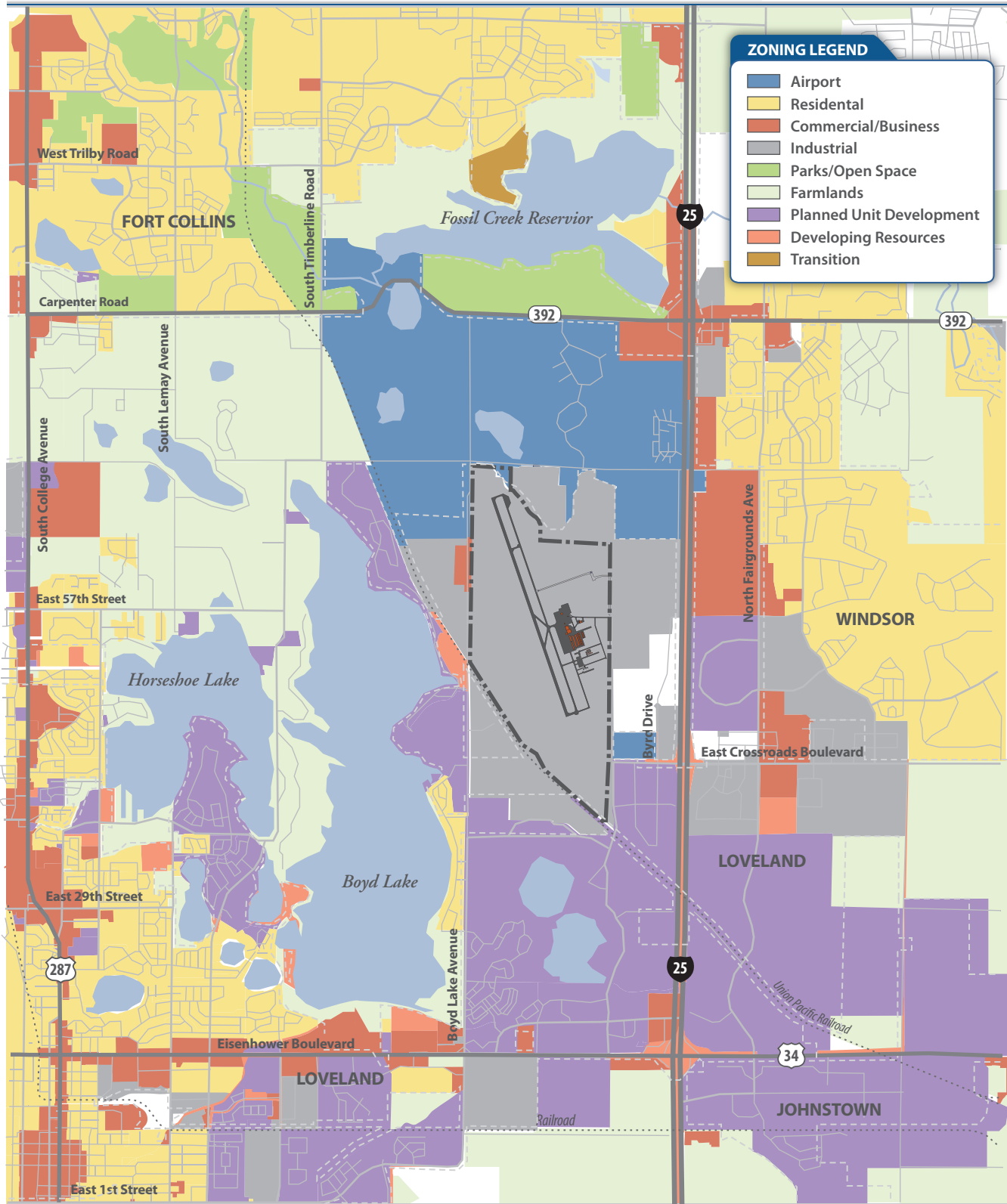
The existing generalized zoning surrounding the Airport is illustrated in **Figure 2-6**. The Airport is zoned Developing Industrial, which is intended to provide space for employment opportunities in sectors such as warehousing and distribution, commercial, industrial, and manufacturing. Developing Industrial zone is also meant for complementary uses such as day care centers, convenience shopping centers. Good access to major arterial roads is required.

The Airport is surrounded by Developing Resource, Developing Business, Residential, and Planned Unit Development Zones. Developing Resources zones are areas being annexed and that may not have a specific plan or are intended for open space. Developing Business zones are meant for goods and service provides intended to be accessed by vehicle. Some Low- and High-Density Residential areas exist near Airport. Planned Unit Development Zones are unique to specific areas and accommodate needs of city, developers, property owners, and residents.

Compatible land use protects the health, safety, and welfare of those living and working near FNL, while protecting airspace for safe and efficient aircraft operations. Airports that receive federal funds must prevent the development of incompatible uses on land and ensure that proposed airport actions, including the adoption of zoning laws, have or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. Compatible land use is addressed in detail in the *Appendix B - Airport Influence Area Plan* (to be included later).



