

# **Meadow Lake Airport Association, Inc.**

13625 Judge Orr Road, Meadow Lake Airport (KFLY), Peyton, CO 80831-6051

June 24, 2020

El Paso County Planning and Community Development  
2880 International Circle, Suite 110  
Colorado Springs, CO 80910

Subj: **APPLICATION FOR 1041 PERMIT**

- Ref: (a) ***"Meadow Lake Airport Master Plan Study" & "Airport Layout Plan"*** (2019)  
(b) FAA Denver Airport District Office letter dated May 31, 2019  
(c) El Paso County ***"Administrative Determination – Meadow Lake Airport"*** dated October 3, 2018  
(d) FAA Denver Airport District Office letter dated July 16, 2018  
(e) Meadow Lake Airport Application for 1041 Permit dated April 15, 2018  
(f) ***"El Paso County Land Development Code"***, Appendix B, ***"Guidelines and Regulations for Areas and Activities of State Interest"***, Chapters 1, 2, & 7  
(g) C.R.S. 43-10-113. ***"Safe operating areas around airports – establishment"***

1. **Purpose.** The purpose of this revised application for a 1041 permit is:

**Phase 1:** (timeline: to match El Paso County Master Plan development)

- to submit the Meadow Lake Airport Master Plan Update (*"the Plan"*), which includes projected plans for expansion, including the updated and FAA approved Airport Layout Plan (ALP), for El Paso County's approval; and
- with coordination of the Meadow Lake Airport Association (MLAA), to include Meadow Lake Airport into El Paso County's Master Plan as El Paso County's General Aviation airport (and Reliever airport for Colorado Springs Municipal), and

**Phase 2:** (timeline: six months after Master Plan(s) approval)

- For El Paso County to adopt and approve an overlay that projects the land areas defined or identified in 14 C.F.R. Part 77 surrounding the airport per C.R.S. 43-10-113 [Reference (e)], which requires that:

*"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."*

2. **Discussion.** A description of airport master plans and the NPIAS (National Plan of Integrated Airport Systems) is discussed in the attached enclosures. While review and approval of an "Airport Master Plan" is recognition of a plan for future growth, it should be noted that airport future plans change as requirements change. This is the fourth Master Plan for Meadow Lake Airport since it was designated by the FAA as a reliever airport in 1989. The specifics of the "future" runway complex described in each Plan has changed based on FAA and local requirements at the time of each update.

FAA Master Plans for any airport are living documents and are reviewed and updated periodically and as necessary due to changing environments. The **2011 Colorado Aviation System Plan - Executive Summary** [Page 6] states: *"The master planning benchmark applies to publicly-owned and NPIAS airports. During this update, the Division of Aeronautics and FAA worked together to adjust the objective for current master plans. The revised objective is for all commercial airports to have a master plan that is current within seven years and for publicly-owned and NPIAS general aviation airports to have master plans that are current within 10 years."* With the 1041 Permit approval, MLAA will ensure coordination of all future updates with El Paso County and the appropriate provisions of the Land Development Code.

The Master Plan is not a construction plan, it is only a strategic plan for growth of the airport at some time in the future. As the need to expand the airport becomes apparent, actual construction plans will address specific County questions and concerns at that time; i.e. *"Expansion of Airports"*. Until then, we can only provide best estimates and concepts that may apply. Paragraph 8 of the Application for 1041 Permit (Appendix A) asks for "Duration of Permit". We recommend that the permit be defined as "indefinite" with the current Master Plan, but subject to renewal at each update to the Airport Master Plan.

Note: Where appropriate throughout this application, direct excerpts from the Meadow Lake Airport Master Plan have been used. These excerpts (and those from other published Meadow Lake documents) are shown in quotations and blue ink. Reference to "figures" and "tables" made in these excerpts are to tables and figures that may be found in the Master Plan and are not routinely repeated in this application document.

- Excerpts from County documents will be shown in green.
- Excerpts from state and federal regulations and documents will be shown in red

Respectfully,



David E. Elliott  
President, MLAA Board of Directors  
cell/text: 719-339-0928  
email: [falcon20flier@msn.com](mailto:falcon20flier@msn.com)

Additional References:

- (h) **"Meadow Lake Airport – Environmental Assessment: Establishment of Turf Runway"** (2013)
- (i) **"Compliance Plan – Meadow Lake Airport"** (2012)
- (j) **"Falcon/Peyton Small Area Master Plan"** (August 2008)
- (k) **"El Paso County Policy Plan"** (1998)



The following References are available online at:

[www.codot.gov/programs/aeronautics](http://www.codot.gov/programs/aeronautics)

