APPENDIX B

CHAPTER 2

PERMIT REGULATIONS

Section 2.303. Submission Requirements for all Permit Applications; Waivers.

The following information is provided in accordance with the El Paso County Land Development Code, Appendix B [reference (f)], Section 2.303:

(Numbering of paragraphs corresponds to appropriate paragraphs of Section 2.303)

(1) **Completed application form** [Reference (f), Exhibit B] . . . . [see Appendix A]

(2) **Additional information required by Director**:
No additional plans or reports have been requested by the Director at this time.

(3) **Mineral rights certification**: . . . . . [see Encl 13a]

(4) **Information describing the applicant**:

(a) *Applicant*: **Meadow Lake Airport Association**
13625 Judge Orr Road
Meadow Lake Airport
Peyton, CO 80831

The Meadow Lake Airport Association was formed on February 29, 1972 as a Colorado non-profit corporation with the express purpose *"To provide an organization to administer the airport facilities of the Meadow Lake Airport in Falcon, Colorado; to maintain, construct, and provide airfield operating areas, runways, taxiways, roads and lighting facilities. ..."* On October 30, 2007, the Articles of Incorporation were amended and restated to read: *"To provide an organization to administer the public use federally-obligated airport facilities of the Meadow Lake Airport in Peyton, Colorado. ..."* The Association is designated as a 501(c)(4) by the Internal Revenue Service and recognized as a "charitable" organization by the Colorado Department of Revenue. . . . . [see Encl 12a]

Membership of the Association consists of the owners of the private properties that have "Through-The-Fence" (TTF) access to the property and runway complex owned and operated by the Association. . . . . [see Encl 10]

Most commonly, airports have hangar and tie-down facilities on the airport property and a fence around the property that provides security and access control. A "Through-the-Fence" operation is one where the aircraft are based on private property outside the airport property and access the runway complex "though-the-fence". This is generally discouraged by the FAA since the airport operating authority loses some control over the private properties. Meadow Lake was set up from the very beginning as a TTF operation where the listed property

owners are the airport "association" and the elected Board of Directors is the operating authority. The Board has some responsibility for the hangar areas as part of the total airport, with respect to coordinating FAA Airport Design standards where appropriate. However, the Board has influence, but no direct authority over the private properties and must work with El Paso County (the land use authority) in development of these through-the-fence properties and for code enforcement concerns.

(b) *MLAA (KFLY) Management*.

There are no specific published qualifications required to develop, implement, or operate the airport. In fact, many small general aviation airports are managed as an additional duty by a municipal Public Works Director or an Assistance City Manager, commonly with little or no aviation experience or background. The Meadow Lake Airport Association Bylaws provide that the Board of Directors oversee management of the airport. All routine operations and maintenance functions at Meadow Lake Airport, i.e.; mowing, snow removal, maintenance of airport lighting, etc., are performed by volunteers. Professional services, such as planning & engineering, legal, CPA, technical maintenance (AWOS, vehicle, etc), are provided by paid contractors.

Board of Directors. Article IV of the Bylaws of the Meadow Lake Airport Association provide for a Board of Directors of seven members of the Association to manage the business and affairs of the Corporation (2-year terms). Article V of the Bylaws allow the Board to appoint a person as the Manager of the Airport, or to retain those responsibilities with the Board. The current Board has retained those responsibilities, with the President of the Board acting as Airport Manager, assisted by various Directors with assigned duties:

The current Board of Directors: . . . . . [resumes at Encl 11a(1)]

President **David Elliott** *falcon20flier@msn.com*
MLAA Board: 22 years (12 yrs President, 8 yrs Treasurer) . . . . . Airport Manager

- Education: MBA (Western New England College), BS (US Coast Guard Academy), AAS-Aviation Maintenance Technology (Pikes Peak Comm College)
- Aviation experience: 44 years (23,000 hours TPT {Total Pilot Time})
  > 21 years USCG, 13 years airline, 11 years corporate, 34 yrs general aviation;
  > Airline Transport Pilot (AMEL), Commercial Pilot (AMES, ASEL/S), Certified Flight Instructor-Gold Seal (CFI/CFII/MEI), Advanced Ground Instructor, Airframe & Powerplant Mechanic, Remote Pilot (sUAS)
- Business experience: co-owner TGP Aviation Services LLC, DELL Properties LLC, Falcon Development Corporation (all at Meadow Lake); started 3 other successful small businesses (2 sold, 1 merged)
- Community activities: COS Airport Advisory Commission (2008-2015, 2018-present), Upper Black Squirrel Creek Ground Water Management District Board (2017), Aviation Education Foundation of Colorado (AEFCO), Falcon-Peyton Small Area Master Plan Committee (2006-2008)
- Member: Colorado Airport Operators Assn (CAOA), Colorado Pilots Assn (CPA), Aircraft Owners & Pilots Assn (AOPA), National Association of Flight Instructors (NAFI), National Business Aircraft Assn (NBAA), Experimental Aircraft Assn (EAA),

Vintage Aircraft Assn (VAA), Antique Aircraft Assn (AAA), American Bonanza Society (ABS), Cessna Owners Assn, Piper Owners Society, Cub Club, Fairchild Club, Ancient Order of the Pterodactyl

Vice-President **Carl Benda** *carl.benda@yahoo.com*
MLAA Board: 2 years . . . . . IT(website)/AWOS/Security

- Education: Colorado Aero Tech
- Aviation experience: 20 years (____ hours TPT)
  > __ yrs
  > Private Pilot (ASEL/MEL), Airframe & Powerplant Mechanic
- Business experience: COO, Automatic-Access, Inc.
- Community activities:
- Member: El Paso County Contractors Assn, Colorado Glass Contractors Assn, Construction Specifications Institute Pikes Peak, American Association of Automatic Door Manufacturers ... Aircraft Owners and Pilots Assn, Red Star Pilots Assn, Cessna Owners Assn, Twin Cessna Flyers, Experimental Aircraft Assn (EAA), Warbirds Association

Secretary/Treasurer **Jeff Moore** *jtq.moore@gmail.com*
MLAA Board: 9 years (4 yrs Treasurer, 5 yrs Secr/Treas) . . . . . Financial Management

- Education: MA-Management & Organizational Behavior (Silver Lake College), BS-Meteorology (Univ of Wisconsin)
- Aviation experience: 33 years (4,000 hrs TPT + Nav/Weapons Systems):
  > 25 years USAF, 32 yrs general aviation
  > Commercial Pilot (w/instrument), Certified Flight Instructor (CFI/CFII/ MEI), Airframe & Powerplant Mechanic (Inspection Authorized)
- Business experience: Self-Employed (JTQ Aviation) – flight instruction, aircraft maintenance
- Member: Airport Owners & Pilots Assn (AOPA), Experimental Aircraft Assn (EAA)

Director **Mike Barr** *dmbarr01@msn.com*
MLAA Board: 6 years . . . . . Runways/Taxiways

- Education: BBA-Accounting (Baylor University)
- Aviation experience: 46 years (1,300 hrs TPT + 4,200 Master Navigator)
  > 20 years USAF, 46 years general aviation
  > Private Pilot, Airframe & Powerplant Mechanic (Inspection Authorized), A&P course manager/instructor - OT Autry Vo-Tech (6 yrs), Maintenance Instructor - Flight Safety Int'l (10 yrs)
- Business experience: Self-Employed (MB Aviation) – aircraft maintenance,)
- Member: Aircraft Owners & Pilots Assn (AOPA), Experimental Aircraft Assn (EAA), International Comanche Society (ICS), International Cessna 120-140 Association

Director **Jeff Hundley** *jeff@pumptechnologies.com*
MLAA Board: 2 years . . . . . Runway Rehab Project Coordinator

- Education: BS-Manufacturing Engineering (California Polytechnic)
- Aviation experience: 12 years (1,400 hours TPT)
  > 12 years general aviation
  > Private Pilot with instrument rating, Airframe & Powerplant Mechanic
- Business experience: Owner-Pump Technologies, LLC (founded 2005)

- Member: Aircraft Owners & Pilots Assn (AOPA), Experimental Aircraft Assn (EAA), International Comanche Society (ICS)

Director **Dan Jacquot** *indianflyer67@yahoo.com*
MLAA Board: 2 years . . . . . Roads & Grounds

- Education: Associate Degree Christian Studies
- Aviation experience: 40 years (1800 hours TPT)
  > 40 yrs general aviation
  > Private Pilot with instrument rating
- Business experience: 27 years railroad conductor, 2 years project manager Royal Corp
- Community activities: EAA Young Eagles
- Member: Aircraft Owners & Pilots Assn (AOPA)

Director **Tom Shook** *tom@meadowlakeairport.com*
MLAA Board: 5 years . . . . . .

- Education: Pikes Peak Community College
- Aviation experience: 11 years (1,800 hrs TPT)
  > 11 years general aviation
  > Commercial Pilot (Instrument) [Part 137 Ag Pilot, Part 135 Cargo]
- Business experience: property management (7 years)
- Community activities: EAA Young Eagles, Aviation Education Foundation of Colorado, Boy Scouts of America, Civil Air Patrol

Airport Development Committee: Article VI of the Bylaws provides for an Airport Development Committee to advise the Board of Directors on proposed development of properties on MLAA property or having through-the-fence access to the airport.

Current members of the ADC are: . . . . . [resumes at Encl 11a(2)]

Chairman **Lee Wolford** *leefly@sprynet.com*
ADC: 7 years . . . (MLAA Board: 4 years: 2 yrs VP, 2 yrs Treasurer)

- Education: MPA (Auburn University), MS-Political Science (USAF War College), BS-Psychology (Troy University, BS-Metallurgical Engineering (Lehigh University)
- Aviation experience: 64 years (10,300 hrs TPT)
  > 26 years USAF, 60+ years general aviation
  > Commercial Pilot (w/instrument)
- Business experience: 13 years project manager/owner/director
- Community activities: East Meadow Lake Hangar Assn (President), Aviation Education Association of Colorado (AEFCO- Vice President), EAA-Young Eagles (pilot coordinator .. has personally flown over 400 kids!)
- Member: Aircraft Owners & Pilots Assn (AOPA), Experimental Aircraft Assn (EAA)

Member **Lee Lesher** *lesherlee@gmail.com*
ADC: 7 years . . . (MLAA Board: 2 years as Vice President)

- Education: MBA (Arizona State University), BS-Civil Engineering (University of North Dakota)
- Aviation experience: 47 years (15,000 hrs TPT)
  > 22 years USAF, 20 years corporate, 46 years general aviation
  > Airline Transport Pilot (ATP), Certified Flight Instructor (CFI/CFII/MEI), Airframe and Powerplant Mechanic

- Business experience: co-owner TGP Aviation LLC, DELL Properties LLC, Falcon Development Corporation (all at Meadow Lake)
- Community activities: EAA Young Eagles Pilot, Civil Air Patrol Flight Instructor/Check Pilot
- Member: Colorado Pilots Assn (CPA), Aircraft Owners & Pilots Assn (AOPA), Experimental Aircraft Assn (EAA), American Bonanza Society (ABS)

Member **Wyman Varnadoe** *wymanvarnadoe@phantomfuels.com*
ADC: 7 years (MLAA Board: 1 year)

- Education: BS (US Air Force Academy)
- Aviation experience: 41 years
  > 10 years USAF, 31 years airline, 40 years general aviation;
  > Airline Transport Pilot (ATP),
- Business experience: owner Phantom Fuels (KFLY)
- Community activities: Young Eagles
- Member: Experimental Aircraft Association (EAA)

(c) *Written authorization of the application package by the Project owner, if project different than the applicant*:

. . . MLAA is the owner and applicant. . . . {see Letter of Designation (Encl 11b)]

(d) *Documentation of applicant's financial and technical capability to develop and operate the Project, including description of the applicant's experience developing and operating similar projects*:

The following comments describe the current financial management of the Meadow Lake Airport. Implementation of the expansion program is discussed at Paragraph 9 below.

The primary source of revenue to operate the Meadow Lake Airport are from annual assessments (dues) provided by members of the Meadow Lake Airport Association. No public funds or tax resources are used for routine operations or maintenance to this valuable public-use facility. Dues are based on a percentage of the County Assessors valuation/property taxes, and a budget is prepared annually to operate and maintain the airport. The annual budgets for the past few years have been approximately $100-110K, with approximately 60-65% toward operations & maintenance (O&M) and 35-40% allocated for discretionary projects and reserve. Reserve funds are used for providing the "sponsor match" to grants obtained from federal and state aviation programs for capital improvements. The MLAA annually files an IRS Form 990: *"Return of Organization Exempt From Income Tax"*. The 2018 report is provided to illustrate the solvency of the Association. . . . . [see Encl 12a]

In the mid-80's, it was realized that the airport was growing much quicker than expected and an upgrade to the runway was needed to support increasing operations. The original runway was 36 feet wide, 4,300 feet long, and reportedly lighted by mason jars with light bulbs. A proper upgrade was well beyond the available resources of the Association and application was made to the Federal Aviation Administration for assistance. In July, 1989 the FAA

approved the designation of Meadow Lake Airport as a reliever airport for Colorado Springs [Enclosures (6) and (7)], thereby including it in the National Plan of Integrated Airports System (NPIAS) and making it eligible for federal grants via the Airport Improvement Program (AIP). Since that time, the MLAA has obtained and administered 22 AIP grants to improve and protect the airport as part of the NPIAS. . . . . [see Encl 12b]

The following description of the NPIAS is an excerpt from the **2011 Colorado Aviation System Plan – Technical Report** [reference (l)]:

(Page 2-2): 2.2.1 **National Plan of Integrated Airport Systems (NPIAS) and Service Level**

The NPIAS is developed by the FAA to identify airports that are significant to the national air transportation system. The FAA's criteria for an airport's inclusion in the NPIAS include a variety of factors such as airport demand, geographic location, and airport sponsorship. Airports included in the NPIAS are eligible to receive federal grants for airport planning and various capital improvements to keep the airports current with design standards and to meet system capacity needs. Airports are defined within the NPIAS by their service level, which reflects the type of service the airport provides to the surrounding community. The service level also determines the airport's funding category, as established by Congress, to assist in airport development. The NPIAS categories are:

- **Primary Commercial Service (PR)** - Publicly or privately owned airports that enplane more than 10,000 passengers per year and receive scheduled passenger service.
- **Non-Primary Commercial Service (CS)** - Publicly or privately owned airports that enplane at least 2,500-10,000 passengers per year and receive scheduled passenger service.
- **Reliever (RL)** - Publicly or privately owned airports that relieve congestion at commercial service hub airports by improving and offering alternative access to busy metropolitan areas for general aviation and non-airline commercial operators.
- **General Aviation (GA)** - Publicly-owned airports that primarily serve general aviation users.