SOURCE | BASE MAP: Google Maps, 2018. ZONING DATA: Cities of Fort Collins, Loveland, Windsor & Johnstown.



North | Approximate Scale: 1" = 1 Mile

FIGURE 2-6 **Generalized Existing Zoning**



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## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.11.2 Future Land Use

It is important that future land use planning efforts consider the compatibility of off-airport development to avoid creating obstacles to the safe and efficient use of the airspace surrounding an airport. Non-compatible future land uses planned for the area surrounding an airport can negatively impact current and future airport operations.

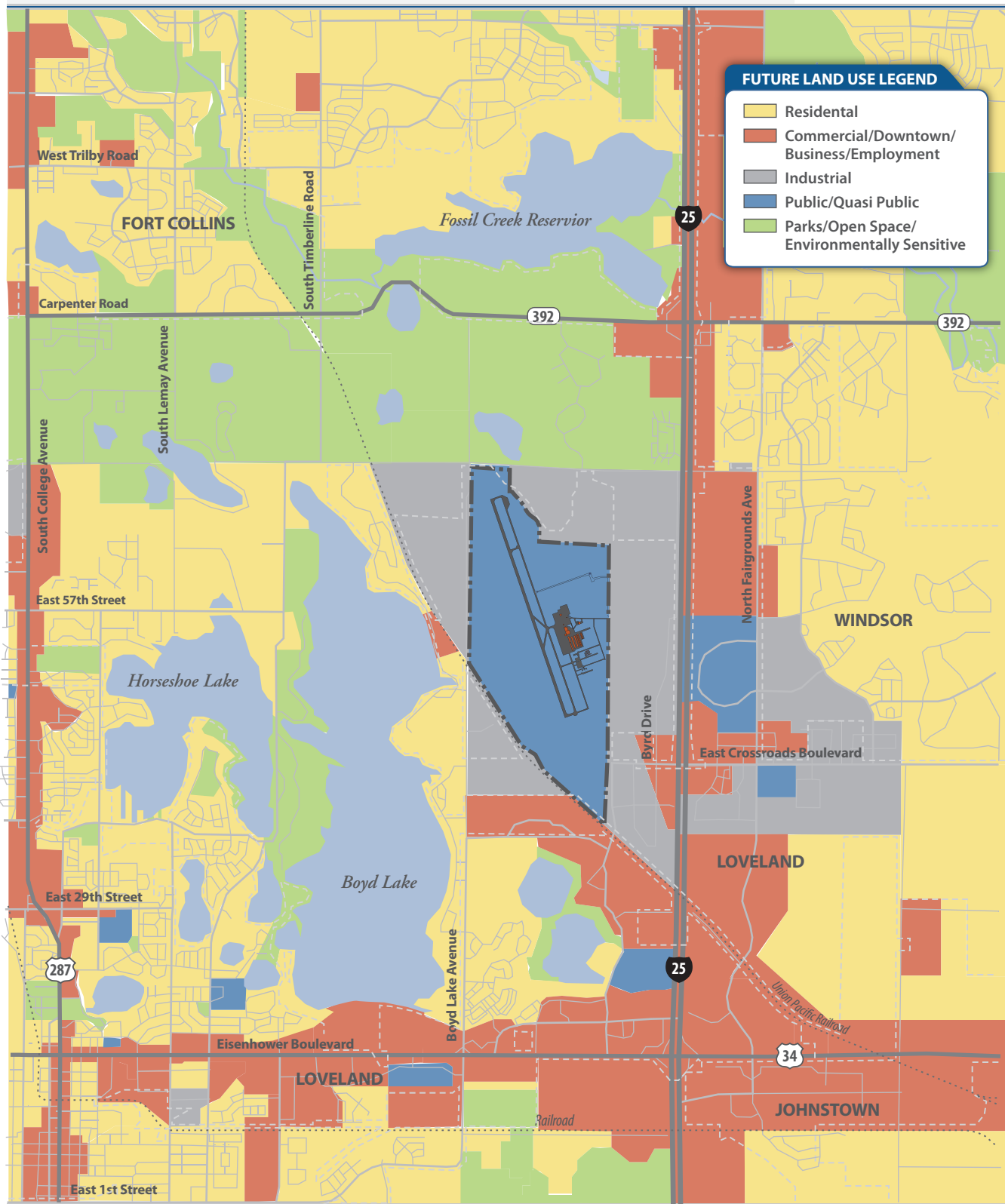
Future land uses of the areas immediately surrounding the Airport are primarily identified in the City of Loveland's Comprehensive Plan, *Plan Loveland* (2016), and include Industrial, Employment, and Corridor Commercial (Activity Center Mixed Use). Future land uses farther to the west, along the eastern edge of Boyd Lake, are primarily residential. Within the incorporated area Fort Collins, north of County Road 30 at the north end of the Airport, future land uses are identified in *City Plan Fort Collins* (2011) and include Community Separator Edge and Open Lands Corridor areas.