- (l) **"2011 Colorado State Aviation Plan"**
- (m) **"2013 Economic Impact Study for Colorado Airports"**
- (n) **"Discretionary Aviation Grant Program"**
- (o) **"Pavement Evaluation and Pavement Management Program"**

The following References are available online at:

[www.faa.gov](http://www.faa.gov)

- (p) **"General Aviation Airports: A National Asset"** (May 2012)
- (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 following References are available online at:

[www.trb.org](http://www.trb.org)

- (aa) ACRP Report 27 – **"Enhancing Airport Land Use Compatibility"**  
Vol 1: **"Land Use Fundamentals and Implementation Resources"** (2010)  
Vol 2: **"Land Use Surveys and Case Study Summaries"** (2010)
- (bb) ACRP Report 168 – **"Runway Protection Zones Risk Assessment Tool Users' Guide"** (2017)
- (cc) ACRP Report 206 – **"Guidebook on Effective Land Use Compatibility Planning Strategies for General Aviation Airports"** (2019)
- (dd) ACRP Legal Research Digest 14: **"Achieving Airport-Compatible Land Uses and Minimizing Hazardous Obstructions in Navigable Airspace"**
- (ee) ACRP Report 16 – **"Guidebook for Managing Small Airports"** (Second Edition – 2019)

## ATTACHMENTS

### Glossary of Terms

### Appendix A: "Application for a Permit to Conduct Designated Activity of State Interest"

### Enclosures:

#### 1. Parcel Maps:

- a. El Paso County Assessor's GIS map depicting general location of Meadow Lake Airport from Falcon
- b. El Paso County Assessor's GIS map depicting Meadow Lake Airport

- c. Google Earth overhead view depicting Meadow Lake Airport and associated properties
2. Legal Description: Assessor's Office Property Data for 43000-00-563
3. Bylaws of the Meadow Lake Airport Association
  - a. *"Exhibit A – Schedule of Properties and Owners"*
4. Colorado Revised Statutes:
  - a. C.R.S. 41-1-107 *Ownership of space*
  - b. C.R.S. 43-10-113 *Safe operating areas around airports – establishment*
5. Federal Regulations:
  - a. 49 U.S.C. sec 40102 ... (32) *"Navigable Airspace"*
  - b. 49 U.S.C. sec 47102 ... (22) *"Public-Use Airport"*  
(23) *"Reliever Airport"*
  - c. 14 CFR 91.119 – *Minimum safe altitudes: General*
6. Correspondence:
  - a. FAA Denver Airport District Office letter dated July 14, 1989
  - b. FAA Denver Airport District Office letter dated July 16, 2018
  - c. FAA Denver Airport District Office letter dated October 9, 2018
  - d. FAA Denver Airport District Office letter dated May 31, 2019
7. "National Plan of Integrated Airport Systems (NPIAS) 2019-2023", Report to Congress: Appendix A - List of NPIAS Airports
  - a. Explanation of Terms and Abbreviations (pg A-1 & A2)
  - b. State Summary (pg A-3)
  - c. Colorado (pg A-24 & A-25)
8. Meadow Lake Airport Governmental Relationships
9. Receipt for Fees Paid #521244 dated 04/24/18

**Appendix B: Section 2.303 Submission Requirements for All Permit Applications**

**Appendix C: Section 7.201 Application Submission Requirements**  
**Section 7.202 Review Criteria**

**Enclosures:**

10. **"Articles of Incorporation"** and **"ByLaws of the Meadow Lake Airport Association"**
11. **Key Personnel and Oversight**
  - (a) MLAA
    - Board of Directors
      - David Elliott, President
      - Carl Benda, Vice President
      - Jeff Moore, Secretary/Treasurer
      - Mike Barr



- Jeff Hundley
  - Dan Jacquot
  - Tom Shook
  - Airport Development Committee
    - Lee Wolford, Chair
    - Lee Leshner
    - Wyman Varndoe
- (b) Applicant drafter & planners
  - David Elliott
  - Aviation, Inc . . MLAA (KFLY) Planning and Engineering Consultants
  - Letter of Designation from the MLAA Board of Directors
- (c) Coordination and Oversight:
  - Colorado Division of Aeronautics
  - FAA Denver Airports District Office (ADO)

## 12. Financial Exhibits of the MLAA

- (a) Financial Statements (2018)
  - (1) IRS Form 990 (2018)
- (b) Summary of FAA AIP and CDAG grants to Meadow Lake Airport
- (c) Meadow Lake Airport Capital Improvement Plan (CIP)
- (d) Application for Colorado Discretionary Aeronautics Grant (2019)
- (e) Colorado GA Sustainability Program data overview
- (f) 2013 Economic Impact Study for Colorado Airports
  - (1) The Economic Impact of Meadow Lake Airport (FLY)