Notes:

1. The current FAA Form 5010 "Airport Master Record" indicates Meadow Lake's NPIAS No. 08-0063 . . . . . [see Encl 14d]
2. The FAA report *"General Aviation Airports: A National Asset"* [reference (p)] identified only 19 privately owned/operated airports in the country in the NPIAS and eligible for federal AIP grants. . . . . [see Encl 14a]

In addition to the federal AIP, Meadow Lake is eligible for Colorado Discretionary Aviation Grants (CDAG) and has obtained and administered grants every year since 2003 to protect the infrastructure and operations of this valuable state asset (including the Master Plan Update that is the source of this application).

Meadow Lake is the only private airport in the Colorado Airport System in the NPIAS and therefore eligible for state grants. . . . . [see Encl 7c]

The FAA Capital Improvement Program (CIP) for Colorado airports is managed by the Colorado Division of Aeronautics in coordination with the FAA Denver Airports District Office (ADO), and coordinates CDAG and AIP grants, along with "sponsor match" to achieve capital improvement projects. An example is Meadow Lake's upcoming "Runway 15/33 Rehab" project. This reconstruction of the existing runway and primary parallel taxiway is estimated to cost approximately $3.6 million. A CDAG grant in 2018 for $400K, plus a 10% ($44,444) "sponsor match" from MLAA, was used for design engineering work. In 2019, an additional CDAG grant of $2.2M, an FAA AIP grant of $688K (from General Aviation Entitlement funds), and sponsor match of $251K will provide construction of the reconstruction project. . . . . [see Encl 12c]

The Colorado Division of Aeronautics administers a number of other statewide initiatives that Meadow Lake also participates in. Additional information can be found at *https://www.codot.gov/programs/aeronauticals/Periodicals/AnnualReport*

- **USDA Wildlife Hazard Mitigation Program**. *"This program funds efforts of the USDA to assist Colorado airports with effective and approved wildlife mitigation programs. This successful program has significantly helps to reduce wildlife aircraft strikes and damage to airport infrastructure at Colorado's Airports"*

  . . . Meadow Lake uses this program for wildlife control.

- **Crack Sealant Rebate Program**. *"Funding for the crack sealant rebate program directly benefits Colorado airports with a 90% rebate up to $10,000 for crack sealant materials purchased through the state bid system. This program is designed to encourage Colorado airports to use preventative asphalt maintenance practices proven to extend the life span of asphalt runways, taxiways and apron surfaces."*

  . . . Meadow Lake purchased a crack fill machine a few years ago and with volunteer labor, uses this program to help maintain our asphalt surfaces.

- **Communications, Pilot Outreach & Safety**. *"This aviation program funds the production of the Colorado Airport Directory and Colorado Aeronautical Chart as well as safety information outreach to pilots who fly in Colorado. These publications give pilots the most current information in order to safely plan and navigate while flying in Colorado."*

  . . . Although not an "airport" program, Meadow Lake pilots routinely use these publications for recreational flying throughout the state.

- **5010 Airport Safety Inspections**. *"Funding for this program allows the Colorado Division of Aeronautics to conduct regular safety inspections at Colorado airports. These inspections are structures to update the Federal Aviation Administration (FAA) Master Record Form to give the pilots the most current airport data and safety information."*

  . . . Performed on a rotating three-year cycle . . . . . [see Encl 14d]

- **Pavement Condition Index (PCI) Inspection Program**. *"Pavement management is a systematic method of: assessing current pavement conditions, determining maintenance and rehabilitation needs, and prioritizing these needs to make the best use of anticipated funding levels for local, Division, and FAA programs. The Division assists eligible airports in pavement management by utilizing (PCI) Pavement Condition Indexing."*

  . . . Meadow Lake evaluations, prior to (and the basis for) this year's reconstruction project . . . . . [see Encl 15]

- **Internship Program**. *"The Aviation Management Internship Program is designed to develop and educate aspiring aviation professionals and provide them critical on-the-job experience so they can integrate into the aviation industry upon completion of the internship. The CAB approves and appropriates funding for up to two internships per airport, per year. Currently, eight have interns funded by the Division of Aeronautics."*

  . . . Not appropriate for Meadow Lake at this time.

- **Surplus Equipment Sales**. *"With the cooperation of CDOT, Denver International Airport and the CAB, the Division coordinates surplus equipment sales for Colorado public-use airports, in accordance with 43-10-110.7. Equipment at these sales are offered to other Colorado airports in order to make critical equipment such as snow removal equipment, mowers, loaders, service vehicles, and others available to airports at a much lower cost than new."*

  . . . Meadow Lake has taken advantage of this program since 2006 ... [see Encl 13k]

- **Colorado General Aviation (GA) Sustainability Program**. *"Following nearly two years of development, the Division implemented a nationally-ground breaking initiative to provide a sustainability framework and toolkit for the state's general aviation (GA) airports.*

  This is the first such effort in the nation to look at statewide airport sustainability, not just from an environmental perspective, but operationally, socially and financially as well. The Division's sustainability program provides GA airports in the state with an effective and easy to use online toolkit to help them easily create a sustainability plan, create and track metrics, and report on achievements. This toolkit is integrated with the Division's web-based Information Management System (WIMS) program, allowing for future statewide airport sustainability reporting and tracking by the Division."

  . . . Meadow Lake participates in this program (required for CDAG grants). ... [see Encl 12e]

- **Remote Air Traffic Control Tower Project**. *"This leading edge project will be the first in the world to integrate both ground-based video and aircraft track-based/radar components to provide necessary air traffic data to air traffic controllers working in a remote facility. ...".*

  . . . Not appropriate for Meadow Lake at this time.

- **Automated Weather Observing System Development and Maintenance.** *"This program funds the maintenance and repair of Colorado's network of 13 mountain automated weather observing systems (AWOS). ..."*

  . . . Meadow Lake uses portions of this program to maintain our FAA-certified AWOS facility.

Descriptions of the funding programs for the future expansion of the airport, in accordance with the Master Plan growth plan, are described in Paragraph 9 below.

(e) *Written qualifications of report preparers*.

[1] 1041 Application:

David Elliott, President, MLAA Board of Directors . . . . [resume at Encl 11b] Extensive experience in successfully developing and drafting business plans, organization plans, operations plans and programs, etc.

[2] Master Plan/ALP Updates and Design & Engineering Consultant:

FAA guidance for selection of professional consultants to assist airport management is found in Advisory Circular 150/5100-14E, ***"Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects"***:

> "A sponsor is required to award each contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, land acquisition services, mapping or related services with respect to the project in the manner as a contract for architectural and engineering services as negotiated under Title IX of the Federal Property and Administrative Service Act of 1940 (40 U.S.C. Chapter 11, Selection of Architects and Engineers), or an equivalent qualifications-based requirement prescribed for or by the Sponsor of the Airport." [Reference (r)]

Meadow Lake followed this procedure and awarded contracts to Jviation, Inc. for both planning and engineering services:

Jviation, Inc.
900 S. Broadway, Suite 350
Denver, CO 80209
(303) 524-3030
planning
and
engineering consultant

Travis Vallin, Principal
Jim Miklas, Planning Manager
jim.miklas@jviation.com
Tony Davis, Sr Aviation Planner
tony.davis@jviation.com
Jon Weeks, Project Engineer
jon.weeks@jviation.com

"Jviation is a privately-owned planning, design, and construction administration firm incorporated in the state of Colorado. The firm's management team consists of Principals Jim Trott, PE, JD Ingram, PE, Jim Fluhr, PE, and Travis Vallin, who have spent their careers serving airport clients throughout the United States. The firm has 83 full-time professional, technical, and administrative staff."

"Jviation focuses on partnering with our clients to minimize their staff burden during projects, effectively serving as an extension of the client's staff. Since1976, the individuals at Jviation have become leaders in providing high quality and creative planning, design, and related engineering services. By offering complete development and engineering services, we are able to successfully manage projects throughout their entire life cycle." . . . . . [Jviation website]

In addition to preparing this Master Plan, Jviation assisted MLAA and El Paso County in developing Chapter 7 of the Appendix B to the Land Development Code in 2013.

[3] Coordination & oversight:

Colorado Dept of Transportation
Division of Aeronautics
5126 Front Range Parkway
Watkins, CO 80137
(303) 512-5250

David Ulane, Director
Todd Green, Program Manager
todd.green@state.co.us
Kaitlyn Westendorf, planner
kaitlyn.westendorf@state.co.us

Federal Aviation Administration (FAA)
Denver Airports District Office (ADO)
26805 East 68th Ave., Suite 224
Denver, CO 80249-6361
(303) 342-1282

John Bauer, Manager
Marc Miller, Asst Manager
marc.c.miller@faa.gov
John Sweeney, planner
john.sweeney@faa.gov
Kristin Brownson, engineer
kristin.brownson@faa.gov

(5) **Information describing the Project**.

(a) *Vicinity map showing the proposed site and the surrounding area*:

. . . [see Encl 13b]

(b) *Executive summary of the proposal indicating the scope and need for the Project*:

Meadow Lake Airport was conceived and construction began in 1965 as a privately owned and operated airport with an intent for minimal government involvement and/or oversight. As the facility organized and grew, it became increasingly attractive to local aviators desiring to own their own property and explore a variety of aviation interests.

By the mid-80's the facility had outgrown its limited resources and additional support was needed for the airport. Application was made to the FAA for designation of Meadow Lake as a "reliever airport" to Colorado Springs Municipal Airport, which was also growing rapidly. Approval by the FAA in July, 1989 [Enclosure 6a] initiated long-range planning for the airport (Master Plan) as well as capital improvements to the facility. Most of the planning and resource procurement for the airport during the 1990's and turn-of-the-century was technical assistance provided by consultants, with MLAA input.

Additional resources became available to the airport in 2003 with Colorado Discretionary Aviation Grants. The combination of the state and federal resources allowed the airport to acquire a State Infrastructure Bank (SIB) loan in 2004 to acquire additional property to provide more options for future growth and to provide a "buffer" within the rapidly growing Falcon community. Today, the airport comprises over 757 acres, plus approximately 450 acres of private property with through-the-fence access. The Airport Layout Plan (ALP) includes an Exhibit A, "Airport Property Map" which details property owned by the airport (or considered for possible future expansion).

Meadow Lake Airport property
(present Property Schedule No: 43000-00-563)

acquired	property	ALP Tract	acreage
April 1980	runway / parallel taxiway	1	62.14
Sept 1991	Runway 15-33 south RPZ	2	38.25
various	Taxiway Charlie easement (quitclaim)	16/22	4.35
	Cessna Drive (quitclaim)		3.90
July 2001	MLA 1, Tract 1 (old Hangar Restr)	8	5.48
Jan 2002	MLA 1, Tract 2	6	37.09
Sep 2003	buffer E side below crosswind runway	7	163.35
Mar 2004	buffer W side of runway	11	56.91
Mar 2004	buffer S side of runway to Falcon Hts	9	319.28
Oct 2004	buffer SE side for future FBO	12	29.88
July 2005	buffer SE side for future xwind runway	14	36.37
			757 ac

In 2010, the FAA initiated a study of the role and scope of federal support to general aviation airports and in May, 2012, published their initial report ***"General Aviation Airports: A National Asset"*** [reference (p)]. Sources have informed us that Meadow Lake Airport was used prominently through-out the process as an example of general aviation vitality in a local community. The "Summary" (page 1) provides the following perspective:

> There are over 19,000 airports, heliports, seaplane bases, and other landing facilities in the United States and its territories. Of these, 3,330 are included in the FAA's National Plan of Integrated Airport Systems (NPIAS), are open to the public, and are eligible for Federal funding via the Airport Improvement Program (AIP). When an airport's owner or sponsor accept AIP funds, they must agree to certain obligations (or grant assurances).
>
> Most people are familiar with one or more of the 378 primary airports that support scheduled commercial air service, such as John F Kennedy International, Chicago O'Hare International, or Los Angeles International, where U.S. and foreign airlines operate. We also rely on the other 2,952 landing facilities (2,903 airports, 10 heliports, and 39 seaplane bases) to support aeromedical flights, aerial firefighting law enforcement, disaster relief, and to provide access to remote communities. These 2,952 landing facilities are primarily used by general aviation aircraft and agree, therefore, commonly referred to as general aviation airports. Included in this group are 121 airports that also support limited scheduled air services boarding at least 2,500 but less than 10,000 passengers each year.
>
> We documented many important aeronautical functions that are economically and effectively supported at these general aviation airports. As shown in Figure 1, these range from emergency preparedness and response to the direct transportation of people and freight and commercial applications such as agricultural spraying, aerial surveying, and energy exploration.

Figure 1: Types of Aeronautical Functions Serving Public Interest

Emergency Preparedness And Response	Aeromedical Flights Law Enforcement/National Security Emergency Response Arial Fire Fighting Support Emergency Diversionary Airport Disaster Relief and Search & Rescue Critical Federal Functions
Critical Community Access	Remote Population /Island Access Air Taxi/Charter Services Essential Scheduled Air Service Cargo
Other Aviation Specific Functions	Self-Piloted Business Flights Corporate Flight Instruction Personal Flying Charter Passenger Service Aircraft/Avionics Manufacturing/Maintenance Aircraft Storage Aerospace Engineering/Research

Commercial, Industrial, and Economic Activities	Agricultural Support Aerial Surveying and Observation Low-Orbit Space Launch and Landing Oil and Mineral Exploration/Survey Utility/Pipeline Control and Inspection Business Executive Flight Service Manufacturing and Distribution Express Delivery Service Air Cargo
Destination and Special Events	Tourism and Access to Special Events Intermodel Connections (rail/ship) Special Aeronautical (skydiving/airshows)

Together these 2,952 general aviation airports form an extensive network and make important economic contributions to society. Many of these aeronautical functions cannot be economically supported at primary commercial service airports and other alternatives (e.g., fight forest fires without aerial support) are less effective and sometimes more dangerous. [Note: Helicopters supporting the Black Forest fire fighting efforts operated out of Meadow Lake, and life flight support for the new Children's Hospital on the north side of Colorado Springs have been staging through Meadow Lake.]

This study focuses on the Federal network of general aviation airports, heliports, and seaplanes bases and divides them into four new categories based on existing activity levels and related criteria: national, regional, local, and basic:

National (84)	Supports the national and state system by providing communities with access to national and international markets in multiple states and throughout the United States.
Regional (467)	Supports regional economics by connecting communities to statewide and interstate markets.
Local (1,236)	Supplements local communities by providing access primarily to interstate and some interstate markets.
Basic (668)	Supports general aviation activitites such as emergency service, charter or critical passenger service, cargo operations, flight training, and personal flying.