Larimer County is currently updating its Comprehensive Plan and is re-evaluating the future land uses proposed in the current *Larimer County Master Plan* (1997). Future land uses for the unincorporated areas of Larimer County in the Airport vicinity are currently designated as Cities and Towns. As a quickly growing area within the State, it is important that the AIA framework being developed as part of this Master Plan is used to help inform the County's long-range plans for land uses in unincorporated areas in the Airport vicinity. Land uses of the unincorporated areas of Larimer County north of County Road 30 are also guided by another document, *Plan for the Region between Fort Collins and Loveland* (1995), which indicates that these areas north of the Airport, particularly those areas influenced by aircraft operational activity, should remain agricultural or open land use, with some low density residential in the future.

Future generalized land use surrounding the Airport is illustrated in **Figure 2-7**. The future zoning in the Airport vicinity is intended protect and preserve compatible land uses in the area. Future land use goals include fostering quality investments, attracting diverse but compatible Airport uses, supporting commercial service, investing in and enhancing safety, and offering incentives that will spur economic development in the area. The City of Loveland aims to work with City of Fort Collins and Larimer County to develop an agreement to help guide the future of Airport area. The City of Loveland plans to create an Airport District Zone with development standards and land use designations to help Airport area become an economic and innovation hub for the region.



SOURCE | BASE MAP: Google Maps, 2018. FUTURE LAND USE: Cities of Fort Collins, Loveland, Windsor & Johnstown.