## 13. Property Exhibits

- (a) Certification of Mineral Rights
- (b) Vicinity Maps
- (c) List of Adjacent Bordering Properties
- (d) Area Zoning Map
  - (1) Special Districts: Emergency Services
  - (2) Special Districts: School Districts and Facilities
- (e) Easements and Plats – Meadow Lake Airport
  - (1) Aviation Easement, 18 March 1969
  - (2) Clear Zone Aviation Easement, 7 September 1990
  - (3) Aviation Easement, 11 October 1990
  - (4) Clear Zone Aviation Easement, 21 December 1990
  - (5) Aviation and Hazard Easement, 4 June 1996
  - (6) Meadow Lake Estates Filing No 6, Subdivision Plat dated December 10, 1982 (excerpt)
  - (7) Proposed Meadow Lake "Airspace Aviation Easement"

- (f) Meadow Lake Airport Property Charts
  - (1) Meadow Lake Airport Property Boundary
  - (2) Existing Airport Facilities (including Runway Protection Zones)
  - (3) Meadow Lake Airport Layout Plan – Existing
  - (4) Meadow Lake Airport Layout Plan – Future
- (g) Meadow Lake Airspace Charts
  - (1) Meadow Lake Airport Influence Area
  - (2) Meadow Lake Airport AIRSPACE PLAN (Part 77)
  - (3) Meadow Lake Airport Traffic Patterns – Main Runway 15-33
  - (4) Meadow Lake Airport Traffic Patterns – Main Runway 15G-33G
  - (5) Meadow Lake Airport Traffic Patterns – Main Runway 8-26
- (h) Colorado Stormwater Permits
  - (1) Inactivation – Stormwater Discharge Permit COR-010077
  - (2) CDPS General Permit COR 406129 dated 7/8/2019
- (i) Colorado Ground Water Commission Determinations (21 Nov 2006)
- (j) Environmental Assessment, Establishment of Turf Runway (May 2013)
- (k) MLAA List of Ground Support Equipment

#### 14. Miscellaneous Exhibits – Federal

- (a) Nation Plan of Integrated Airport Systems (NPIAS) - 2019-2023
- (b) General Aviation Airports: A National Asset (May 2012)
- (c) FAA Airport Improvement Program - Airport Sponsor Assurances 3/2014
- (d) KFLY Airport Information:
  - (1) FAA 5010 Airport Master Record: Meadow Lake Airport (KFLY)
  - (2) FAA National Based Aircraft Inventory Program (cover page)
- (e) Current FAA Advisory Circulars Required for Use in AIP Funded and PFC Approved Projects
- (f) Sample Buyer Awareness Documents . . . . . [see Ref (cc), App H]
  - (1) Typical Avigation Easement
  - (2) Recorded Overflight Notification

#### 15. Miscellaneous Exhibits - Colorado

- (a) Correspondence
  - (1) Colorado Aeronautical Board letter dated April 19, 2019 (w/attach)
  - (2) Colorado Airport Operators Association letter dated May 5, 2019
- (b) 2011 Colorado Aviation System Plan: Executive Summary
  - (1) Chap 2. Inventory | Technical Report, May 2012 (pgs 2-1 thru 2-9)
- (c) Colorado Discretionary Aviation Grant Assurances
- (d) General Aviation Airport Sustainability Program
- (e) Pavement Evaluation and Management



## GLOSSARY OF TERMS

From Advanced Cooperative Research Program, National Academy of Sciences:

- "**Guidebook for Managing Small Airports**" (2019), ACRP Research Report 16
- "**Guidebook on Effective Land Use Compatibility Planning Strategies for General Aviation Airports**" (2019), ACRP Research Report 206

**Above Ground Level (AGL):** An elevation datum given in feet above ground level.

**Aircraft Accident:** An occurrence incident to flight in which, as a result of the operation of an aircraft, a person (occupant or nonoccupant) receives fatal or serious injury or an aircraft receives substantial damage.

**Aircraft Incident:** A mishap associated with the operation of an aircraft in which neither fatal nor serious injuries nor substantial damage to the aircraft occurs.