Meadow Lake is classified by the FAA as: Private (PR) - Reliever - Regional

. . . [see Encl 14b]

The ***2011 Colorado Aviation System Plan*** [Reference (l)] describes the state airport system as follows:

> Airports included in the study are predominantly publicly-owned airports, with the addition of some privately owned facilities that are open to the public. The public-use airport system includes 76 airports in total, of which 65 are publicly-owned and 11 are privately-owned. Of these, 14 are commercial service airports and 62 are general aviation airports.

Meadow Lake is classified by Colorado as: Intermediate - Reliever - Private

. . . [see Encl 15a]

To summarize, and put Meadow Lake in perspective:

3,330 airports in the FAA NPIAS

378 primary airports (commercial service)

2,952 general aviation facilities (includes 10 heliports & 39 seaplane bases)

19 privately-owned/operated airports in the FAA NPIAS

. . . Meadow Lake the largest by land area and based aircraft

76 public-use airports in Colorado

. . . 14 are commercial service, 62 general aviation

. . . 65 public owned, 11 private owned

4 Reliever Airports in Colorado: Centennial, Rocky Mountain Metro, Front Range (aka Colorado Air & Space Port), and Meadow Lake

Meadow Lake is the only privately owned/operated airport in the Colorado Aviation System Plan and the NPIAS and the largest of its kind in the country

As Meadow Lake continues its rapid growth and prominence, airport management is taking a more proactive role in planning for Meadow Lake's future. We believe it is appropriate to establish a more formal relationship with El Paso County as our local government and land-use authority to protect this valuable local, state and federal public-use facility, in accordance with state and federal regulations and guidance. This application is submitted to initiate El Paso County recognition and support to Meadow Lake Airport in three parts:

1. designation of Meadow Lake as *"Matter of State Interest"*,
2. review and approval of the Meadow Lake Airport Master Plan Study, and
3. to provide a basis for future coordination for County compliance with C.R.S. 43-10-113: to *"adopt and enforce, at a minimum, rules and regulations to protect the land areas defined in 14 CFR Part 77."* ... [Note: initial discussions with County Planning indicate that this may require coordination for amendments to the Land Development Code]

It should be noted that this Master Plan deals only with the airport proper, i.e.; the aeronautical surfaces (runways & taxiways) and property that the MLAA owns (Property Schedule No. 43000-00-563). It does not address planning or growth of the approximately 450 acres of private-owned personal property that have "Through-The-Fence" access to the airport, over which the MLAA has no direct authority or control for land development standards and only limited responsibility for airport development purposes.

(c) *Plans and specifications of the Project in sufficient detail to evaluate the application against the applicable Review Criteria*:

Appendixes B & C and enclosures provide state and federal guidance for 1041 approval of Meadow Lake as a "Matter of State Interest".

The *"Meadow Lake Master Plan Technical Report (2018)"* [reference a] has been reviewed by the staff at the Colorado Division of Aeronautics and approved by the FAA Denver Airport District Office (ADO). The Master Plan contains the following chapters:

1. Study Introduction and Goals
2. Inventory of Existing Conditions
3. Forecast of Aviation Demand . . . . [FAA approval required - see Encl 6b]
4. Facility Requirements
5. Alternative Analysis
6. Implementation and Financial Plan
7. Airport Layout Plan Drawing Set . . . . [FAA approval req'd - see Encl 6d]

Sheet 01 Title
02 Airport Data Sheet
03 Airport Layout Plan – Existing
04 Airport Layout Plan – Future
05 Terminal Area Plan – Existing
06 Terminal Area Plan – Future
07 Airport Airspace Drawing – Existing
08 Airport Airspace Drawing – Future
09 Airport Airspace Drawing – Existing Runway 8/26, 15/33, 15G/33G Profiles
10 Airport Airspace Drawing – Future Runway 8/26, 15/33, 15G/33G Profiles
11 Inner Approach Surface Drawing – Existing Runway 15/33
12 Inner Approach Surface Drawing – Existing Runway 15G/33G
13 Inner Approach Surface Drawing – Existing Runway 8/26
14 Inner Approach Surface Drawing – Future Runway End 15
15 Inner Approach Surface Drawing – Future Runway End 33
16 Inner Approach Surface Drawing – Future Runway 15G/33G
17 Inner Approach Surface Drawing – Future Runway 8/26
18 Departure Surface Drawing – Future Runway 15/33
19 Land Use Drawing
20 Exhibit A Property Map
21 Exhibit A Property Map (data)

In addition, the Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] and *"Compliance Plan"* [reference (i) were prepared for review and approval by the Division of Aeronautics and ADO, and are referred to through-out this application. The former was also reviewed by El Paso County.

As stated previously, future Master Plans and actual plans to expand of the airport will specifically address all of the County's Review Criteria. Proposed implementation of the expansion plans described herein will necessitate an additional future application with the actual construction plans addressing the requirements of the Land Development Code, Appendix B.

(d) *Descriptions of alternatives to the Project considered by the applicant*:

The Meadow Lake Airport Master Plan contains the following:

Section 2.4.1 **Airport Reference Code (ARC)** . . . . . [ref (a), pg 2-4]

The Federal Aviation Administration (FAA) classifies airports in the United States with a coding system known as the Airport Reference Code (ARC). This classification helps apply designed criteria appropriate to operational and physical characteristics of the aircraft types operating at each airport. The design standards are presented in various FAA advisory circulars, primarily in FAA AC 150/5300-13A, Airport Design. The ARC is made up of two components: the Aircraft Approach Category (AAC) and the Airplane Design Group (ADG). FLY is currently classified as ARC B-1: Small Aircraft (less than 12,500 pounds).

The **Aircraft Approach Category (AAC)** is an alphabetical classification of aircraft based upon 1.3 times the stall speed in a landing configuration at their maximum certified landing weight. An airport's AAC is determined by the approach speed of the fastest aircraft that operates at the Airport at least 500 times per year; Category A is the slowest approach speed, E is the fastest.

Aircraft Approach Category (AAC)					
Approach Category	A	B	C	D	E
Approach Speed	< 90 kts	91-120	121-140	141-165	>166

The **Airplane Design Group (ADG)** is a numerical classification of aircraft based on wingspan and tail eight. If an airplane's wingspan and tail height is n two categories, the most demanding category is used. Similar to the AAC, an airport's ADG is determined by the largest aircraft operating at least 500 times per year at the airport. For airports with multiple runways, the published ARC is based on the most demanding runway design group.

Airplane Design Group (ADG)						
Design Group	I	II	III	IV	V	VI
Tail Height	< 20'	20-30	30-45	45-60	60-66	66-80
Wing span	< 49'	49-78'	79-117'	118-170'	171-213'	214-261'

Section 2.4.2 **Runway Design Code (RDC)** . . . . . [ref (a), pg 2-5]

The RDC is specific to each runway at an airport. The most critical aircraft which uses a runway at least 500 times per year is used to determine the RDC. The RDC uses the same AAC and ADG criteria utilized to determine the ARC, but adds a visibility minimum component. The current RDC for Runway 15/33 at FLY is B-I-5000. The RDC for Runway 8-26 is A-I-5000, as well as for the turf glider runway.

The following table illustrates the phases of growth at Meadow Lake:

	pre-FAA original	B-I 1990	B-II future
Runway width:	36 feet	60 feet	75 feet
Runway length	4,300 feet	6,000 feet	6,750 feet *
Runway weight bearing	unspecified	12,500 lbs	
dual wheel:		18,000	30,000 lbs
Instrument Approach	none	no	yes
Safety Area (setbacks)	no standard	FAA VFR	FAA IFR

* revised FAA standards now require the sponsor to own 1,000 feet at each end of runway for the Runway Protection Zone (RPZ). Therefore, the current future growth plan is limited to 6,750 feet. Additional property could allow for a longer runway.

Alternatives for submission of this application for recognition of Meadow Lake Airport as a "Matter of State Interest" are:

- Do Nothing

  Pros - no action or effort required, no cost required

  Cons - encroachment to airport risks significant safety concerns to pilots and persons on ground
  - encroachment to airport risks potential noise and irritant concerns to persons on ground
  - lack of proper land use coordination jeopardizes FAA and CDoT funding to airport
  - jeopardizes long term future existence of airport

- Submit Application

  Pros - coordinates and provides planners with Compatible Land Use Plan for development in the Meadow Lake Airport Influence Area, and:
    - minimizes safety risks to persons and property
    - minimizes non-compatible development of land in the
    - maintains FAA & CDoT grant eligibility to airport
    - enables future growth and economic viability and vitality of airport and community

  Cons - Will require time and effort on part of MLAA and County
  - May require amendment to County Land Code

The Meadow Lake Airport Master Plan contains the following:

Chapter 5. ALTERNATIVES ANALYSIS . . . . . [ref (a), pg 5-1]

The objective of this chapter is to present various options and provide recommendations for future development at the Meadow Lake Airport (FLY or the Airport) over the next 20 years that meet the projected levels of aviation

demand. Maximize economic development potential and maintain a safe aviation environment. As noted in the FAA AC 150/5070-6B, *Airport Master Plans*:

> The alternatives chapter brings together many different elements of the planning process to identify and evaluate alternatives for meeting the needs of the airport users as well as the strategic vision of the airport sponsor. Airports have a wide variety of development options, so an organized approach to identifying and evaluating alternative development options is essential for effective planning.

In conformance with this FAA objective, this chapter has been structured to provide that organized approach to determine a recommended plan for future development at FLY. It includes the following five sections:

5.1 Summary of Airport Facility Recommendations
5.2 Ability of Existing Facilities to Accommodate Future Improvements
5.3 Identification of Development Alternatives
5.4 Evaluation of Alternatives
5.5 Conclusions and Recommendations

Section 5.3 **Identification of Development Alternatives** . . [ref (a), pg 5-6]

Five Alternatives for development within the existing Airport property have been prepared for consideration. Particular focus has been given to the use of existing facilities, development within the property boundary and enhancements to access and connect various components of the airfield and landside. The Alternatives have been numbered based on their projected impact to the existing airfield (with Alternative 1 representing little to no impact, and Alternative 2 resulting in more significant impacts) and need based on their runway configuration.

The evaluation of the alternatives considers a number of factors, including:

- Meeting FAA airport design standards
- Minimizing potential environmental impacts
- The cost and funding sources for facility development
- Providing sufficient operational capacity to meet projected demand
- Maximizing the use of airport property
- Efficiently staging development of a 20-year planning period
- Providing flexibility to meet changing demand

Pros	Cons
Alternative 1A	
Maintain the Existing Runway System	
Relatively low cost	Does not provide ARC B-II runway
Accommodates ARC B-I Small aircraft	Limited access by ARC B-II aircraft
Meets projected demand	Longer ground access to relocated turf runway
Meets FAA design standards (B-I Small)	Need to acquire easement for taxiway
Allows for more terminal area development	Modification to design standard for turf runway
Does not meet State Aviation System Plan benchmarks	

Alternative 1B

Existing Runway System + Turf Runway East of Runway 15/33

Relatively low cost	Does not provide ARC B-II runway
Accommodates ARC B-I Small aircraft	Limited access by ARC B-II aircraft
Meets projected demand	Longer ground access to relocated turf runway
Meets FAA design standards (B-1 Small)	Need to acquire easement for taxiway
Allows for more terminal area development	

Does not meet State Aviation System Plan benchmarks

Alternative 2A

New B-II Rwy 15/33 + New Turf Runway West + Shift Runway 8/26

Accommodates ARC B-II aircraft	Large capital investment
Meets FAA design standards (ARC B-II)	Environmental impacts
Allows for more terminal area and FBO development	Future ownership of parcel to be determined for taxiway
Provides more than adequate operational capacity	Terminal building should be relocated
Allows for instrument approach procedure	Reduced length glider runway
Allows glider operation to remain in existing location	

Meets State Aviation System Plan benchmarks, but limits glider operations

Alternative 2B

New B-II Runway 15/33 + New Turf Runway East of 15/33

Accommodates B-II aircraft	Large capital investment
Meets FAA design standards (ARC B-II)	Environmental impacts
Allows for more terminal area development	Longer ground access to relocated turf runway
Provide more than adequate operational capacity	Future ownership of parcel to be determined for taxiway
Allows for instrument approach procedure	Terminal area should be relocated

Meets State Aviation System Plan benchmarks, but limits crosswind operations

Alternative 2C (preferred alternative)

New B-II Runway 15/33 + New Turf Runway East + Shift Runway 8/26

Accommodates ARC B-II aircraft	Large capital investment
Meets FAA design standards (ARC B-II)	Environmental impacts
Allows for more terminal area and FBO development	Longer ground access to relocated turf runway
	Terminal area should be relocated
Provide more than adequate operational capacity	
Allows for instrument approach procedure	

Optimum plan to meet State Aviation System Plan benchmarks and local needs

(e) *Schedules for designing permitting, constructing and operating the Project, including the estimated life of the Project*:

Recognition of Meadow Lake Airport as a "Matter of Interest" should be an indefinite designation for the active life of the airport as an FAA approved Reliever Airport, subject to review with each Master Plan Update for potential revision of the Airport Influence Area and any Compatible Land Use Plan.

The Meadow Lake Airport Master Plan contains the following:

Section 6.1.1 **Development Plan Implementation** . . . . . [ref (a), pg 6-1]

The implementation of the recommended development plan will be dependent on a number of factors including availability of funding; the environmental coordination, review, and compliance process; the actual rate at which aviation activity increases in the future that warrants additional capacity; among others. As a result, MLAA will need to continually review and update their Capital Improvement Plan (CIP), which they currently do in coordination with CDoT and the FAA, as well as monitor their aviation activity levels in relation to the forecasts of demand presented in this master plan.

There are two key factors that must be considered in the overall implementation process:

1. The time required to design and construct each project, including scheduling the necessary funding from various sources, as well as the environmental review and approval process, all of which can require a number of months, and sometimes even years. Construction timing and phasing is also weather and season dependent, which limits the time period available to implement the development.
2. The sequence and priority of the project development. Some projects are relatively independent stand-alone improvements such as the renovation or replacement of the existing terminal building/SRE garage, and relocating Runway 8-26 to the south. Other projects, such as the construction of the new Runway 15-33 to B-II design standards, will require the construction of parallel taxiways and the closing of the existing Runway 15-33. The existing Runway 15-33 pavement is in poor condition and is programmed to be partially rehabilitated (primarily maintenance) in the fall of 2015. The runway is programmed to be rehabilitated in 2019, after which it is anticipated to have a design life of approximately 10 years (until 2029). The new Turf runway, parallel to Runway 15-33, will be constructed when the new Runway 15-33 is built.