North | Approximate Scale: 1" = 1 Mile

FIGURE 2-7  
**Generalized Future Land Use**

**Master Plan  
Northern Colorado  
Regional Airport**





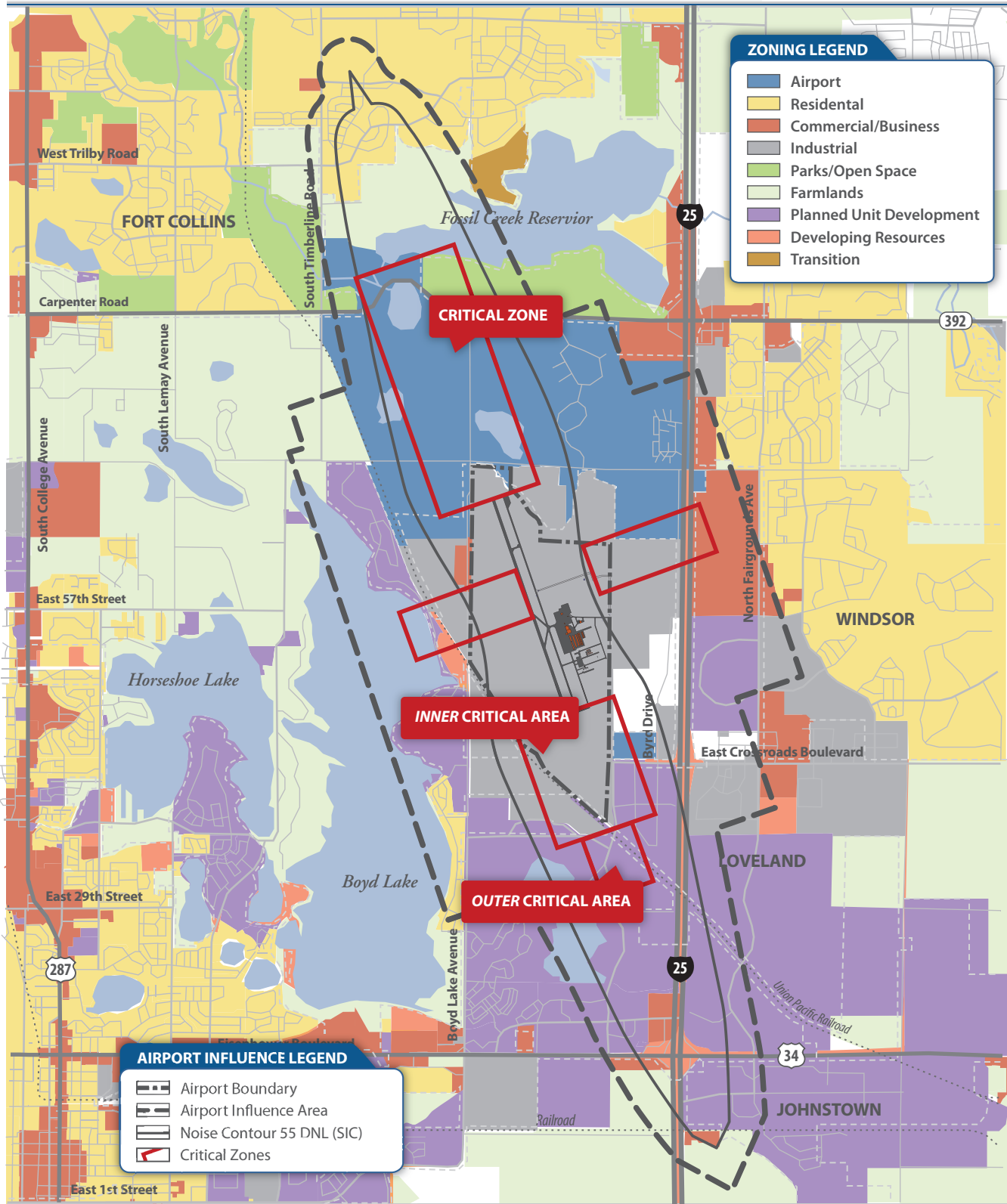
### 2.11.3 Airport Influence Area

Off-Airport land use planning and protecting the Airport from future encroachment by incompatible land use is of utmost importance. To protect surrounding land uses, FNL developed an Airport Influence Area (AIA) Plan, which was established as part of the City of Loveland’s 1994 Master Plan and has since been carried forward in City and Airport planning documents. As defined in the 2015 Loveland Comprehensive Plan, the AIA is “an area that recognizes the benefits and potentially adverse impacts that occur within certain distances from public aviation facilities and that provides a policy framework to minimize these impacts as well as protect the safety and efficiency of aircraft operations.” The existing AIA is illustrated in **Figure 2-8**.

The existing AIA Plan is being reviewed as part of this Master Plan to evaluate consistency with local and county land use plans, policies, and regulations; and identify opportunities to encourage compatible off-airport land use development. The purpose of this review is to reevaluate the existing guiding principles and criteria for compatible land use near the Airport and propose a strategic direction for future development in the AIA that maximizes potential for compliance with grant assurances and FAA guidance while best aligning community land use, infrastructure, and economic development goals. The findings and recommendations for potential changes to the existing AIA are included as part of *Appendix B – Airport Influence Area* (to be included later). This AIA Plan review will be used to inform the Cities of Loveland and Fort Collins in future zoning and planning efforts by providing guidance relating to compatible development on and around the Airport.



**SOURCE** AIRPORT INFLUENCE AREA DATA: 2007 Master Plan Update. **BASE MAP:** Google Maps, 2018. **ZONING DATA:** Cities of Fort Collins, Loveland, Windsor & Johnstown.



North | Approximate Scale: 1" = 1 Mile

FIGURE 2-8 **Airport Influence Area**



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## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.12 Environmental Baseline Conditions

The purpose of this section is to document existing baseline environmental conditions at the Airport. This allows for the consideration of potential environmental impacts through the planning process including during the development of alternatives and recommendations.

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

- Coastal Resources
- Climate
- Construction Impacts
- Secondary Impacts
- Socioeconomic Impacts
- Environmental Justice, Children’s Health and Safety Risks

#### 2.12.1 Air quality

Air quality analysis for federally funded projects must be prepared in accordance with applicable air quality statutes and regulations, including the Clean Air Act of 1970<sup>3</sup>, the 1977 Clean Air Act Amendments<sup>4</sup>, the 1990 Clean Air Act Amendments<sup>5</sup>, and the National Ambient Air Quality Standards (NAAQS)<sup>6</sup>. The air pollutants of concern in the assessment of impacts from airport related sources include six “criteria pollutants”; carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM-10 and PM-2.5), and sulfur dioxide (SO<sub>2</sub>).

The Airport is located within Larimer County, parts of which are designated by the U.S. Environmental Protection Agency (EPA) as CO Maintenance Areas; however, Loveland (where the Airport is located) is in a Larimer County CO Maintenance Area. The Airport is within the Denver-Boulder-Greeley-Ft. Collins-Loveland Ozone Non-Attainment Area. The area is designated by the U.S. Environmental

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<sup>3</sup> U.S. Code. The Clean Air Act of 1970. U.S. Congress, Public Law 91-604, 42 U.S.C. §7401

<sup>4</sup> U.S. Code. The 1977 Clean Air Act Amendments, U.S. Congress, Public Law 95-95, 42 U.S.C. §7401

<sup>5</sup> U.S. Code. The 1990 Clean Air Act Amendments, U.S. Congress, Public Law 101-549, 42 U.S.C. §7401

<sup>6</sup> 40 CFR Part 50, Section 121, National Ambient Air Quality Standard



Protection Agency (EPA) as being in attainment status for all parts of the County in all other criteria.<sup>7</sup>

### 2.12.2 Biological Resources

Biological resources include fish, wildlife, plants, and their respective habitats. Requirements have been set forth by The Endangered Species Act (ESA)<sup>8</sup>, The Sikes Act<sup>9</sup>, The Fish and Wildlife Coordination Act<sup>10</sup>, The Fish and Wildlife Conservation Act<sup>11</sup>, The Migratory Bird Treaty Act<sup>12</sup>, Executive Order 13751 (Invasive Species)<sup>13</sup>, and various state and local regulations for the protection of fish, wildlife, and plants of local and national significance.