**Aircraft Mishap:** The collective term for an aircraft accident or an incident.

**Aircraft Operation:** The airborne movement of aircraft at an airport or about an enroute fix or at other point where counts can be made. There are two types of operations: local and itinerant. An operation is counted for each landing and each departure, such that a touch-and-go flight is counted as two operations. (FAA Stats)

**Airport:** An area of land or water used or intended to be used for the landing and taking off of aircraft that includes its buildings and facilities, if any. (FAR 1)

**Airport Compatibility Zone:** Areas on or near an airport in which land use and development restrictions are established to protect that safety of the public. Typical areas include the Runway Protection Zone, Inner Approach/Departure Zone, Inner Turning Zone, Outer Approach/Departure Zone, Sidelane Zone, and the Traffic Pattern Zone.

**Airport Economic Impact:** The contribution of an airport to the regional economy, quantified in terms of employment, payroll and output.

**Airport Elevation:** The highest point of an airport's usable runways, measured in feet above mean sea level. (AIM)

**Airport Hazard:** Any structure or use of land that obstructs the airspace required for the flight of aircraft in takeoff and landing.

**Airport Hazard Area:** An area in which an airport hazard may be established.

**Airport Improvement Program (AIP):** Federal Aviation Administration (FAA) program that provides grants to public agencies for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems. Through AIP grants, the FAA funds the majority of the cost of planning studies and eligible improvement projects.

**Airport Influence Area (AIA).** An AIA is the area or areas in which current or future airport-related noise, overflight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses.



**Airport Layout Plan (ALP):** A scale drawing of existing and proposed airport facilities, their location on the airport, and the pertinent clearance and dimensional information required to demonstrate conformance with applicable standards

**Airport Master Plan (AMP):** An assembly of appropriate documents and drawings covering the development of a specific airport from a physical, economic, social and political jurisdictional perspective by assessing current and projected demands. The master plan typically has a time frame of 20 years, with short-, intermediate- and long-term goals within that time frame. The airport layout plan (ALP) is a part of this plan.

**Airport Property:** Any property described as part of an airport in an agreement with the United States or defined by an airport layout plan or listed in an Exhibit "A" property map is considered to be obligated property for airport purposes.

**Airport Reference Code (ARC):** An airport designation by the FAA that signifies the airport's highest runway design code, minus the third (visibility) component of the runway design code. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the airport.

**Airport Reference Point (ARP):** The approximate geometric center of all usable runways at the airport.

**Airspace Protection:** Protection of navigable airspace from the hazards to flight.

**Allowable Land Use:** Uses of land that are allowed within a designated area by zoning ordinance in place.

**Ambient Noise Level:** The level of noise that is all encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the receiver.

**Approach or Departure Airspace:** The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.

**Approach Protection Easement:** A form of easement that both conveys all of the rights of an aviation easement and sets specified limitations on the type of land uses allowed to be developed on the property.

**Approach Surface:** A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based on the type of approach available or planned for that runway end.

**Aviation-Related Use:** Any facility or activity directly associated with the air transportation of persons or cargo or the operation, storage, or maintenance of aircraft at an airport or heliport. Such uses specifically include runways, taxiways, and their associated protected areas defined by the FAA, together with aircraft aprons, hangars, fixed base operations, terminal buildings, etc.

**Aviation Easement:** A type of easement that typically conveys the following rights:

- A right-of-way for free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface in the easement (usually set according to FAR Part 77 criteria).



- A right to subject the property to noise, vibrations, fumes, dust, and fuel particle emissions associated with normal airport activity.
- A right to prohibit the erection or growth of any structure, tree, or other object that would enter the acquired airspace.
- A right-of-entry onto the property, with proper advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.
- A right to prohibit electrical interference, glare, misleading lights, visual impairments, and other hazards to aircraft flight from being created on the property.

**Base or Base Leg:** The leg perpendicular to the final leg of the traffic pattern to the landing runway.

**Based Aircraft:** Aircraft stationed at an airport on a long-term basis.

**Buffer Area/Zone:** A technique that local governments and developers use to create a neutral area between adjacent properties.

**Capital Improvement Plan (ACIP):** A document prepared by the airport sponsor on an annual basis that represents the airport sponsor's 5-year program for capital development at the airport. Also referred to as an airport capital improvement program or transportation improvement program.

**Categorical Exclusion (CATEX):** A category of actions that do not individually or cumulatively have a significant effect on the human environment and for which neither an environmental assessment nor an environmental impact statement is required. (Documentation in the form of a CATEX checklist still must be prepared by the airport or its sponsor.)

**Circling Approach:** A maneuver initiated by the pilot to align the aircraft with a runway for landing when a straight-in landing from an instrument approach is not possible or not desirable.