(f) *The need for the Project, including a discussion of alternatives to the Project that were considered and rejected; existing/proposed facilities that perform the same or related function; and population projections or growth trends that form the basis of demand projections justifying the Project*:

The following excerpt if from the Airport Cooperative Research Program (ACRP) Report 27, *"Enhancing Airport Land Use Compatibility"*, Volume 1 [ref (aa)]:

Introduction

Airports are an important element in the viability of our nation and are a significant resource to both the national and global economy. Unfortunately, incompatible land uses are threatening the utility of airports and aircraft operations across the country. The FAA, as the federal agency charged with oversight of aviation issues, airport operations, state aviation departments, and local jursidictions that are locted near an airport, must encourage compatible land

uses around airports to protect these important transportation and economic assets. Table S1.1 summarizes some of the primary reasons for incompatibility and the associated consequences. ...

Table S1.1 Reasons to prevent incompatibility

Why is Incompatibility Occurring?

- The United States population has increased by over 80 million people in 30 years.
- Urban areas are expanding and communities are pursuing dense development.
- Communities underestimate the adverse impacts of incompatible land use development on airport operations.
- Many airports are currently surrounded by flat, undeveloped land that is attractive for development because it is served by utilities and other infrastructure.

What are the consequences of Incompatibility?

- Degraded airport operations
- Limited current and future economic development opportunities
- Reduced quality of life for airport neighbors
- Lost value of public investment
- Decline in transportation access
- Increased safety risk to aircraft and persons on the ground
- Precludes airport expansion or modification resulting from demand or new technology

Types of Airport Land Use Compatibility Concerns

Airport compatible land uses are defined as uses that can coexist with a nearby airport without either constraining the safe and efficient operation of the airport or exposing people living and working nearby to unacceptable levels of noise pr hazards. Determining the level of compatibility of land uses around an airport is affected by the type of use and associated concerns. ...

Roles and Responsibilities of Stakeholders

A variety of federal and state agencies are stakeholders in the land use planning arena that need to be integrated into the planning process. Since the FAA is unable to mandate specific land uses near airports, it is the responsibility of local governments and airport sponsors to implement and enforce land use compatibility measures near airports. Each community and airport has unique situations that require policies be tailored to their individual airport and community needs to ensure compatible land uses. In many instances there often are contradictory regulations from these same stakeholders that must be addressed to achieve land use compatibility near an airport. ...

The Master Plan is submitted for County review in accordance with federal and state directives. As previously noted, Meadow Lake is designated by the FAA as a general aviation (GA) reliever for the Colorado Springs Municipal Airport (COS). As COS and its Commercial Aeronautical Zone (CAZ) continue to grow with large commercial, corporate and military traffic, the significance of Meadow

Lake to relieve the general aviation congestion will also continue to grow. It is imperative to be proactive in planning for future growth of this facility.

Calhan (5V4) and Springs East (CO4) airports are open to the public, but have limited facilities and neither are part of the Colorado or National Airport systems.

The Federal Aviation Administration requires NPIAS airports to provide a Master Plan in accordance with the following directives:

- *"Airport Master Plans"* [FAA Advisory Circular 150/5070-6 . . . . . [ref (q)]
- *"Airport Improvement Program Handbook"* [FAA Order 5100.38 . . [ref (u)]
- *"FAA Airport Compliance Manual"* [FAA Order 5190.6 . . . . . [ref (w)]

The Meadow Lake Airport Master Plan contains the following:

Chapter 3. **FORECAST OF AVIATION DEMAND** . . . . . [ref (a), pg 6-1]

Projecting future demand is a critical element in the Airport Master Plan (AMP) process since many projects and recommendations within the master plan are based upon aviation activity demand forecasts. As noted in FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans:

> Forecasts of future levels of aviation activity are the basis for effective decisions in airport planning. These projections are used to determine the need for new or expanded facilities. In general, forecasts should be realistic, based upon the latest available data, be supported by information in the study, and provide an adequate justification for airport planning and development.

The FAA requires their approval of the aviation forecast used in airport master plans. The approval for the FLY Master Plan is enclosed at Enclosure 6b.

The *"FAA Airport Compliance Manual"* requires that airport sponsors be obligated to "Airport Assurances" when accepting FAA AIP grants. [see Encl 14c] Included in the 39 assurances, are requirements that the sponsor (MLAA) ensure that:

- Assurance #6. **Consistency with Local Plans** ... *"The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport."*
- Assurance #7. **Consistency of Local Interest** ... *"It has given consideration to the interest of communities in or near where the project may be located."*
- Assurance #21. **Compatible Land Use** ... *"It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, 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 or aircraft. ..."*
- Assurance #29: **Airport Layout Plans** ... *"It will keep up to date at all times an airport layout plan of the airport ...".*

- Assurance #34. **Policies, Standards, and Specifications** ... *"It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects ... and in accordance with applicable state policies, standards, and specifications approved by the Secretary."*

The *2011 Colorado Aviation System Plan* established Performance Measures for evaluation to determine how well the system is performing. Meadow Lake fell short in three areas:

- Primary Runway PCI (Pavement Condition Index) (to be accomplished with the 2018-2019 Runway rehab project)
- Airport Not Meeting Part 77 Benchmark (the third objective of this submission)
- Intermediate Airports Needing Published Approach (to be accomplished in the future)

The following description of the Airport Master Plan and the FAR Part 77 Surfaces is an excerpt from the 2011 Colorado Aviation System Plan:

2.5.1 **Airport Master Plan/Layout Plan** . . . . . [ref (j), pg 2-34]

Information regarding the current status of planning documentation at Colorado system airports is depicted in Table 2-4. The table includes the date of each airport's most recent master plan, anticipated date for their master plan to be updated, and whether the current master plan/Airport Layout Plan includes an FAR Part 77 airspace drawing. Airports included in the NPIAS must have a current airport master plan or airport layout plan that has been approved by the FAA to be eligible for federal funding. Additionally, only projects shown on a current and approved airport layout plan are eligible for FAA funds. The airport master plan is a report that documents the airport's long range planning process, while the Airport Layout Plan (ALP) is a set of drawings that actually depicts recommendations that are a result of the planning process.

2.5.2 **FAR Part 77 Surfaces**

Federal Aviation Regulations (FAR) Part 77 define the standards for determining obstructions in the vicinity of an airport or within its airspace. Part 77 defines the airport's imaginary surfaces, which are geometric shapes that are in relation to the airport and each associated runway. The slope and dimension for the imaginary surfaces for each runway at each airport are based on the category of existing and future approaches for each runway. Exhibit 2-2 depicts the FAR Part 77 surfaces.

FAR Part 77 imaginary surfaces are defined as follows:

- **Primary Surface** - The Primary Surface is an imaginary obstruction-limiting surface that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are a function of the type of approach, existing or planned for each runway.
- **Approach Surface** - The Approach Surface is an imaginary obstruction-limiting surface that is longitudinally centered on the extended runway

centerline and extends outward and upward from the primary surface at each end of a runway at a designated slope and distance based upon the type of available or planned approach to each runway.

- **Horizontal Surface** - The Horizontal Surface is an imaginary obstruction-limiting surface that is specified as a portion of a horizontal plane surrounding a runway that is located 150 feet above the established airport elevation. The specific horizontal dimension of this surface is a function of the type of approach, existing or planned, for the runway.
- **Conical Surface** - The Conical Surface is an imaginary obstruction-limiting surface that extends from the edge of the horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- **Transitional Surface** - The Transitional Surface is an imaginary obstruction-limiting surface that extends outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface.

The runway approach surfaces overlay the Runway Protection Zone (RPZ); the RPZ is a trapezoidal shaped area off each runway end which is designed to improve the protection of people and property on the ground. The dimensions of the RPZ are determined from the design aircraft, operational types, and approach visibility minimums. The approach zone and RPZ standards get progressively larger as the approach type moves from visual, to non-precision, and then to precision.

2.5.3 FAR Part 77 Zoning Ordinances

In addition to the approach surfaces mandated by the FAA, local communities may also implement land use zoning and local height restrictions around airport property. Ordinances such as these can serve to protect encroachment from incompatible land uses or obstructions to the airport's airspace. One of the assurances that an airport owner/sponsor signs when they accept a federal grant is to protect the airport from encroachment that may limit the airport's expansion or operation. Table 2-4 indicates which Colorado system airports have FAR Part 77 drawings and/or local land use or height restrictions.

Expansion of an airport is considered with respect to operational capacity and forecasts for growth. The 2011 Colorado Aviation System Plan establishes the following benchmark:

For airports in Colorado to effectively serve their customers, they should have adequate operational capacity. The system plan benchmarked the annual operational capacity of each airport to current and future total annual aircraft landings and takeoffs. This was accomplished using each airport's annual service volume (ASV). ASV reflects the ability of each airport's runway and taxiway system to accommodate annual operational demand; an ASV for each system airport was estimated using accepted FAA guidance. Projections of aviation demand were developed to support activity benchmarking. Activity recorded in 2005 and 2010 was a major building block to develop projections for various demand components. The critical component considered in the demand/capacity analysis was each airport's total annual operational estimate.

The FAA recommends that when annual demand saturates 80 percent of an airport's ASV, steps should be taken to address operational capacity shortfalls. The system plan includes a target to have all airports operating under 80 percent demand/capacity ratio. No airports in the Intermediate or Minor categories reached critical demand/capacity thresholds in 2000, 2005, or 2011.

(g) *Description of relevant conservation techniques to be used in the construction and operation of the Project*:

Operation of the current airport is consistent with accepted best practices. The Application for a 1041 Permit and Airport Master Plan review dos not involve construction or any disruption of the current airport environment.

Future expansion involving actual construction will include appropriate conservation techniques in accordance with local, state, and federal requirements. Enclosure 14e provides a list of "Current FAA Advisory Circulars Required for Use in AIP Funded and PFC Approved Projects". Many of these circulars contain conservation practices relevant to the subject matter.

(h) *Description of demands that this Project expects to meet and basis for projections of that demand*:

"Capacity" of an airport is a consideration of annual operations (take-offs and landings) and the number of based aircraft. At airports with operating air traffic control tower, such as Colorado Springs, tower personnel (controllers) keep an hourly record of take-off and landing clearances issued. At "uncontrolled" airports, such as KFLY, pilots coordinate directly with each other without the assistance of a control tower. At these facilities, there are no records kept of take-offs and landings, so an annual operations are an estimate.

The FAA sponsors the "National Based Aircraft Inventory Program" for the 2,949 airports enrolled in the NPIAS as non-Primary airports. Meadow Lake participates in this program by conducting an annual census with our membership. The current list shows over 450 aircraft of all types, flying, under construction or repair, or awaiting restoration, based at KFLY. The FAA does not consider gliders, ultralights, and other non-operational aircraft, therefore the current FAA 5010 Airport Master Record shows 392 based aircraft as of 7/18/2019. (Note: only 106 airports in the program have more than 200 aircraft)

. . . [see Encl 14c(2)]

With these numbers as a basis, the factors listed below are used to forecast growth and needs of the airport for the future. The Meadow Lake Airport MASTER PLAN STUDY [Reference (a)] has been drafted and approved in accordance with FAA requirements of the Airport Improvement Program and other published policies and regulations.

The Master Plan (and FAA Terminal Area Forecast) include:

Relevant Factors at Meadow Lake Airport

- Home building, flight training, glider activity is strong

- Military/CAP training & transient traffic at FLY has fluctuated over the years but still strong
- El Paso County population, employment, and income growing – outlook strong
- Most based aircraft owners also home/hangar owners & members of MLAA – long term commitment
- FLY is a GA reliever to COS Airport
- FLY used regularly for training by a variety of military units, AP, and non-based aircraft
- A large percent of traffic at FLY by homebuilts & antique aircraft
- Some noise complaints, but no noise abatement procedures or curfews [ed note: We have had very few noise complaints in the 12 years that I have been listed as the airport contact]

Factors Driving Activity Growth at Meadow Lake Airport"

- County-wide population & employment growing
- Airport easily accessible
- Airport can accommodate variety of GA aircraft
- Multiple airport services available
- GA reliever to Colorado Springs (COS)
- Very price competitive (hangars, fuel, tiedowns)
- Room for additional aprons & hangars
- Resource center for GA aircraft maintenance & homebuilts
- Stable/proactive airport management
- Pro-active outreach programs such as AEFCO, Young Eagles, Falcon Aero-Lab, CAP Cadet program, etc

FLY – Preferred Forecast

Year	Based Aircraft	Operations
current	393	65,813
2022	403	70,121
2027	413	74,848
2037	434	85,748
2018 – 2034	+ 10.4 %	+ 30.3 %

(i) *List of adjacent property owners and their mailing addresses*:

. . . [see Encl 13c]

(6) **Property rights, other permits and approvals**.

(a) *Description of property rights that are necessary for or that will be affected by the Project, including easements and property rights proposed to be acquired through negotiation or condemnation*:

The current operation of the airport and aircraft taking off and landing is protected by state and federal regulations. The following statutes apply:

- C.R.S. 41-1-107. Ownership of space. *"The ownership of space above the lands and waters of this state is declared to be vested in the several owners of the surface beneath, subject to the rights of flight of aircraft."* . . . . [see Encl 4a]
- *49 U.S. Code 40102.* Definitions. *"Navigable airspace" means airspace above the minimum altitudes of flight prescribed by regulations under this subpart and subpart III of the part, including airspace needed to ensure safety in the takeoff and landing of aircraft."* . . . . . [see Encl 5a]
- 14 CFR 91.119 – Minimum safe altitudes: General. *"Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes: (a)* ***Anywhere****. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface; (b)* ***Over congested areas****. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal within a horizontal radius of 2,000 feet of the aircraft; (c)* ***Over other than congested areas****. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure."* . . . . . [see Encl 5c]

Runway Safety Area and **Runway Protection Zones** are discussed in the Master Plan at Section 4.2.8. "The ***Runway Safety Area (RSA)*** enhances the safety of aircraft which could undershoot, overrun, or veer off the runway, and provides greater accessibility for firefighting and rescue equipment during such incidents." "The ***Runway Protection Zones (RPZ)*** is designed to provide additional protection for people and equipment on the ground." Enclosure 13f(2) "Existing Airport Facilities" depicts current **Runway Safety Areas** and **Runway Protection Zones** (formerly referred to as "Runway Clear Zone") for Meadow Lake Airport. All RSAs and RPZs for the three current runways are on MLAA property with two exceptions:

(1) The RPZ for the north end of Runway 15-33 extends beyond airport property, across Judge Orr Road and Rt 24 and two private properties. A "Clear Zone Avigation Easement" was entered into by the MLAA and the owners of the properties. . . . . [see Encl 13e(2) & 13e(4)]

(2) The RPZ for the east end of Runway 8-26 extends across a portion of Lot 11, Meadow Lake Estates Filing No 6. The subdivision plat depicts the lot, the runway and "clear zone surface" and "approach clearance surface", and Note 12, which reads *"Height of all structures within this*

subdivision is subject to the limitations defined in Part 77 of the Federal Aviation Regulation entitled, Objects Affecting Navigable Airspace."
[see Encl 13e(6)]

Avigation Easements have been filed on many of the properties surrounding Meadow Lake Airport. Generally, these documents advise the property owners that the property is within the influence area of the airport and in addition to conveying the overflight of aircraft, the property may be subject to noise, vibration, and all other effects cause by the aircraft taking off and landing at the airport. A "standard" Meadow Lake Airport Avigation Easement has been developed for future use with developments in the Meadow Lake Airport Influence Area. . . . . [see Encl 13e]

Current **Meadow Lake Airport Traffic Patterns** are illustrated at Enclosure 13g(3) thru 13g(5). Note that these are representative only. The actual ground path of the aircraft and radius of turn for each leg is a direct function of the speed of the aircraft and experience of the pilot.