The US Fish and Wildlife Service (USFWS) is the federal agency responsible for the Endangered Species Act (ESA), the Fish and Wildlife Coordination Act and the Migratory Bird Treaty Act (MBTA). Colorado Parks and Wildlife (CPW) is the state agency responsible for conservation, outdoor recreation, and wildlife management within the State of Colorado. The ESA requires Federal agencies to ensure that actions authorized, funded, or carried out by the agency would not jeopardize the continued existence of endangered or threatened species, nor result in the destruction or adverse modification of a species' habitat. Agencies overseeing Federally-funded projects are required to obtain information from and coordinate with the USFWS concerning any species listed or proposed to be listed that may be present in a proposed project study area.

The U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Conservation (IPaC) System was used to identify species of concern. Species listed as threatened or endangered, or candidates that may be found within the Airport vicinity are depicted in **Table 2-5**. The Airport property has been disturbed by past construction and is characterized by non-native patches of grasses and weeds and does not contain sensitive flora or suitable habitat for wildlife. There does not appear to be suitable habitat for any of these species within the Airport property limits. A survey would need to be completed prior to any proposed development to determine if any listed threatened or endangered species are present on Airport property.

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<sup>7</sup> U.S. Environmental Protection Agency, Green Book – Colorado Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants, [https://www3.epa.gov/airquality/greenbook/anayo\\_co.html](https://www3.epa.gov/airquality/greenbook/anayo_co.html). Accessed October 11, 2018.

<sup>8</sup> Endangered Species Act of 1973, U.S. Congress, Public Law 93-205, 16 U.S.C §1531-1544

<sup>9</sup> Sikes Act, Amendments of 1974, U.S. Congress, Public Law 93-452

<sup>10</sup> Fish and Wildlife Coordination Act of 1958, U.S. Congress, Public Law 85-624, 16 U.S.C §661-666c

<sup>11</sup> Fish and Wildlife Conservation Act of 1980, U.S. Congress, Public Law 96-366, 16 U.S.C §2901-2912

<sup>12</sup> Migratory Bird Treaty Act of 1981, 16 U.S.C §703-712

<sup>13</sup> E.O. 13751 of Dec 5, 2016, Safeguarding the Nation from the Impacts of Invasive Species, 81 FR 88609



## ▪ INVENTORY OF EXISTING CONDITIONS

There is limited suitable nesting habitat for migratory birds on Airport property. A field investigation would need to be performed prior to proposed development to determine whether there are birds protected by the MBTA present on Airport property

Table 2-5: Threatened and Endangered Species in Larimer County

Group	Species	Scientific Name	Status
<b>Birds</b>	Least Tern	<i>Sterna antillarum</i>	Endangered
	Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Threatened
	Piping Plover	<i>Charadrius melodus</i>	Threatened
	Whooping Crane	<i>Grus americana</i>	Endangered
<b>Insects</b>	Arapahoe Snowfly	<i>Arsapnia arapahoe</i>	Candidate
<b>Fish</b>	Greenback Cutthroat Trout	<i>Oncorhynchus clarkii stomias</i>	Threatened
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Endangered
<b>Mammals</b>	Canada Lynx	<i>Lynx canadensis</i>	Threatened
	North American Wolverine	<i>Gulo gulo luscus</i>	Proposed Threatened
	Preble's Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	Threatened
<b>Flowering Plants</b>	Colorado Butterfly Plant	<i>Gaura neomexicana</i> var. <i>coloradensis</i>	Threatened
	North Park Phacelia	<i>Phacelia formosula</i>	Endangered
	Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	Threatened

**DATA SOURCE:** U.S. Fish and Wildlife Service, Information for Planning and Consultation (IPaC) Species Report, <https://ecos.fws.gov/ipac/>. Accessed October 10, 2018.



### 2.12.3 Section 4(f)

According to Section 4(f) of the Department of Transportation Act (recodified as 49 USC, Subtitle I, Section 303), no publicly owned park, recreation area, wildlife or waterfowl refuge, or land of historic site that is of national, state or local significance shall be used, acquired, or affected by programs or projects requiring federal assistance for implementation unless there is no feasible or prudent alternative.

The closest Section 4(f) properties to the Airport are Boyd Lake (0.5 miles west), the Highland Meadows Golf Course (1.5 miles east) and Frank Farm Park (2 miles south); however, none are located within the Airport property boundary.<sup>14</sup>

### 2.12.4 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”.

While the Natural Resources Conservation Service (NRCS) Web Soil Survey was used to evaluate soils in the Airport vicinity, the Airport is located within the incorporated city limits of Loveland; therefore, it is exempt from FPPA.<sup>15</sup> North of Runway 15, there are areas that are classified as farmland of statewide or local importance within the property boundary and also areas with these classifications north of the property boundary. FPPA would apply to these areas that are north of County Road 30 because they are located outside of the city limits.