**Class C Airspace:** Airspace around busy U.S. airports (other than Class B). Radio contact with approach control is mandatory for all traffic. This includes an area from the surface to 4,000 feet above ground level out to 5 miles and from 1,200 to 4,000 feet AGL to 10 miles from the airport. [note: Colorado Springs (COS) is Class C up to 10,200 feet MSL]

**Class D Airspace:** Airspace around an airport with an operating control tower, typically to a radius of 3-5 miles from the surface to 2,500 feet above ground level. Radio contact with the control tower is required prior to entry. [note: US Air Force Academy (AFF) is Class D up to 8,800 feet MSL]

**Class E Airspace:** General controlled airspace comprising control areas, transition areas, low-altitude (Victor) airways, etc. [note: the airspace above FLY, AFF, & COS is Class E to 18,000 feet MSL]

**Class G Airspace:** Uncontrolled airspace, generally the airspace from the surface up to 700 or 1,200 feet above the ground level in most of the United States, but up to as



high as 14,500 feet in some remote western and sparsely populated areas. [note: Meadow Lake (FLY) is Class G up to 700 feet AGL]

**Combining District:** A zoning district that establishes development standards in areas of special concern over and above the standards applicable to basic underlying zoning districts.

**Compatible Land Use:** The use of land that is compatible and consistent with activities and purposes of ongoing airport operations.

**Crosswind or Crosswind Leg:** The leg perpendicular to the takeoff leg for the runway in use.

**Day-Night Average Sound Level (DNL):** The noise metric adopted by the U.S. Environmental Protection Agency for measurement of environmental noise. It represents the average daytime noise level during a 24-hour day, measured in decibels and adjusted to account for the lower tolerance of people to noise during nighttime periods. The mathematical symbol is Ldn.

**Decibel (dB):** A unit measuring the magnitude of a sound, equal to the logarithm of the ratio of the intensity of the sound to the intensity of an arbitrarily chosen standard sound, specifically a sound just barely audible to an unimpaired human ear. For environmental noise from aircraft and other transportation sources, an A-weighted sound level (abbreviated Dba) is normally used. The A-weighting scale adjusts the values of different sound frequencies to approximate the auditory sensitivity of the human ear.

**Deed Notice:** A formal statement added to the legal description of a deed to a property and referenced on any subdivision map. As used in airport land use planning, a deed notice would state that the property is subject to aircraft overflights. Deed notices are used as a form of buyer notification as a means of ensuring that those who are particularly sensitive to aircraft overflights can avoid moving to affected areas.

**Density and Intensity Limitations:** Establishment of criteria limiting the maximum number of dwellings or people in areas close to the airport.

**Departure Obstacle Clearance Surface:** A 40:1 surface originating at the location and elevation of the departure end of the runway, which is used to elevate required climb performance from a particular departure runway end to the nearest (shortest distance) obstacle in the segment.

**Design Aircraft:** An aircraft with the characteristics that determine the application of airport design standards for a specific runway, taxiway, taxilane, apron or other facility. This aircraft can be a specific aircraft model or a composite of several aircraft using, expected to or intended to use the airport or part of the airport. (Also called "critical aircraft" or "critical design aircraft".)

**Discretionary Funds:** Airport Improvement Program funds remaining within the obligation limitation, after entitlement calculation, subject to restrictions in legislation and available for distribution at the FAA's discretion, per the FAA priority system.

**Downwind or Downwind Leg:** A flight path parallel to the landing runway in the direction opposite the landing direction.



**Entitlement Funds:** A set minimum level of Airport Improvement Program funding for an airport, based on the FAA's criteria. The minimum differs for primary and nonprimary airports based on enplanement levels for primary air carrier airports and standard allocation for each nonprimary airport.

**Easement:** A less-than-fee-title transfer of real property rights from the property owner to the holder of the easement.

**Environmental Assessment (EA):** An assessment of the environmental effects of a proposed action for which federal assistance is being requested or for which federal authorization is required. The EA serves as the basis for the FAA's environmental impact statement (EIS) or finding of no significant impact (FONSI).

**Environmental Impact Statement (EIS):** A document prepared under the requirements of the National Environmental Policy Act of 1969, Section 102(2)(c) representing a federal agency's evaluation of the effect of a proposed action on the environment. (The FAA will serve as the sponsor of an EIS.)

**Equivalent Sound Level (Leq):** The level of constant sound that, in the given situation and time period, has the same average sound energy as does a time-varying sound.

**Exhibit "A" Property Map:** A drawing of the dedicated airport property, including detailed information about how the property was acquired, the funding source for the land and if the land was conveyed as federal surplus land or government property.