Noise Contours for Meadow Lake Airport are illustrated in the Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] at Figure 5-5.

An illustration of a **"Meadow Lake Airport Influence Area"** is depicted in the Falcon/Peyton Small Area Master Plan. . . . . [see Encl 13g(1)]

The Meadow Lake Airport Layout Plan (ALP) [reference (a), Chapter 7] contains the following airspace drawings ("Part 77")

Airport Airspace Drawing – Existing . . . Sheet No 07 of 21
Airport Airspace Drawing – Future . . . . Sheet No 08 of 21

C.R.S. 43-10-113 [Reference (g)], directs that appropriate zoning be adopted with respect to the Meadow Lake Airport Influence Area as charted in the FAR Part 77 airspace depictions. . . . . [see Encl 13g(2)]

(b) *List of all other federal, state and local permits and approvals that will be required for the Project, together with any proposal for coordinating these approvals with the County permitting process*:

Master Plan Approval. CDOT/Aeronautics and the FAA Denver Airport District Office (ADO) have reviewed and approved the Meadow Lake Master Plan Update. Implementation of the Plan will require additional coordination and approval with County, State and Federal resources.

FAR Part 77 Adoption. Directives from the state and county directing/adopting the Meadow Lake Airport Part 77 implementation are already in place. The MLAA stands ready to work with the County Planning and Community Development Department in drafting appropriate zoning or land use regulations.

C.R.S. 43-10-113. Safe operating areas around airports - establishment

(1) "The general assembly hereby declares commercial service airports, public airports, reliever airports, as defined in 49 U.S.C. sec. 47102, and the land areas

surrounding such airports, as defined in 14 CFR part 77, to be a metter of state interest as provided in article 65.1 of title 24, C.R.S."

(2) "Governmental entities with zoning and building permit authority shall adopt and enforce, at a minimum, rules and regulations to protect the land areas defined in 14 CFR part 77."

El Paso County Policy Plan [reference (k)]: Chapter III, Appendix II

ELEMENTS OF THE EL PASO COUNTY MASTER PLAN
"As of January 1, 1998 the following documents are all adopted elements of the El Paso County Master Plan:"

A. Small Area Plans:
   9. Falcon/Peyton Comprehensive Plan (1993)

B. Topical Elements:
   5. Meadow Lake Airport Part 77 Study (1990)

Implementation of the expansion depicted in the Master Plan: will require, at a minimum:

- Master Plan Update indicating need for expansion runway (with County, State, FAA approvals)
- Update and approval of Capital Improvement Plan (CIP) indicating funding for design & engineering, and construction of expansion runway (usually 3-5 years prior to planned construction)
- Submission and approval of grant applications for design & engineering
- Submission and approval of grant applications for construction.

(c) *Copies of relevant official federal and state consultation correspondence prepared for the Project; a description of all mitigation required by federal, state and local authorities; and copies of any draft or final environmental assessments or impact statements required for the Project*:

Exhibit B (with Enclosures) is the El Paso County application for 1041 Permit

The Master Plan Update had been prepared in accordance with federal and state directives and guidelines. Applicant is not aware of any other correspondence or documentation that is required at this time. The correspondence at Enclosures 5a illustrate the time critical need for developing an appropriate compatible land use plan around Meadow Lake Airport as soon as possible.

Implementation of the expansion depicted in the Master Plan will require additional engineering and documentation, including environmental studies required by FAA Order 5050.4, "Airport Environmental Handbook" [Reference (t) ... available at www.faa.gov].

(7) **Land Use**.

(a) *Provide a map at a scale relevant to the Project and acceptable to the Department describing existing land uses and existing zoning of the proposed Project area and the Project service area, including peripheral lands which may be impacted. The land use map shall include but need not necessarily be limited to the following categories: residential, commercial, industrial, extractive, transportation, communication and utility, institutional, open space, outdoor recreation, agricultural, forest land and water bodies. Show all special districts (school, fire, water, sanitation, etc.) within the Project area*:

Area Zoning Map 423 . . . . . [see Encl 13d(1)]
Emergency Services Map . . . . . [see Encl 13d(2)]
School Districts and Facilities . . . . . [see Encl 13d(3)]

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.4 **Compatible Land Uses** . . . . . [ref (h), pg 4-3]

The compatibility of land promotes the safety, health and welfare of both airport users and surrounds neighbors by protecting airspace and ensuring appropriate use of land within and surrounding airport property boundaries. Generally speaking, noise impacts and safety generated b airports and aircraft operations are a primary consideration in land use planning around airports. Typically, development actions that may change aviation related noise impacts and land uses include fleet mix changes or the number of aircraft operations, air traffic changes, and new approaches. Noise impacts are discussed thoroughly in Section 4.2.12. In addition to the effects of noise on land use compatibility, the FAA requires the analysis of compatibility of land uses in the vicinity of an airport to ensure safe aircraft operations can continue, as well as the protection of defined airspace around airports like FLY.

4.2.4.1 Existing Conditions

The zoning surrounding FLY is maintained by El Paso County and depicted in Figure 4-2. The zoning designations, as defined in the El Paso County Land Development Code, Chapter 3 and 4, surrounding the airport are:

- **A-35: Agricultural District**. The A-35 zoning district is a 35-acre district primarily intended to accommodate rural communities and lifestyles, including the conservation of farming, ranching and agricultural resources.
- **RR-2.5: Residential Rural District**. The RR-2.5 zoning district is a two and a half-acre district intended to accommodate low density, rural, single-family residential development.
- **RR-5: Residential Rural District**. The RR-5 zoning district is a five-acre district intended to accommodate low density, rural, single-family residential development.

- **R-4 (Obsolete)**: The R-4 district is established to provide more flexibility and latitude of design; to provide for a greater variety of principal and accessory uses in the development of land; to address the advantages resultant from technological change; and, to encourage initiative and creative development of parks, recreational, open space, and other selected secondary uses.
- **PUD: Planned Unit Development**. The PUD district is a versatile zoning mechanism to encourage innovative and creative design and to facilitate a mix of uses, including residential, business, commercial, industrial, recreational, open space, and other selected secondary uses.
- **GA-O: General Aviation Overlay District**. The GA-O district is intended to apply to the land within and surrounding airports to protect those airports using non-instrument runways for GA purposes.
  - **Use Restrictions**: No building or land may be used and no building may be erected, converted, or structurally altered except in accordance with the following requirements:
  - **Meadow Lake Airport GA-O Uses**. The following uses are allowed in the non-residential area of the FLY included in the GA-O district, in addition to those uses allowed in the underlying base zoning district:
    - Aero club facilities
    - Aircraft maintenance facilities
    - Airfields and landing strips
    - Airport terminals. Related supporting facilities
    - Aviation control towers
    - Hangars and tie-down facilities
    - Navigation instruments and aids
    - Aviation related businesses

The following was provided with the original draft of the Meadow Lake Airport Master Plan:

> There are mixed land uses in the vicinity of Meadow Lake Airport, including residential, roadways, open space, and commercial. Local state, and federal government agencies have as one of their stated goals to promote the safety, health, and welfare of citizens, and the FAA has actively promoted this goal by defining land uses both on and adjacent to airports that are compatible with aviation activity. The FAA acknowledges that airport sponsors have very limited control over off-airport land uses, but the FAA expects sponsors to work with local communities to promote compatible land uses that benefit both airport users and surrounding residents by adopting appropriate zoning ordinances, and where appropriate, acquiring property and undertaking soundproofing.
>
> In general, noise impacts and air quality impacts generated by airports (such as ground vehicles) and aircraft operations are primary considerations in land use planning on and adjacent to airports. Land uses that are most sensitive to aircraft noise are residential, institutional (e.g. schools, hospitals, etc.), and outdoor stadiums and concert halls. By contrast, agricultural, industrial, open

space, and commercial land uses are generally compatible with aviation activity. In addition to the effects of noise on land use compatibility, the FAA requires the analysis of compatibility of land uses in the vicinity of an airport to ensure safe aircraft operations can continue as well as the protection of defined airspace around airports like FLY.

As noted previously, members of the Meadow Lake Airport Association have constructed residences on private property in the vicinity of the runways at FLY, and most of the houses have hangars for aircraft. Most of the home owners are pilots and/or aircraft owners, and therefore aircraft noise is not an issue for them.

There are also residential areas in the vicinity of the airport that are owned by non-pilots or aircraft owners, and are therefore more sensitive to aircraft noise. Residential and commercial development has occurred in the vicinity of Meadow Lake Airport, and El Paso County anticipates that type of development will continue to expand outward from the Colorado Springs metropolitan region along the U.S. 24 corridor.

El Paso County is responsible for the zoning in the vicinity of FLY, and the County's current zoning map as depicted in Figure 1-10. The zoning designations surrounding the Airport, as defined in the El Paso County Land Development Code, Chapters 3 and 4, are:

Currently the Airport is zoned as R4 and RR-5 with a GA-O District encompassing the entire airport, as sown in Figure 2-1. Typically, residential zoning designations in the vicinity of an airport have the potential to be compatible with aviation uses; however, these areas are also included in the General Aviation Overlay District, which maintains compatible land use on and around the Airport."

(b) *All immediately affected public land boundaries should be indicated on the map. Potential impacts of the proposed development upon public lands will be visually illustrated on the map as well as described in the text*:

The only known effect to public lands are overflight of roads & highways, the Rock Island Regional Trail, and occasional overflight of the Falcon Regional Park. There are no additional impacts anticipated with approval of this Master Plan.

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.5 **U.S. Department of Transportation Act: Section 4(f)** [ref (h), pg 4-6]

The Department of Transportation (DOT) Act, Section 4(f) provisions commonly govern impacts in this category; however, it was recodified and renumbered as Section 303(c) of 49 U.S.C. which provides that the Secretary of Transportation will not approve any program or project that requires the use of any public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land from a historic site of national, state, or local significance, as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the

project includes all possible planning to minimize harm resulting from such use. This section will continue to refer to Section 4(f) as the criteria referenced.

4.2.5.1 Existing Conditions

FLY is located in an area that is primarily considered a rural area. Table 4-1 depicts the Section 4(f) properties located within a five-mile radius of FLY. The nearest identified Section 4(f) property is the Falcon Day Care, located approximately 0.4 miles southwest of the airport."

(c) *Specify whether and how the proposed Project conforms to the El Paso County Master Plan*:

The ***"El Paso County Policy Plan"*** [Reference (k)], states the following:

9.0 Transportation.

Aviation planning in this region is also based upon a federally mandated process, with the Colorado Springs owned Municipal Airport which shares runways and navigational facilities with Peterson Air Force Base, being the primary facility. Noise impacts from the Colorado Springs Airport have influenced land uses in some unincorporated areas. Additionally, there are several smaller military and civilian aviation facilities in the County, each with its own unique land use aspects.

Appendix II, Chapter III states:

As of January 1, 1998 the following documents are all adopted elements of the El Paso County Master Plan:

C. Small Area Plans:

9. Falcon/Peyton Comprehensive Plan (1993)

D. Topical Elements:

5. Meadow Lake Airport Part 77 Study (1990)

The *"Meadow Lake Airport Part 77 Study"* was based on the runway that still exists today and is the basis for the Master Plan Update, although the revision also accounts for the Turf Runway & relocation of glider operations. This Update also includes Part 77 airspace requirements for a future runway when that growth plan becomes relevant.

The Falcon/Peyton Comprehensive Plan was updated in 2007-2008 and was superseded by the ***"Falcon/Peyton Small Area Master Plan"*** [Reference (j)]. With respect to Meadow Lake, it provides the following in Chapter 3, Goals and Principles:

Section 3.5 Transportation:

Enhance the future role of Meadow Lake Airport through the recommendation of compatible land uses.

It provides further guidance in Chapter 4, Future Land Use Plan:

Section 4.4.3 Meadow Lake Airport Area

The Meadow Lake Airport area includes the airfield, associated airfield support and industrial areas, and the extent of the area influenced by the airport noise and safety zones.

4.4.3.1 Recognize the economic and safety importance of the Meadow Lake Airport and encourage compatible land uses within and around the facility.

4.4.3.2 Promote the Airport property as a center for mixed use commercial, business airport-compatible residential uses under the assumption that urban services uses including industrial uses which are compatible with Airport operations and surrounding residential areas will ultimately be extended to the property

4.4.3.3 Encourage effective notice of Airport operations and impacts to adjoining property owners, preferably in advance of purchase and development of these properties

4.4.3.4 Recognize the Meadow Lake Airport area as an appropriate location for non-residential

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.14 **Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks** . . . . . [ref (h), pg 4-19]

49 CFR part 24, *Uniform Relocation Assistance and Real Property Acquisition Policies Act* of 1970, as amended;

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and the accompanying Presidential Memorandum, and Order DOT 5610.2, Environmental Justice, and

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks provide regulations that protect against socioeconomic impacts, environmental injustice, and risks to children's environmental health and safety.

Airport development actions have the potential to create social impacts, health, and safety risks to children, and socioeconomic impacts to include moving homes or businesses; dividing or disrupting established communities; changing surface transportation patterns; disrupting orderly, planned development; and creating a notable change in employment.