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<sup>14</sup> City of Loveland Parks & Recreation Facilities Map, <http://www.cityofloveland.org/departments/parks-recreation/parks-facilities/parks-recreation-facilities-map>. Accessed October 10, 2018.

<sup>15</sup> USDA Natural Resources Conservation Service. Farmland Protection Policy Act (2017). Available at: [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/fppa/?cid=nrcs143\\_008275](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/fppa/?cid=nrcs143_008275). Accessed September 21, 2017.



## ▪ INVENTORY OF EXISTING CONDITIONS

### 2.12.5 Hazardous Materials, Pollution Prevention and Solid Waste

Hazardous materials are defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) 42 United States Code (USC) 6901-6992. Hazardous materials include substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare or the environment.

The two statutes of concern to the FAA are the RCRA, as amended by the Federal Facilities Compliance Act, and the CERCLA, as amended by the Superfund Amendments Reauthorization Act (SARA) and by the Community Environmental Response Facilitation Act. RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of release of a hazardous substance, excluding petroleum, into the environment.

Sites of interest are defined as state cleanup sites, federal superfund cleanup sites, hazardous waste generators, solid waste facilities, underground storage tanks, dairies, and enforcement actions. The United States Environmental Protection Agency (EPA) lists nine (9) sites of interest at FNL. These are listed below in **Table 2-6**.

**Table 2-6: Sites Reporting Generation of Hazardous Waste to EPA**

Site Name	Site Address (Loveland, CO 80538)
Loveland Aero <sup>1</sup>	5280 Northrop Street
Continental Express <sup>1</sup>	4826 Earhart Road
Eagle Air Jet Services <sup>1</sup>	5235 Gulfstream Court
Fire Wall Forward	5212 Cessna Drive
Loveland Jet Center	4824 Earhart Road
FNL	4900 Earhart Road
Hach Company <sup>2</sup>	5600 Lindbergh Drive
FNL TSA	4900 Earhart Road
Virga Corp Airport Hangars <sup>1</sup>	Lear Drive and Gulfstream Court

**SOURCE:** United States Environmental Protection Agency Envirofacts (2018).

**NOTES:**

1. Much of this EPA data is outdated. Loveland Aero, Continental Express, Eagle Air Jet Services and Virga Corp no longer operate at FNL.



2. The Hatch Company site is in the Airport Business Park and it is not within the Airport property boundary.

### 2.12.6 Historical, Architectural, and Cultural Resources

Historical, architectural, archaeological, and cultural resources encompass a range of sites, properties, and physical resources associated with human activities, society, and cultural institutions. Federal law requires project sponsors who require federal funds or approvals to consider how their proposed projects would affect historic properties. In accordance with NEPA and Section 106 of the National Historic Preservation Act (NHPA), the FAA is the lead agency for identifying the potential impacts of a proposed project on these resources and consulting with the federally recognized tribes, the State Historic Preservation Office (SHPO), and other agencies as necessary. The FAA must also comply with the Archaeological and Historic Preservation Act “provides the survey, recovery, and preservation of significant scientific, prehistorical, historical, archeological, or paleontological data when such data may be destroyed or irreparably lost due to a federal, federally licensed, or federally funded project.”

In the context of this Master Plan, 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 NRHP. The Airport does not have historic buildings or structures. The closest historic resource listed on the NRHP is Preston Farm, located over four miles north of Airport.

Previous cultural resource surveys have not identified any cultural resources. Historic use of the Airport area was related to agriculture. Most Airport land has been previously disturbed because of previous agricultural activities and Airport construction projects.

A cultural resource survey would be required prior to any major development to determine if any historic, archaeological and cultural resources occur on Airport property.

### 2.12.7 Natural Resources and Energy Supply

Energy or natural resources impacts result from implementation of projects that have a measurable effect or result in significant changes in the use or demand placed on local supplies. Energy requirements associated with an airport usually fall into two categories: demands for stationary facilities and demands for the movement of air and ground vehicles.





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## ▪ INVENTORY OF EXISTING CONDITIONS

FAA does not have an established significance threshold for Natural Resources and Energy Supply<sup>16</sup>. Certain Airport improvement projects may potentially cause a deficit in natural resources and energy supply.