**Federal Aviation Regulations (FAR) Part 77:** The part of Federal Aviation Regulations that deals with objects affecting navigable airspace in the vicinity of airports. Objects that exceed the Part 77 height limits constitute airspace obstructions. FAR Part 77 establishes standards for identifying obstructions to navigable airspace, sets forth requirements for notice to the FAA of certain proposed construction or alteration, and provides for aeronautical studies of obstructions to determine their effect on the safe and efficient use of airspace. A copy of the regulations is available at [www.ecfr.gov](http://www.ecfr.gov).

**FAR Part 77 Surfaces:** Imaginary airspace surfaces established with relation to each runway of an airport. There are five types of surfaces:

- **Primary:** A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway, but when the runway has no specially prepared hard surface, the primary surface ends at each end of that runway.
- **Approach:** A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface.
- **Transitional:** These surfaces connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or the other transitional surfaces.
- **Horizontal:** A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the



center of each end of the primary surface of each runway (5,000 or 10,000 feet, depending on runway category and approach type)

- **Conical:** A surface that extends upward and outward from the outer limits of the horizontal surface for a horizontal distance of 4,000 feet. The slope of the conical surface is 20:1 (5 percent) measured in a vertical plane.

**Federally Obligated Airport:** An airport that has accepted federal grant funds and the associated requirements known as "Grant Assurances".

**Final or Final Leg:** The last leg of the traffic pattern when the aircraft is aligned to fly straight in to the landing runway.

**Final Approach Segment:** This is the segment of an approach procedure in which alignment and descent for landing are accomplished. The segment begins at the "final approach fix" (FAF) and ends at the "missed approach point" (MAP) or "decision altitude" (DA), and the dimensional criteria/slope vary based on airport conditions and approach type.

**Finding of No Significant Impact (FONSI):** An administrative determination by the FAA that a proposed action by the airport sponsor will have no significant impact on the environment.

**Flight Hazard.** Any object or use of land that has the potential to lead to, cause, or contribute to the severity of an aircraft accident.

**General Aviation (GA):** All civil aviation (excluding military) except those classified as air carrier or air taxi. The types of aircraft typically used in GA activities vary from multiengine jet aircraft to simple single-engine piston aircraft for purposes such as personal, business and instructional flying.

**General Aviation Airport:** Airport not classified as commercial service or military.

**Geographical Information Systems (GIS):** A system (or tool) used for gathering, analyzing, and presenting spatial or geographic data.

**Global Positioning System (GPS):** A navigational system that utilizes a network of satellites to determine a positional fix almost anywhere on or above the earth. For aviation purposes, the current form of GPS guidance provides enroute aerial navigation and selected types of nonprecision instrument approaches.

**Grant Assurances:** Obligations, undertaken by the airport sponsor, when they accept funds from the FAA-administered airport financial assistance program.

**Hazard to Air Navigation:** An existing or proposed object that will have a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft.

**Incompatible Land Use:** A use of land that conflicts with airport operations and activities. Residential, public, recreational and certain other noise-sensitive land uses that are designated as unacceptable within specific ranges of cumulative (Ldn) noise exposure, as set forth in Table 2 of Appendix A of FAR Part 150.

**Instrument Approach Procedure:** A series of predetermined maneuvers for the orderly transfer of an approach under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made



visually. It is prescribed and approved for a specific airport by competent authority. (AIM)

**Instrument Runway:** A runway equipped with electronic and visual navigation aids for which a precision or nonprecision approach procedure having straight-in landing minimums has been approved. (AIM)

**Itinerant Operation:** An arrival or departure performed by an aircraft from or to a point beyond the local airport area. Also defined as all aircraft arrivals and departures other than local operations.

**Land Use Compatibility/Compatible Land Use:** The coexistence of land uses surrounding the airport with airport related activities, particularly with the noise from aircraft operations.

**Land Use Controls:** Measures established by local governments to implement land use planning.

**Land Use Density:** A measure of the concentration of land use development in an area. Mostly the term is used with respect to residential development and refers to the number of dwelling units per acre.

**Land Use Intensity:** A measure of the concentration of nonresidential land use development in an area. For the purposes of airport land use planning, the term indicates the number of people per acre attracted by the land use.

**Local Operation:** An aircraft operation that remains no more than 25 nautical miles from the departure point, or terminates at the point of departure or does not include a stop of a duration greater than 15 minutes. Touch-and-Go operations are local operations.

**Master Plan/Comprehensive Plan:** A document and graphics prepared by a community or land use jurisdiction setting out goals, objectives and desired patterns for future land use, transportation and other development factors. The Master Plan is the basis for enactment of zoning ordinances to effect the Plan's objectives.