4.2.14.1 Existing Conditions

The demographic information and social profile for the affected environment gives a relevant idea of the economy of the region surrounding the Airport. The population and demographic information for the City of Falcon and Peyton have not been consistently recorded over the past 20 years; therefore, the population and unemployment history for this demographic profile uses data from the City of Colorado Springs, El Paso County, and the State of Colorado.

(d) *Specify whether and how the proposed Project conforms to applicable regional and state planning policies*:

To repeat paragraph 4(f) above, the *"2011 Colorado Aviation System Plan"* [Reference (l)] established Performance Measures for evaluation to determine how well the state airport system is performing. Meadow Lake fell short in three benchmarks:

- Primary Runway PCI (Pavement Condition Index) (to be accomplished with the 2018-2019 Runway rehab project)
- Airport Not Meeting Part 77 Benchmark (the third objective of this submission)
- Intermediate Airports Needing Published Approach (to be accomplished with the future B-II runway if/when that expansion runway is constructed)

The following was provided with the original draft of the Meadow Lake Airport Master Plan:

Section 2.3 **Colorado Department of Local Affairs – 1041 Regulations**

"As noted by the DLA: "In 1974 the Colorado General Assembly enacted measures to further define the authority of state and local governments in making decisions for matters of statewide interest. These powers are commonly referred to as "1041 powers", based on the number of the bill of the proposed legislation (HB 74-1041). These 1041 powers allow local governments to identify, designate, and regulate areas and activities of state interest through a local permitting process. The general intention of these powers is to allow for local governments to maintain their control over particular development projects even where the development project has statewide impacts. Areas of state interest include: "Areas around key facilities in which development may have a material effect upon the key facility or the surrounding community", and Areas of state interest include: "Site selection of airports".

In response to the State's 1041 regulations, El Paso County adopted Appendix B within tits Land Development Code in 2013, "Guidelines and Regulations for Areas and Activities of State Interest of El Paso County", which were amended on 2014. Chapter 7, "Site Selection and Expansion of Airports" discusses the policy and permitting process covering airports in the County, including Meadow Lake Airport. The Guidelines define "airport influence area", "General Aviation-Reliever", "airport navigation subzone", etc. The Guidelines state that airport activities are of state interest, and no person may engage in development or relocation or other significant change of such activities without first obtaining a permit pursuant to those regulations. In addition, other persons may not engage in development that may impact those activities of state interest without first obtaining a permit from the County pursuant to those regulations."

(e) *Specify whether and how the proposed Project conforms to applicable federal land management policies*:

This Master Plan was drafted in accordance with the provisions of the Federal Aviation Administration and conforms to the requirements of the following Reference documents:

(q) FAA Advisory Circular 150/5070-6, *"Airport Master Plans"*
(r) FAA Advisory Circular 150/5100-14, *"Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects"*
(s) FAA Advisory Circular AC 150/5300-13, *"Airport Design"*
(t) FAA Order 5050.4, *"Airport Environmental Handbook"*
(u) FAA Order 5100.38, *"Airport Improvement Program Handbook"*
(v) FAA Order 5100.39, *"Airports Capital Improvement Plan"*
(w) FAA Order 5190.6, *"FAA Airport Compliance Manual"*

The Plan has been reviewed and approved by the staffs at Colorado Division of Aeronautics and FAA Denver Airport District Office (ADO).

(f) *If relevant to the Project design, describe the agricultural productivity capability of the land in the Project area, using Soils Conservation Service soils classification data*:

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.6 **Farmlands** . . . . . [ref (h), pg 4-7]

The Farmlands Protection Policy Act (FFPA) regulates federal actions with the potential to convert important farmland to non-agricultural uses. Important farmland includes all pasturelands, croplands, and forests considered to be prime, unique, or of statewide or locally important lands. "Prime" farmland can be defined as "land having the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimal use of fuel, fertilizer, pesticides, or products." "Unique" farmland can be defined as "land that is used for producing high-value food and fiber crops with a special combination of soil quality, location, growing season, and moisture necessary to produce high quality crops or high yields of them economically." Finally, farmland considered to be of statewide and local importance is defined as "land that has been designated as "important" by either a state government (State Secretary of Agriculture or higher office) or by county commissioners or an equivalent elects body." The State Conservationist representing the Natural Resource Conservation Service (NRCS) must agree with the designation.

4.2.6.1 Existing Conditions

Land on and surrounding the Airport has not been mapped by the NRCS; however, it has been mapped by the American Farmland Trust (Trust), as depicted in Figure 4-3. The Trust defined "high-quality" farmland by

combining the U.S. Department of Agriculture's (USDA) "prime farmland" designation (land most suitable for producing food, feed, forage, fiber and oilseed crops) with the Trust's unique farmland definition (land used to grow vegetables, grapes, and horticulture crops, including fruits, nuts and berries, that have unique soil and climatic requirements).

Because farmland conversion is taking place n every state, Figure 4-3 identifies high-quality farmland that is important relative to statistical benchmarks established for each state. In addition to identifying the most intense areas of high quality farmland conversion in the nation, Figure 4-3 also identifies where conversion was most intense within each given state.

The map designations were determined based on two threshold tests:

1. High-quality farmland included mapping units that in 1997 had greater than their statewide mapping unit averages of prime or unique farmland; and
2. High development included mapping units that experienced a rate of development greater than their statewide mapping unit average, providing it had at least 1,000 acres developed between 1992 and 1997.

Figure 4-6 highlights in dark green those mapping units with a greater percentage of high quality farmland than the average mapping unit within that state, a rate of development higher than the average mapping unit in the state, and more than 1,000acres developed between 1987 and 1997. Mapping units shaded in light green exceeded the average amount of high quality farmland found in mapping units within their state, but they experienced a lower rate of development than the average mapping unit in their states, or had less than 1,000 acres of development. Dark green areas on the map signal rapid development and a potential threat to thigh quality farmland. One should take care in interpreting the map, remembering that high-quality farmland areas are relative to their state benchmarks.

FLY is located in an area designated as "Other" which does not display the characteristics of high quality farmland.

(g) *Describe the probability that the Project may be significantly affected by earthquakes, floods, fires, snow, slides, avalanches, rockslides or landslides and any measures that will be taken to reduce the impact of such events upon the Project*:

- None known. Earthquakes, floods, and fires are unlikely to occur or affect Meadow Lake operations any more than they would affect the surrounding community.
- The 500-year rainfall of 2015 did not appreciably affect airport surface operations (other than un-flyable airborne weather conditions).
- The MLAA has heavy duty snow removal equipment to reopen the airport after significant snow fall/blizzard events, although, scheduled commercial aviation operations are not conducted from this airport.
- The prairie topographic conditions are unlikely to sustain slides, avalanches, rockslides, or landslides.

(h) *Specify if excess service capabilities created by the proposed Project will prove likely to generate sprawl or strip development*:

1041 and Master Plan approval are unlikely to have any effect on "sprawl or strip development" in the Airport Influence Area. In the event that such developments are proposed, they will be in concert with the prospective Compatible Land Use Plan.

The Meadow Lake area is in a state sponsored commercial enterprise zone. Proximity of the Airport to the Meadow Lake Industrial Park and the Meadow Lake Commons/Judge Orr PUDs could spur growth and development (such as the Commercial Aeronautical Zone at COS), but none is apparent at this time and the airport is unlikely to promote those.

(i) *Specify whether the demand for the Project is associated with development within or contiguous to existing service areas*:

The CDOT Report *"2013 Economic Impact Study for Colorado Airport"* states:

Total Economic Impact of Meadow Lake Airport"

Over the past five years, the aviation industry has been impacted by increased fuel costs and a lagging U.S. economy. This has resulted in consolidation in the airline industry, fewer new general aviation aircraft being manufactured in the U.S. and an overall reduction in flights. For some Colorado airports, the contraction in aviation demand over the past five years translated into lower economic impacts. In other instances, demand and economic impacts may have increased or remained constant despite downturns.

Together, airport, tenant, capital improvement and visitor impacts along with multiplier effects, represent the local economic contribution of Meadow Lake Airport. The airport's economic contribution to the communities ir serves is $10.1 million in output and 130 jobs, with an annual payroll of $4.9 million. . . . . [see Encl 12f]

(8) **Surface and subsurface drainage analysis**.

The following excerpt is from the *"Geotechnical Subsurface Exploration Program - Final Submittal"* dated November 20, 2014, conducted by Ground Engineering Consultants, Inc. and prepared for Jviation, Inc. in preparation for the upcoming runway rehab project:

Regional Geology

Published maps (e.g., Madole, R.F., 2003') depict the site as underlain by Upper Pleistoncene Alluviam Three (Qa3) consisting of tan to reddish brown to grayish brown, poorly to moderately consolidated, poorly to moderately stratified silt, sand, gravel and cobbly gravel. These surficial soils are mapped as underlain by the early Tertiary and Late Cretaceous Dawson Arkose consisting of white to tan friable sandstones with a high clay content and interbeds of thin-bedded gray claystone and sandy claystone or dark-brown, organic-rich siltstone.

Groundwater and Subsurface Drainage

As previously stated, groundwater was encountered at depths ranging from approximately 5 to 8 feet below existing grades in some of the test holes during our exploration program. Groundwater levels can be expected to fluctuate, however, in response to annual and longer-term cycles of precipitation, irrigation, surface drainage, land use, and the development of transient, perched water conditions.

Future expansion of the airport, or simple development of airport property, at some future time, will require surface and sub-surface drainage analysis. Control and mitigation plans will necessarily be included as drainage away from aeronautical surfaces is critical. Construction plans must adhere to federal standards in place at the time of design and engineering of the project.

. . Specific design details that must be considered can be found at Reference (s)

(9) **Financial feasibility of the Project**.

(a) *Relevant bond issue, loan and other financing approvals or certifications*:

. . . None applicable

(b) *Business plan that generally describes the financial feasibility of the Project*:

The Meadow Lake Airport Master Plan was completed with a Colorado Discretionary Aviation Grant. Submission of the Plan for County approval via this application is being funded by MLAA funds.

The alternatives for future growth discussed in Paragraph 5b above are an FAA requirement under the Airport Improvement Program which require Master Plans to show potential for growth if/when needed. However, construction of an expansion project such as the proposed runway described in the Meadow Lake Airport Master Plan, would be an estimated $12-15M project and would necessarily require FAA Discretionary Funds, as well as GA Entitlement and CDAG funds. Under current FAA policy, private airports (such as Meadow Lake) are not eligible for Discretionary Grants.

The Meadow Lake Airport Master Plan contains the following description of the FAA Airport Improvement Program (AIP):

Section 6.5.1 **FAA Airport Improvement Program** . . . [see Ref (a), pg 6-5]

The FAA AIP was created by the Airport and Airways Act of 1982 to assist in the development of a nationwide system of public-use airports. AIP replaced the previous programs, including the Airport Development Program (ADAP) and the earlier Federal Aid to Airports Program (FAAP). AIP provides an increased level of funding, higher federal participation rate, and greater project eligibility. Amendments to the program since 1982 have consistently increased funding levels, participation rate, and eligibility.

The FAA AIP funding process involves two steps. The first step required inclusion of an airport in the National Plan of Integrated airport Systems (NPIAS) to be eligible for funding. The NPIAS is an unconstrained list of airport needs in the United States, assisting Congress in authorization and appropriation of funds for AIP. The final NPIAS is a document presented to Congress every two years showing the status of airport needs across the country. Since the NPIAS is an unconstrained list of airports' need, the long-term list will contain development concepts that have a small likelihood of receiving AIP funding.

The second step in the process is inclusion of FLY's capital needs list in the FAA's Capital CIP. This is the constrained agency funding plan for a five year period, and is a continuously changing document. A general aviation airport, such as FLY, annually submits its CIP with new projects and project estimates to the FAA Denver Airports District Office (Denver ADO) so they can make updates to their five-year plan and the FAAA Regional CIP. Each airport should receive feedback from the FAA regarding which of their projects have been included.

The AIP has limits on eligibility. Generally, grant eligible items include airfield and aeronautical related facilities, such as: runways, taxiways, aprons, lighting, and visual aids, as well as land acquisition, planning, and environmental tasks needed to accomplish the airport improvement projects. Most revenue producing items like hangars, fuel farms, and FBO facilities are not eligible for AIP funds. Additionally, equipment eligibility is limited to safety equipment such as Aircraft Rescue and Firefighting (ARFF) rucks and snow removal equipment (SRE). Mowers, earth moving equipment, and airport operations vehicles are not eligible for AIP funding. The FAA utilizes a priority system to rank development items. Generally, the smaller the airport and the farther that it is from the runway, the lower priority it receives (e.g. runways have priority over taxiways, which have greater priority than aprons, which have priority over roads, etc.). However, development or equipment or equipment required by rule or law has a high priority.

Historically, federal participation in the AIP was 90% of the eligible cost of airport projects, leaving the airport sponsor responsible for the other 10%. After September 11, 2001 Congress authorized increased federal participation from 90% to 95% because of the economic impact 9/11 had on local resources. On February 6, 2012, the Senate passed a four-year (2012-2015) reauthorization and reform of the FAA Bill. The legislation decreases the federal participation on AIP grants from t95% to the historical 90%.

In Colorado, CDOT Aeronautics has typically provided a grant for 50% of the sponsors share on AIP grants. The probable change to the AIP authorizing legislations will increase demands on CDOT funds, but there has been no indication that their support will be less than 50% of the sponsor share. All funding from State and Federal agencies must be for planning, design, construction, or pavement maintenance projects, and cannot be used to supplement the operating expense of the airport.

There are two types of AIP funds that Meadow Lake (FLY) may, or has received: entitlement and discretionary."

Section 6.5.2 **FAA Entitlement Funds**

General aviation airports included in FAA's NPIAS are eligible to receive an entitlement of $150,000 per year. General aviation airports are defined as airports that do not offer commercial airline service, are open to the public, have at least 10 base aircraft, and are located 20 miles away from the nearest NPIAS airport. Meadow Lake is also designated by the FAA as a reliever airport. If a GA airport wishes to receive discretionary funds (Section 6.4.1.2) for a development project, the airport's CIP should include at least two years of entitlement funds dedicated to the project. An airport can use entitlement funds on any eligible item; however, excessive use of entitlements on low priority work can have a negative effect on the FAA's discretionary funding plans for that airport.