### 2.12.8 Noise and Noise-Compatible Land Use

According to the FAA Order 1050.1F, Desk Reference, Chapter 11, Noise and Noise-Compatible Land Use, “noise” is defined as unwanted sound that may interrupt activities such as sleep, conversation, or student learning. Aviation noise typically comes from the operation of aircraft during departures, arrivals, overflights, taxiing, and engine run-ups. The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1986 authorizes the FAA to prescribe standards for the measurement of aircraft noise and establish regulations to abate noise. The Noise Control Act of 1972, which amends the Control and Abatement of Aircraft Noise and Sonic Boom Act of 1986, adds consideration of the protection of public health and welfare and adds the EPA to the rulemaking process for aircraft noise and sonic boom standards.

Per FAA Order 1050.1F, projects at airports that experience 90,000 annual piston-powered aircraft operations, 700 annual jet-powered aircraft operations, such as siting a new airport, runway relocation, runway strengthening, or a major runway expansion require a noise analysis including noise contour maps. FNL meets these operational criteria and has established noise contours as documented in the 2007 Airport Master Plan. **Figure 2-9** illustrates the 65 Day-Night Average Sound Level (DNL). As shown, the 65 DNL noise contour remains well within FNL’s boundary.

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<sup>16</sup> FAA Order 1050.1F



SOURCE | Google Maps, 2018. Zoning Data: Cities of Fort Collins, Loveland, Windsor & Johnstown.

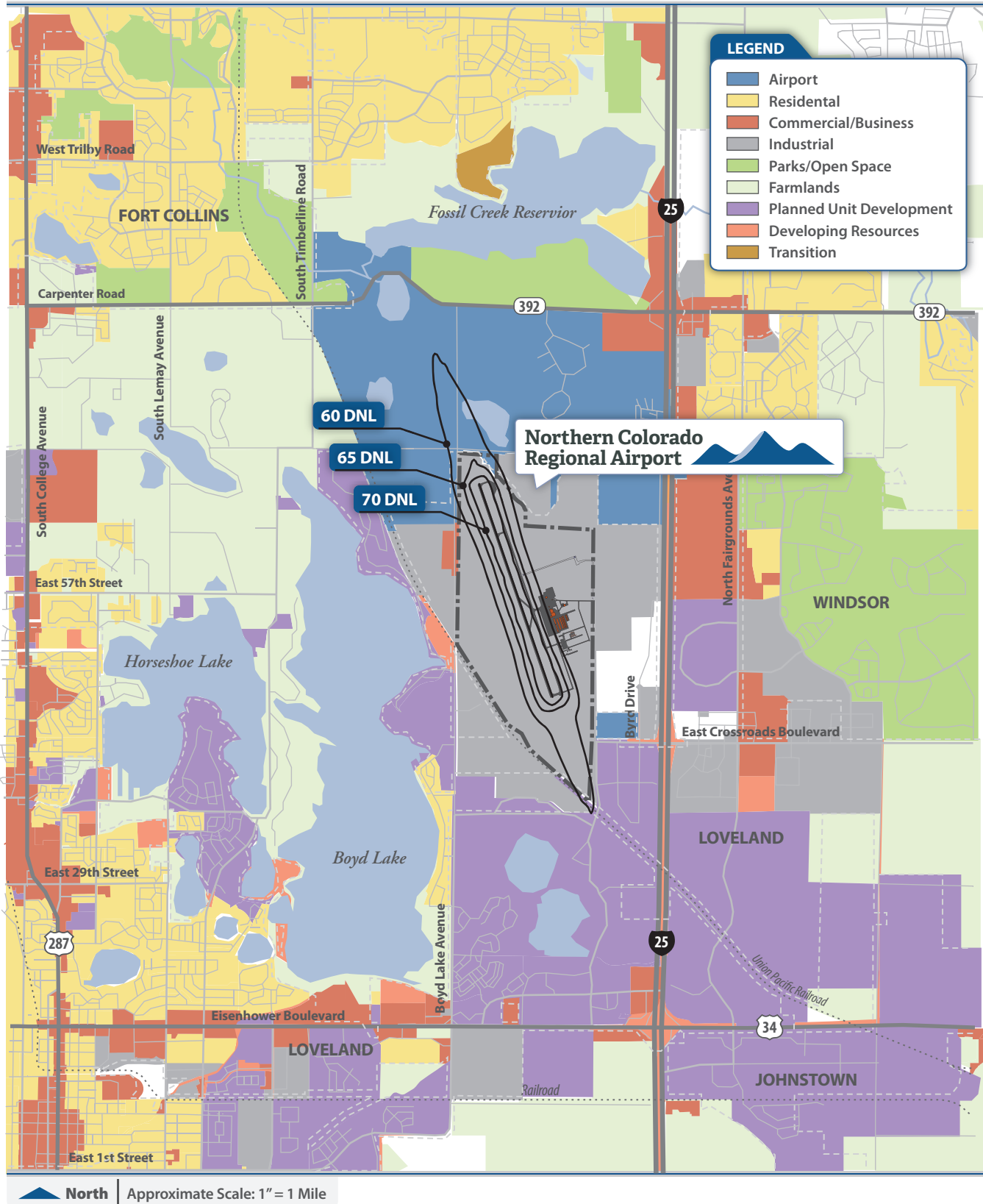


FIGURE 2-9

**2007 DNL Noise Contours with Generalized Existing Zoning**

**Master Plan Northern Colorado Regional Airport**



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### 2.12.9 Light Emissions and Visual Impacts

FAA Order 1050.1F defines light emissions as light that emanates from a light source into the surrounding environment (i.e. airfield and apron flood lighting, NAVAIDs, terminal lighting, parking lighting, roadway lighting, safety lighting). Visual resources may include structures or objects that obscure or block other landscape features (i.e. buildings, sites, traditional cultural properties, or other manmade landscape features).