**Mean Sea Level (MSL):** Altitude expressed as feet above sea level, rather than above local terrain (i.e., above ground level). To ignore varying terrain elevations, all navigational altitudes and barometric altimeters are based on height above MSL. Only radar altimeters, which measure the distance between the aircraft and the ground at low altitudes, indicate actual height above the ground.

**Minimum Descent Altitude (MDA):** The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided. (FAR 1)

**National Airspace System (NAS):** The airspace, navigational facilities and airports of the United States along with their associated information, services, rules, regulations, policies, procedures, personnel, and equipment.



**National Plan of Integrated Airport Systems (NPIAS):** Public-use airports considered necessary to provide a safe, efficient and integrated system of airports to meet the needs of United States civil aviation, national defense and U.S. Postal Service.

**Noise Contours:** Continuous lines drawn on a map and representing equal noise levels around a noise source, such as an airport or highway. The lines are generally drawn in 5-decibel increments so that they resemble elevation contours in topographical maps: i.e., DNL 75dB, DNL 70dB, DNL 65 dB, etc

**Noise Level Reduction (NLR):** A measure used to describe the reduction in sound level from environmental noise sources occurring between the outside and the inside of a structure.

**Noise-Sensitive Receptor:** Land uses in which occupants are especially susceptible to the effects of exposure to unwanted sound. These uses include residences, schools, hospitals, parks, auditoriums, churches, nursing homes, libraries, and guest lodges.

**Nonconforming Use:** An existing land use that does not conform to subsequently adopted or amended zoning or other land use development standards.

**Nonprecision Approach Procedure:** A standard instrument approach procedure with minimums not lower than  $\frac{3}{4}$  mile and/or 250-foot ceiling, for which at least horizontal guidance is provided with a ground-based navigational aid or global positioning system. A nonprecision approach utilizing the global positioning system may also provide vertical guidance, depending on the approach and equipment of the aircraft.

**Nonprecision Instrument Runway:** A runway where the best approach is a nonprecision instrument approach procedure and no precision approach facility or procedure is planned.

**Nontowered Airport:** An airport without a control tower. The majority of America's 13,000 airports are nontowered (only 680 airports have control towers). Nontowered airports are far from being "uncontrolled". Pilots follow traffic pattern procedures and self-announce positions and intentions using the common traffic advisory frequency, usually called the UNICOM (universal communications) frequency.

**Obstruction:** Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used therein, the height of which exceeds the standards established in Subpart C of FAR Part 77, Objects Affecting Navigable Airspace.

**Obstruction Evaluation/Airport Airspace Analysis (OE/AAA):** A public website provided by the FAA to enable individuals and organizations engaged in sponsoring the construction or alteration of potential obstructions on and off airport property to easily notify the FAA of their intentions and activities. This allows the FAA to evaluate the impacts of their activities on the airspace system.

**Open Land:** Land that is relatively level and free of large obstacles and can be used for emergency landing of aircraft near an airport.

**Overflight:** Any distinctly visible and/or audible passage of an aircraft in flight, not necessarily directly overhead.



**Overflight Easement:** An easement that describes the right to overfly the property above a specified surface and includes the right to subject the property to noise, vibrations, fumes, and emissions. An overflight easement is used primarily as a form of buyer notification.

**Overflight Zone:** The area(s) where aircraft maneuver to enter or leave the traffic pattern, typically defined by the FAR Part 77 horizontal surface.

**Overlay Zone/Overlay District:** A regulatory tool that creates a special zoning district, placed over an existing base zone(s), which identifies provisions in addition to those already in place in the underlying base zone. See Combining District.

**Permitted Height:** The height that a structure can have without penetrating the airport's airspace protection surfaces.

**Precision Approach Path Indicator (PAPI):** A visual aid that provides guidance information to help a pilot acquire and maintain the correct approach, relative to aircraft altitude, to a runway.

**Prohibited Uses:** Facilities and uses that are often not permitted within an airport's influence area.

**Public-Use Airport:** Airport available for public use; may be publicly or privately owned.

**Recorded Deed of Notice:** A form of buyer awareness measure whose objective is to ensure that prospective buyers of airport area property are informed about the airport's impact on the property.

**Redevelopment:** The acquisition and renovation of a previously developed area or land

**Reliever Airports:** General aviation airports in metropolitan areas that provide pilots with an alternative to using congested commercial service airports or provide general aviation access to the surrounding area.

**Runway Protection Zone (RPZ):** An area (formerly called a clear zone) off the end of a runway use to enhance the protection of people and property on the ground. (Airport Design AC). A trapezoidal area at ground level off the runway end to enhance the protection of people and property on the ground, which is achieved through airport owner control over RPZs. Such control includes clearing RPZ areas (and keeping them clear) of incompatible objects and activities. Control is preferably exercised through the acquisition of sufficient property interest in the RPZ.