Section 6.5.3 **FAA Discretionary Funds**

Approximately half of the AIP appropriations each year can be dispersed by the FAA at their discretion, rather than the fixed entitlement grants. The FAA has

many priority programs they fund each year; examples are runway safety areas, runway surface treatments, and projects which improve overall system capacity (e.g. new runways at hub airports). GA airports such as Meadow Lake (FLY), compete best for discretionary funding for safety, security, and pavement preservation projects. As a designated reliever FLY competes for different funding sources in relation to other GA airports that are not designated relievers. FAA has indicated however, that as privately owned facility, FLY would not receive FAA discretionary grants. As noted previously, FAA has indicated verbally to the MLAA that FLY is not eligible for discretionary grants, however, that policy (i.e. statement) is contrary to FAA Order 5100.38D, Airport Improvement Program (AIP) Handbook. As a designated reliever airport in FAA's NPIAS, FLY is subject to the same conditions and benefits, including discretionary grants, as all other designated reliever airports in the NPIAS.

Section 6.5.4 **CDOT Aeronautics – Discretionary Aviation Grant Program**

Because Meadow Lake Airport is included in the state's Aviation System Plan, it is eligible to receive state discretionary grants. Between 2005 and 2015 Meadow Lake Airport has received the following grants from CDOT:

As noted by CDOT: "The State of Colorado was the last State in the Nation to establish a dedicated aviation branch of state government. In 1989 the Division of Aeronautics and the Colorado Aeronautical Board was created to support, develop and maintain the Colorado Aviation System through taxes collected on aviation fuel sold within the state. There are no general funds used to meet the needs within the Colorado Aviation System, the needs are funded solely though the taxes collected by those actually using the aviation system.

CDOT published a White Paper on the state airport funding program, which is attached as Appendix 5-B. [to the Master Plan] In 2014 and 2015 CDOT Aeronautics experienced a significant budget shortfall in their discretionary grant program, which forced the agency to curtail some grants. CDOT has also indicated that the focus of their discretionary grant program through 2018/2019 will be on matching FAA grants vs. issuing stand-alone grants, as well as limit any grant amendments. CDOT personnel coordinated with each airport to review the impact of the funding shortfall and possible adjustments to capital improvement programs (CIP).

Section 6.5.5 **Private Investment**

Many airports, from small general aviation facilities to large hub commercial service airports, benefit from capital investment made by private parties. Private investment comes from a number of sources such as fixed base operators (FBO), aircraft owners and private hangar developers, aircraft and parts maintenance, repair, overhaul, and manufacturing, as well as non-aeronautical services such as restaurants, rental car companies, etc. Private investors relieve airport sponsors from having to make capital investments, which is particularly helpful for airports with limited resources.

The most common practice of for airport sponsors to negotiate land leases with the private entity/investor, upon which the private party constructs the improvements. In airport sponsor-tenant leases there are typically a number of

clauses, including rate escalation, first right of refusal, right to review subletting, as well as reversion clause in which improvements made by private parties revert to airport ownership after a specified period, typically long enough for the private investor to amortize their costs.

The lease rates typically reflect the level of capital investment made by the private party. All leases must be consistent with the provisions of the FAA's sponsor grant assurances, and the FAA also requires that some of the grant assurance provisions, such as affair and reasonable and non-discriminatory pricing, be applied to the airport tenants as well, even though they are private entities and not signatories to the grant assurances.

The FAA has established policies concerning the use and generation of airport revenue. Aeronautical lease rates are expected to recover aeronautical costs, but can be reduced if necessary to attract and retain commercial aeronautical services. Also, an airport can lease land which was not acquired with federal or state aid for non-aeronautical revenue production, as long as the development does not interfere with aeronautical activities.

The FAA's policy concerning revenue generation requires that non-aeronautical leases be set at fair market value per FAA Policy and Procedures Concerning Use of Airport Revenue dated February 16, 1999. In addition, lease terms cannot exceed 50 years, beyond which FAA has determined that an airport sponsor has given up their rights and powers which are required by the FAA grant assurances to be maintained by sponsors.

Enclosure 12b is a Summary of FAA AIP and Colorado Discretionary Aviation Grants awarded to Meadow Lake Airport.

Enclosure 12c is the Meadow Lake Capital Improvement Plan (CIP) for future projects and grants.

(10) **Local infrastructure and services impacts**. *An impact analysis that addresses the manner in which the applicant will comply with the relevant Permit Application Review Criteria. The impact analysis shall include the following: description of existing capacity of and demand for local government services including but not limited to roads, schools, water and wastewater treatment, water supply, emergency services, transportation, infrastructure, and other services necessary to accommodate the Project within El Paso County*:

The Master Plan addresses the present and future airport aeronautical surfaces and capabilities. The present airport facilities have minimal impact on local infrastructure. Present support facilities are on private properties adjacent to the airport and are not addressed in the Master Plan. These properties are supported by private roads, electric & gas service, wells and IDS (septic/holding) systems, etc.

Future expansion of the airport and aeronautical surfaces, as projected with the growth plans contained in the Master Plan, would be the result of and/or require increased development of facilities on the airport. These would necessarily require development of infrastructure to support them, i.e.; surface access (transportation/road systems), power (electric & gas), water-waste water-drainage, emergency services, etc.

(11) **Recreational Opportunities**. *Description of the impacts and net effect of the Project on present and potential recreational opportunities*.

The current airport and Master Plan afford significant opportunities for hobbyist aviators to develop and exercise their aviation interests. The airport was started by members of the Experimental Aircraft Association (EAA) Chapter 72 in 1965, who wanted to build their own hangars and aircraft to explore their desire to fly. Today, of the estimated 450 aircraft based at Meadow Lake, approximately 25% are experimental (home-built) aircraft.

The facilities of the airport support the experimental and certified aircraft in exploring their recreational interests all over the nation. It is not uncommon for aircraft based at Meadow Lake to travel throughout the Rocky Mountain region on any/every given weekend, and on longer trips throughout North America (including to/from both coasts, Alaska, and the Caribbean & Central American.

Additionally, the present airport supports other aeronautical interests that are not supported at larger airports such as Colorado Springs. These include gliders, soar planes, powered para-gliders, etc.

Expansion of the airport to B-II will primarily benefit larger certified aircraft in regional/national transportation, but should not appreciably affect the experimental and other local recreational uses.

(12) **Areas of Paleontological Historic or Archaeological Importance**. *Description of the impacts and net effect of the Project on sites of paleontological, historic or archaeological interest*.

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following: . . . . . [ref (h), pg 4-13]

4.2.10 Historical, Architectural, Archeological, and Cultural Resources

The National Historic Preservation ACT (NHPA) of 1966, as amended, establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service (NPS). Section 110 of the NHPA governs the responsibilities of federal agencies to preserve and use historic buildings; designate an agency Federal Preservation Office (FPO); identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the National Register. Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking on properties on or eligible for inclusion on the NRHP. Compliance with Section 106 requires consultation with the ACHP, the State Historic Preservation Officer (SHPO), and the Tribal Historic Preservation Officer (THPO) if there is a potential for adverse effects to historic properties on or eligible for listing on the NRHP. Consultation with other federal, state and local agencies, tribes, private sector, and the public may also be required.

4.2.10.1 Existing Conditions

The National Register of Historic Places lists one property within the vicinity of the Airport. The closest property to the Airport was the Black Squirrel Creek Bridge which was located approximately 4.7 miles northeast of the Airport. [ed note: this bridge was replaced several years ago]

According to the Native American Consultation Database there are five federally recognized Indian tribes or Native Hawaiian organizations with an interest to El Paso County, including:

- Arapaho Tribe of the Wind River Reservation, Wyoming
- Cheyenne and Arapaho Tribes, Oklahoma
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- Northern Arapaho Tribe of the Wind River Reservation,
- Northern Cheyenne Indians of the Tongue River Reservation, Montana

(13) **Nuisance**. *Descriptions of noise, glare, dust, fumes, vibration, and odor levels anticipated to be caused by the Project*.

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.13 **Noise** . . . . . [ref (h), pg 4-15]

Noise associated with airport activity is often a controversial topic and of specific importance to the FAA in examining a proposed action. Airport development projects that have the potential to change the airport runway configuration(s), aircraft operations and movements, aircraft types, or aircraft flight characteristics can change the future airport related noise levels. In order to accurately assess the existing noise levels and potential for change, the FAA developed a computer model that simulates aircraft activity and resulting noise at an airport.

4.2.13.1 Noise Methodology

The model, Integrated Noise Model (INM-Version 7.0c), produces a prediction of aircraft day/night noise levels (DNLs) and the potential for significant impacts. A significant noise impact would occur if noise sensitive areas were to experience an increase in noise of DNL 1.5 (dB) or more at or above DNL 65 dB noise exposure when compared to existing conditions. When calculating DNLs, noise events that occur at night (between 10:00 pm and 7:00 am) are given a 10 dB penalty to account for the increased sensitivity during the night time hours.

This EA will provide noise exposure contours for DNL values of 65, 75, and 85 dBs. Areas within contour levels above 65 dB are considered by the FAA to be exposed to significant aircraft sound levels. The DNL contours developed for FLY consider the following:

- Aircraft arrival and departure profiles
- Runway layout
- Runway use
- Flight corridors
- Operational activity within each flight corridor
- Fleet mix and associated number of operations (for an annual average 24-hour day)
- Distribution of operations between the daytime (7:00 am to 10:00 pm) and night time hours (10:00 pm to 7:00 am)

4.2.13.5 Existing Conditions

The extent of 65, 75, 85 DNL noise contours for the year 2011, the base year and existing condition, are depicted in Figure 4-5. As shown, nearly the entire 65, 75, 85 DNL noise contours lie within the airport property boundaries. Approximately 0.25 square miles of 65-74 DNL and 0.02 square miles of 75-84 DNL extend beyond the airport property. Table 4-6 provides the size, in square miles, of each contour.

Table 4-6 - Area (square miles) within the 65, 75, and 85 DNL contours

Year	65-74 DNL	75-84 DNL	85+ DNL	TOTAL
2011 – existing condition	0.585	0.128	0.009	0.722

We rarely receive complaints about aircraft. The more common calls, perhaps one per year or less, are concerns about low flying aircraft throughout the County, not specifically at Meadow Lake, and usually explained. Concerns were raised during the Airport Overlay expansion for the Turf Runway about dust, noise, wild fires, etc, and none have come to past, nor have any complaints been received.

(14) **Air Quality**. *Description of the impacts and net effect that the Project would have on air quality during both construction and operation, and under both average and worst case conditions, considering particulate matter and aerosols, oxides, hydrocarbons, oxidants, and other chemicals, temperature effects and atmospheric interactions*.

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

Section 4.2.1 **Air Quality** . . . . . [ref (h), pg 4-2]

The U.S. Environmental Protection Agency (EPA) is the oversight agency for the Clean Air Act (CAA), which, in addition to the NEPA is the predominant statute that regulates actions with the potential to affect air quality. The CAA established National Ambient Air Quality Standards (NAAQS) for six pollutants, specifically termed "criteria pollutants". The potential air quality pollutants include: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter ($PM_{2.5}$ and PM_{10}), sulfur dioxide (SO_2), and lead (Pb).

4.2.1.1 Existing Conditions

In accordance with the CAA, all areas within the State of Colorado are designated as being in attainment, nonattainment, maintenance, or unclassifiable. An area with air quality better than the NAAQS is designated attainment, while an area with air quality worse than NAAQS is designated nonattainment. The Airport is located in El Paso County which is designated by the EPA as being in attainment for all criteria pollutants.

Section 4.2.2 **Climate** . . . . . [ref (h), pg 4-2]

Greenhouse Gases (GHGs) are regulated under NEPA and the Council on Environmental Quality (CEQ). GHG's include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6), as defined in Executive Order 12514 *Federal Leadership in Environmental, Energy and Economic Performance.*

4.2.1.1 Existing Conditions

Research has shown there is a direct correlation between fuel combustion and GHG emissions. In terms of U.S. contributions, the General Accounting Office (GAO) reports that "domestic aviation contributes about 3 percent of the total carbon dioxide emissions, according to EPA data", compared with other industrial sources, including the remainder for the transportation sector (20 percent) and power generation (41 percent). The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly 3 percent f all anthropogenic GHG emissions globally. Climate change due to GHG emissions is a global phenomenon, so the affected environment is the global climate.

The scientific community is continuing efforts to better understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in a number of initiatives intended to clarify the role that

commercial aviation plays in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., NASA, NOAA, EPA, and DOE), have developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions. The FAA also funds the Partnership for Air Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and U.S. climate and atmospheric compositions. Similar research topics are being examined at the international level by ICAO.

(15) **Visual Quality**. *Description of the impacts and net effect that the Project would have on visual quality, considering viewsheds, scenic vistas, unique landscapes and land formations within view of the Project area*.

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.11 **Light Emissions and Visual Impacts** . . . . . [ref (h), pg 4-14]

Potential impacts due to light emissions or visual impacts associated with a federal action should be assessed. Considerations should be given to imapcts on people and properties to determine significant impacts. Because of the relatively low levels of light intensity compares to the background levels associated with most air navigation facilities and other airport development actions, light emissions impacts are unlikely to have an adverse impact on human activity or the use of characteristics of the protected properties. Visual and aesthetic impacts can be widely defined and are inclined to subjectivity. Public involvement and consultation with federal, state, and local agencies may help determine the extent of light emissions and visual impacts.

4.2.11.1 Existing Conditions

The existing lighting at FLY includes the runway lighting (medium intensity runway edge lighting on Runway 15/33) and lighting used for navigation. The navigational lighting includes a 4-light precision approach path indicator (PAPI) on both runway ends of Runway 15/33. There are also other minimal lighting sources related to the parking lot areas, aprons and hangars.

Because of the relatively low levels of light intensity compared to background levels associated with most air navigation facilities and other airport development actions, light emissions impacts are unlikely to have an adverse impact on human activity or the use of characteristics of the protected properties.

(16) **Surface Water Quality**.

(a) *Map and/or description of all surface waters relevant to the Project, including description of provisions of the applicable regional water quality management plan, and NPDES Phase II Permit and necessary El Paso County Erosion and Stormwater Quality Control Permit ("ESQCP").*

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.15 **Water Quality** . . . . . [ref (h), pg 4-20]

The Federal Water Pollution Control Act (Clean Water Act), as amended, establishes water quality standards, control discharges, develops waste treatment management plans and practices, prevents or minimizes the loss of wetlands, identifies with regard to an aquifer or sensitive ecological area such as wetlands area, and regulates other issues concerning water quality.

The U.S. Fish and Wildlife Coordination Act requires consultation with the UFWS and applicable state agencies if the potential to impound, divert, control, or otherwise modify the waters of any stream or other body of water exists. The Safe Drinking Water Act, as amended, requires federal agencies to consult with the EPA if the potential to contaminate an EPA designated sole principal drinking water resource exists.