The primary sources of light emissions at FNL are the runway lights, rotating beacon, PAPIs, and apron and parking lights, which aid in providing a safe environment for aircraft operations and produce an insignificant amount of light on the surrounding area. Introduction new or relocated airport lighting is analyzed for potential effects on residential or other light sensitive land uses. Light emissions and visual impacts should be considered prior to any future development projects.

#### 2.12.10 Water Resources

Water resources are surface waters and ground water that are vital to society because they provide drinking water as well as support recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems. Surface water, ground water, floodplains, and wetlands do not function as separate and isolated components of the watershed, but rather as a single, integrated natural system. Disruption of any one part of this system can result in consequences to the functioning of the entire system, which must be considered along with potential impacts to the quality of water resources throughout this Master Plan.

##### *Surface and Ground Water:*

Surface water is water that occurs above ground such as a wetland, river, stream or lake. There are no major surface water resources within the Airport property boundary. There are several small drainage swales on Airport property. The main hydrological features in the vicinity of the Airport are the Nelson Reservoir, located approximately ¼-mile north of the Airport, and Boyd Lake, which is located approximately ¾-mile west of the Airport.

Groundwater is a subsurface water that occupies the space between sand, clay, and rock formations. Aquifers are the geologic layers that store or transmit groundwater to wells, springs and other water sources. The Safe Drinking Water Act and its implementing regulations (40 CFR Parts 141-149) prohibit federal agencies from funding actions that would contaminate an EPA-designated sole source aquifer or its recharge area. State and local agencies may also promulgate regulations to protect sole source aquifers and their recharge areas. The northern half of the FNL property boundary lies within the Cache La Poudre



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watershed while the southern half of the property is within the Big Thompson watershed.

### *Wetlands and Non-Wetland Water Features:*

The Clean Water Act (CWA) defines wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Federal regulations require that proposed actions avoid, to the greatest extent possible, long-term and short-term impacts to wetlands, including the destruction and altering of the functions and values of wetlands.

The USFWS National Wetlands Inventory (NWI) online mapping system was reviewed to identify delineated wetlands near FNL. According to the NWI, the only delineated wetland on Airport property is an 8.99-acre Freshwater Emergent Wetland located northwest of the Runway 33 glideslope tower.

### *Floodplains:*

A floodplain is generally a flat, low-lying area adjacent to a stream or river that is subject to inundation during high flows. The relative elevation of a floodplain determines its frequency of flooding.

Executive Order 11988 requires federal agencies “to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification floodplains and to avoid direct or indirect support of floodplain development whenever there is a practical alternative.”

According to FEMA’s National Flood Hazard Layer (NFHL) Viewer, the Airport is entirely located within an area of minimal flood hazard (Zone X). Areas within Zone X are areas outside the 500-year flood plain.

### *Wild and Scenic Rivers:*

Wild rivers are free of obstructions such as canals and dams, and normally so remote as to only be accessible by trail. Scenic rivers are free of obstructions and have undeveloped shorelines but may have road access. Wild and scenic rivers are protected by the 1986 Wild and Scenic Rivers Act. Wild and scenic rivers are managed by the Bureau of Land Management, the National Park Service, the USFWS, and the U.S. Forest Service.

According to the National Park Service (NPS) map of the National Wild and Scenic Rivers System, there are no wild and scenic rivers within or around FNL.



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## ▪ INVENTORY OF EXISTING CONDITIONS

The nearest wild and scenic river is the Cache la Poudre Wild and Scenic River, which is approximately 22 miles away.

### *Water Quality:*

The Clean Water Act<sup>17</sup> 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.”

The Airport is within the Cache La Poudre and Big Thompson watersheds. No surface water resources exist on Airport property. Boyd Lake is approximately ¼ Mile from west of the Airport boundary and is used for recreation and drinking water storage to balance demand during the summer. Houts Reservoir and Equalizer Lake are located to the south. Mud Lake, Nelson Reservoir, Duck Lake, Swede Lake, and Fossil Creek Reservoir are located the north of the Airport. Water resources and water quality will be considered during throughout the master planning process.

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<sup>17</sup> U.S. Code, 1977 The Clean Water Act, 33 U.S.C. §1251-1387