**Runway Vicinity:** Areas immediately adjoining the runway surface.

**Rezoning:** To assign land or an area to a different zone.

**Safety Zone:** For the purpose of airport land use planning, an area near an airport in which land use restrictions are established to protect the safety of the public from potential aircraft accidents.

**Single-Event Noise:** As used herein, the noise from an individual aircraft operation or overflight.



**Strategic Plan:** A written plan identifying the vision and long-term directional goals for an airport; typically, it has a time frame of 10 to 20 years.

**Statutes:** State-level laws and regulations that provide guidance to airport land use compatibility.

**Taking:** Government appropriation of private land for which compensation must be paid as required by the Fifth Amendment of the U.S. Constitution. It is not essential that there be physical seizure or appropriation for a taking to occur, only that government action directly interferes with or substantially disturbs the owner's right to use and enjoyment of the property, or significantly diminishes its economic value.

**Through-The-Fence (TTF):** Access to the airfield granted by the sponsor of a public airport to a person or business that owns property adjacent to the airport for the person's or business's aircraft, or authorized aircraft, to taxi onto and use the airport.

**Traffic Pattern:** The traffic flow prescribed for aircraft landing at, taxing on, or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach. (AIM)

**Traffic Pattern Zone:** An elliptical area that includes the majority of the other portions of regular air traffic patterns and pattern entry routes.

**Transitional Surface:** Surfaces that extend outward and upward at right angles to the runway centerline at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces.

**Uncontrolled Airport:** (See Nontowered Airport)

**Urban Encroachment (Sprawl):** Expansion of populations away from the concentrated urban areas to low-density areas.

**Urban Growth Management (UGM):** The identification and management of the demands on municipal facilities, improvement or services created by any proposed residential, commercial, industrial or other type of development. UGM is intended to (1) provide the means for satisfying such demands; (2) identify any harmful effects of development; and (3) protect the jurisdictions and their residents against such harmful effects by minimizing the costs of municipal facilities, improvements and services. The intent of UGM is usually not to prevent development or growth, but rather to avoid free or disorganized development or growth in the UGM area, which is generally located in and around the fringe of an urban area. The UGM area is usually either relatively undeveloped or predominantly agricultural and lacks most, if not all, municipal facilities, improvements or services.

**Variance:** Permission to deviate from the specific use, bulk or other requirements of a zoning ordinance, granted by a Board of Adjustment or other authorized land use board of commission.

**Vertical Guidance Surface (VGS):** An imaginary 30:1 trapezoidal surface applicable to approaches with vertical guidance, extending from the runway threshold along the runway centerline to 10,000 feet from the runway end. Formerly referred to as a glide path qualification surface (GQS).



**Visual Approach:** An approach where the pilot must use visual reference to the runway for landing under VFR conditions.

**Visual Area Surface:** The 20:1 visual area surface is defined within Section 3.3.2.c of FAA Order 8260.3D: United States Standard for Terminal Instrument Procedures. The surface has a vertical slope of 20:1, extending from the runway's threshold elevation to the decision altitude of the specific approach. It begins 200 feet prior to the runway threshold and is intended to protect aircraft during the last stages of an approach, which allows the transition from instruments to visual guidance.

**Visual Flight Rules (VFR):** Rules that govern the procedures for conducting flight under visual conditions. VFR applies when meteorological conditions are equal to or greater than the specified minimum – generally, a 1,000- foot ceiling and 3-mile visibility. [note: Meadow Lake is in Class "G" airspace: VFR minimum is 1-mile visibility and remain clear of clouds]

**Visual Runway:** A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation on an FAA-approved ALP. (Airport Design AC)

**Zoning:** A police power measure, enacted primarily by nits of local government, in which the community is divided into districts or zones within which permitted and special uses are established, as are regulations governing lot size, building bulk, placement, and other development standards. A zoning ordinance consists of two parts: the text and a map.

**Zoning Ordinance:** A legal document that allows a local government effective and legal regulation of uses of property while protecting and promoting the public interest.

#### Glossary Sources:

**FAR 1:** Federal Aviation Regulations Part 1, *Definitions and Abbreviations*

**AIM:** FAA, *Aeronautical Information Manual*

**Airport Design AC:** FAA Advisory Circular 150/5300-13, *Airport Design*

**FAA ATA:** FAA, *Air Traffic Activity*

**FAA Stats:** FAA, *Statistical Handbook of Aviation*