A national Pollution Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act is required for point-source discharges into waters of the U.S. A Section 404 permit is required to place dredged or fill material in water of the U.S., including jurisdictional wetlands. Additionally, a Section 10 permit, under the River and Harbors Act of 1899, is required for obstruction or alteration of navigable waters.

4.2.15.1 Existing Conditions

FLY potentially contributes to five different watersheds to include: Big Sandy, Bijou, Chico, Fountain, and Kiowa. All five of the watersheds are located in Colorado.

The Big Sandy watershed is monitored by the National Park Service Water Resources Division, the Colorado Department of Public Health and Environment, and the Rivers of Colorado Water Watch Network.

The Bijou watershed is monitored by the Colorado Department of Public Health and Environment, The Rivers of Colorado Water Watch Network, and the Littleton/Englewood Wastewater Treatment Plant.

The Chico watershed is monitored by the Colorado Department of Public Health and Environment, and the Rivers of Colorado Water Watch Network.

The Fountain watershed is monitored by the Colorado Department of Public Health and Environment, and the Rivers of Colorado Water Watch Network, and the EPA National Aquatic Resource Survey Data.

The Kiowa watershed is monitored by the Colorado Department of Public Health and Environment, and the Rivers of Colorado Water Watch Network.

Lastly the Airport's surface water is managed by the Upper Black Squirrel Creek Ground Water Management District.

FLY obtains the required permits for construction projects in addition to implementing and requiring Best Management Practices by MLAA Board Members and contract/construction staff."

Meadow Lake Airport does not currently have operations that require a Storm Water Management Plan (SWMP). Although a Stormwater Discharge Permit (COR-010077) was initiated in the early 1990's, a subsequent determination was issued on June 13, 1995 by the Colorado Department of Public Health and Environment, Water Quality Control Division that inactivated the requirement for the airport to have a storm water permit. . . . . [see Encl 13h(1)]

Meadow Lake have a CDPS General Permit (COR 406129) for the current reconstruction of Runway 15-33. . . . . [see Encl 13h(2)]

(b) *Existing data monitoring sources*.

. . . none at this time

(c) *Descriptions of the immediate and long-term impact and net effects that the Project would have on the quantity and quality of surface water under both average and worse case conditions*.

Expansion of the airport and accompanying development of services on the airport may result in a review of Storm Water Management requirements on the airport at a future time.

(17) **Groundwater Quality**.

(a) *Map and/or description of all groundwater, including any and all aquifers relevant to the Project.*

Review and approval of the Master Plan does not involve any construction and will have no effect on present ground water conditions.

Expansion and development of on airport services may require a review of water quality and quantity with additional wells or possible development of a central water system. The MLAA does have water determinations for three of the aquifers underlying the airport. . . . . [see Encl 13i]

(b) *Description of the impacts and net effect of the Project on groundwater.*

Review and approval of the Master Plan does not involve any construction and will have no effect on present ground water conditions.

Expansion and development of on airport services may require a review of water quality and quantity with additional wells or possible development of a central water system. The MLAA does have water determinations for three of the aquifers underlying the airport. . . . . [see Encl 13i]

(18) **Water Quantity**.

The MLAA has water determinations for three aquifers beneath the airport:

	aquifer	annual withdrawal	land area
• 1046-BD	Denver	162 acre-feet	Area A (464 acres)
		21.0 acre-ft	Area B (57.5 acres)
		0.17 acre-ft	Area C (0.5 acres)
• 1045-BD	Arapahoe	173 acre feet	522 acres
• 1044-BD	Laramie-Fox Hills	160 acre-feet	522 acres

. . . [see Encl 13i]

(a) *Map and/or description of existing stream flows and reservoir levels relevant to the Project*.

None noted at present as no construction is planned at present.

Will necessarily be addressed with expansion of the airport runway system and accompanying landscaping involved.

(b) *Map and/or description of existing minimum stream flows held by the Colorado Water Conservation Board*.

None noted at present as no construction is planned at present.

Will necessarily be addressed with expansion of the airport runway system and accompanying landscaping involved.

(c) *Descriptions of the net effect that the Project would have on water quantity*.

Review and approval of the Master Plan does not involve any construction and will have no effect on present ground water conditions.

Expansion and development of on airport services may require a review of water quality and quantity with appropriate wells and possible development of a central water system.

(d) *Statement of methods for efficient utilization of water, including recycling and reuse*.

None noted at present as no construction is planned at present.

Will necessarily be addressed with expansion of the airport runway system and accompanying landscaping involved.

(19) **Floodplains, Wetlands and Riparian Areas; Terrestrial and Aquatic Animals, Plant Life and Habitat**. *Applicant shall only provide description of foregoing natural conditions, animal and plant life at, but not to exceed, the level of detail required by other federal or state Permits or reviews which are applicable to the Project.*

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following:

4.2.8 **Floodplains** . . . . . [ref (h), pg 4-6]

Executive Order 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, minimize the impacts of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by floodplains. DOT Order 5650.2, *Floodplain Management and Protection*, contains policies and procedures for implementing Executive Order 11988. Through these, agencies are required to analyze and determine that there are no practical alternatives to a project, before taking any action that would encroach on a floodplain based on a 100 year flood.

4.2.8.1 Existing Conditions

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) is depicted in Figure 4-4. The airport property and a significant portion of the area surrounding the airport are designated as Zone X. Zone X is defined as "areas determined to be outside of the 500-year floodplains". Some areas in the vicinity of the Airport are designated by FEMA as Zone A which is defined as "special flood hazard areas inundated by 100-year flood – No base flood elevation determined."

4.2.16 **Wetlands** . . . . . [ref (h), pg 4-21]

Executive Order (E.O.) 11990, *Protection of Wetlands*; Order DOT 5660.1A, *Preservation of the Nation's Wetlands*; the Rivers and Harbors Act of 1899; and the Clean Water Act, Section 404, regulates activities that may impact wetlands. Federal agencies are required by E.O. 11990 to minimize the destruction, loss, or degradation of wetlands; they must also protect, preserve, and enhance the nation's wetlands throughout the planning, construction, funding, and operations of transportation facilities and projects. Order DOT 5660.1A requires that transportation facilities protect and enhance wetlands through planning, construction, and operation.

The Clean Water Act, Section 404, governs the dredging and filling of navigable waters of the U.S. Section 404 defines Navigable Waters of the U.S. as *"waters that are subject to the ebb and flow of the tide and/or are used, have been used in the past, or may be susceptible to be used to transport interstate or foreign commerce."* Navigable Waters, according to Section 404, includes wetlands connected or adjacent to navigable waters of the U.S. The Army Corp of Engineers (Corp) is the permitting agency for the dredge or fill activities of wetlands. The Corp defines wetlands as *"areas that surface or groundwater inundate or saturate at frequency and duration sufficient to support a prevalence*

of vegetation typically adopted for life in saturated soil conditions." The Corp includes swamps, marshes, bogs and similar areas to wetlands.

4.2.16.1 Existing Conditions

An initial wetlands inventory was completed through the use of the U.S. Fish and Wildlife Service's *National Wetlands Inventory Mapper*. The Mapper depicted the potential for wetlands to exist on the airport as depicted in Figure 4-6. A site visit was completed by the U.S. Army Corps of Engineers on December 7th, 2011. From this it was found that further wetland delineation was not needed as the airport property was significantly composed of uplands.

4.2.7 **Fish, Wildlife, and Plants** . . . . . [ref (h), pg 4-9]

Fish, wildlife and plants are regulated and protected by a significant number of acts and regulations to include:

- Section 7 of the Endangered Species Act (ESA), as amended, requires federal agencies to complete consultation and coordination for federal actions to determine if an action has the potential to affect any threatened or endangered species. Consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) is required, as appropriate, to ensure that any action the agency authorizes, funds, or caries out is not likely to jeopardize the continued existence of any federally listed endangered or threatened species or result in the destruction or adverse modification of critical habitats.
- The Magnuson-Stevens Act requires federal agencies to consult with the NMFS with regard to any action authorized, funded, or undertaken that may adversely affect any essential fish habitat identified under the Act.
- The Sikes Act, as amended, requires actions to be consistent with any State Wildlife Conservation Plans and Department of Defense plans where the plans exist.
- The Fish and Wildlife Conservation Act encourages actions as follow state programs for fish and wildlife resources, and to conserve and promote conservation of non-game fish and wildlife and their habitats.
- The Migratory Bird Treaty Act prohibits federal agencies from intentionally taking migratory bird, their eggs, or nests. Taking can be defined as "pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting."

4.2.7.1 Existing Conditions

Threatened, endangered, and candidates to be listed as threatened or endangered, within the project area, as defined by the U.S. Fish and Wildlife Service's *"Information, Planning, and Conservation System"* (IPaC) are depicted in Table 4-2. The region surrounding FLY is primarily open grass fields with some residential and rural development.

(20) Soils, Geological Conditions and Natural Hazards.

(a) *Map and/or description of soils, geological conditions, and natural hazards including but not limited to soil types, drainage areas, slopes, avalanche areas, debris fans, mud flows, rock slide areas, faults and fissures, seismic history, and wildfire hazard areas, all as relevant to the Project area.*

The following excerpt is from the *"Geotechnical Subsurface Exploration Program - Final Submittal"* dated November 20, 2014, conducted by Ground Engineering Consultants, Inc. and prepared for Jviation, Inc. in preparation for the upcoming runway rehab project:

Regional Geology

Published maps (e.g., Madole, R.F., 2003') depict the site as underlain by Upper Pleistoncene Alluviam Three (Qa3) consisting of tan to reddish brown to grayish brown, poorly to moderately consolidated, poorly to moderately stratified silt, sand, gravel and cobbly gravel. These surficial soils are mapped as underlain by the early Tertiary and Late Cretaceous Dawson Arkose consisting of white to tan friable sandstones with a high clay content and interbeds of thin-bedded gray claystone and sandy claystone or dark-brown, organic-rich siltstone.

Groundwater and Subsurface Drainage

As previously stated, groundwater was encountered at depths ranging from approximately 5 to 8 feet below existing grades in some of the test holes during our exploration program. Groundwater levels can be expected to fluctuate, however, in response to annual and longer-term cycles of precipitation, irrigation, surface drainage, land use, and the development of transient, perched water conditions.

(b) *Descriptions of the risks to the Project from natural hazards.*

Present conditions have no effect on the Master Plan review and Part 77 airspace considerations.

Soil conditions and natural features will be considered in the design engineering for the expansion runway when that project becomes relevant.

(c) *Descriptions of the impacts and net effect of the Project on soil and geological conditions in the area.*

The Master Plan review and Part 77 airspace considerations will have no effect on current soil and geological conditions.

Design engineering for the expansion runway when that project becomes relevant, should be designed to have minimal effect on soil conditions and natural features.

(21) **Hazardous Materials**.

(a) *Description of all solid waste, hazardous waste, petroleum products, hazardous, toxic ,and explosive substances to be used, stored, transported, disturbed or produced in connection with the Project, including the type and amount of such substances, their ;location, and the practices and procedures to be implemented to avoid accidental release and exposure,*

The Meadow Lake Airport *"Environmental Assessment – Establishment of Turf Runway"* [reference (h)] contains the following: . . . . . [ref (h), pg 4-11]

4.2.9 Hazardous Materials, Pollution Prevention, and Solid Waste

A significant number of laws govern the handling and disposal of hazardous materials, chemicals, and wastes. Two statutes most importantly regulating actions to construct and operate facilities and navigational aids are the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund) and the Community Environmental Response Act of 1992; Executive Orders (E.O.) RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for consultation with natural resource trustees and the cleanup of any release of a hazardous substance into the environment.

Executive Orders (E.O.) 12088 and 12580 offer additional directives to the handling and disposal of hazardous material, chemicals, substances, and wastes. E.O. 12088, *Federal Compliance with Pollution Control Standards*, as amended, directs federal agencies to comply with applicable pollution standards, in the prevention, control, and abatement of environmental pollution. It also directs consultation with the EPA, state. Interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution. E.O. 12590, *Superfund Implementation*, as amended, requires federal agencies to allow the opportunity for public comment before removal action is taken.

NEPA requires the consideration of hazardous material, pollution prevention, and solid waste impacts for any federally funded, approved, and constructed activities. It is also required that the appropriate level of review for hazardous material or wastes be used, generated, or disturbed by the prosed action, be taken. It is also recommended that, to the extent practical, pollution prevention should be considered in the proposed action, addressed in the environmental consequences section, and disclosed in the record of decision to the extent to which pollution was considered.

4.2.9.1 Existing Conditions

The nearest landfill to FLY is the Colorado Springs Landfill located approximately five miles south of the Airport. The landfill is one of three landfills located in El Paso County, with the other two located in Fountain, approximately 17 miles southwest of FLY.

The EPA has three hazardous waste sites located within five miles of the Airport reporting to the EPA. Table 4-3 provides additional information for the reporting facilities.

(b) *Location of storage areas designated for equipment, fuel, lubrications, and chemical and waste storage with an explanation of spill containment plans and structures*.

All current aircraft services and POL (petroleum, oil, lubricants) facilities are on private properties and beyond the purview of the MLA and this Master Plan.

Future expansion and development of the airport property will need to address POL requirements and appropriate storage and containment plans.

(22) **Monitoring and Mitigation Plan**.

(a) *Description of all mitigation that is proposed to avoid, minimize or compensate for adverse impacts of the Project and to maximize positive impacts of the Project and to maximize positive impacts of the Project*.

(i) Describe how and when mitigation will be implemented and financed.

(ii) Describe impacts that are unavoidable that cannot be mitigated.

This Application for a 1041 Permit and Master Plan review, and future Land Development Code amendment(s) and potential Compatible Land Use Plan are administrative actions with no immediate impact on the environment. Monitoring and mitigation are not a factor.

Future expansion of the airport would require monitoring and mitigation in accordance with Federal, State, and local requirements and will be address in those construction plans.

(b) *Description of methodology used to measure impacts of the Project and effectiveness of proposed mitigation measures*.

This Application for a 1041 Permit and Master Plan review, and future Land Development Code amendment(s) and potential Compatible Land Use Plan are administrative actions with no immediate impact on the environment. Monitoring and mitigation are not a factor.

These will be appropriately addressed when actual expansion and/or development of the airport property is being proposed.

(c) *Description, location and intervals of proposed monitoring to ensure that mitigation will be effective*.

This Application for a 1041 Permit and Master Plan review, and future Land Development Code amendment(s) and potential Compatible Land Use Plan are administrative actions with no immediate impact on the environment. Monitoring and mitigation are not a factor.

These will be appropriately addressed when actual expansion and/or development of the airport property is being proposed.

(23) **Additional Information**. . . . None noted at this time.