

Chapter Seven Land Use



Methow Valley State Airport
Airport Layout Plan Update

CHAPTER SEVEN AIRPORT LAND USE

Overview

Land use compatibility is a critical factor in the successful operation of an airport within any community. The effectiveness of land use planning, particularly the ability to accommodate a variety of compatible land uses, is a critical element in maintaining a livable community with efficient transportation systems.

Airports present unique land use planning challenges. In Washington, public use airports are recognized as “Essential Public Facilities (EPF)” in the Washington State Growth Management Act (GMA). In accordance with GMA, local jurisdictions are required to protect airports through effective land use planning.

Although the responsibility for creating and implementing land use controls is exclusively local, most technical evaluation and land use planning tools designed to protect airports from incompatible land uses or development are created at the state or federal government level.

GOVERNMENT ROLES IN AIRPORT LAND USE

Federal

The federal government’s primary role in airport land use planning focuses on uses of lands within the boundaries of public use airports (aviation-related uses, aeronautical uses, non-aviation uses, etc.), specifically as related to conformance with Federal Aviation Administration (FAA) grant assurances. Airports that are eligible to receive FAA Airport Improvement Program (AIP) grants pledge to protect the aeronautical function of the facility by restricting non-aviation land uses within airport property. Efficient on-airport land use ensures that meeting FAA airport design standards and protecting the airspace that surrounds a runway (FAR Part 77 – Objects Affecting Navigable Airspace) are among the highest priorities for an airport owner.

The second main area of interest at the federal government level is the protection of airspace associated with public use airports from potential hazards to air navigation (obstructions). FAR Part 77 defines the airspace associated with public-use airports that is protected from incompatible development (obstructions). The three-dimensional “imaginary surfaces” extend from the ground

surface, upward and outward from a runway. The geometry of Part 77 surfaces vary by runway design category and approach capabilities. The FAR Part 77 airspace associated with Runway 13/31 is depicted on the Airport Airspace Plan drawing included in Chapter Six.

Proposed construction on airports and in the vicinity of airports is reviewed by FAA (FAA Form 7460-1 - Notice of Proposed Construction or Alteration) to identify potential hazards to air navigation. If a proposed item penetrates any defined FAR Part 77 surfaces, or is located within the defined visual airport traffic patterns, the FAA will normally issue a “determination of presumed hazard,” effectively objecting to the development proposal. It is the responsibility of the local planning/building authorities to address FAA concerns as part of the local permitting process. The execution of airport leases (for hangar construction, etc.) should also be dependent on successful completion of the FAA’s 7460 review process. In areas of mountainous terrain, development of structures of limited height (typically 35 feet or less) is generally recognized as reasonable given the predominance of the terrain, trees, etc., which may significantly exceed the heights of built items.

FAR Part 150 (Airport Noise Compatibility Planning) provides guidance for land-use compatibility around airports. Compatibility or non-compatibility of land use is determined by comparing the noise exposure levels with existing and potential land uses. Through established federal standards, the methodology for quantifying and evaluating cumulative noise impacts is defined. Specific levels of noise exposure are also recognized as “significant,” which is the threshold used by FAA to consider implementing various noise mitigation measures. FAR Part 150 correlates the compatibility of land uses (residential, commercial, industrial, etc.) to specific noise exposure levels. The 1990 Airport Noise and Capacity Act defines federal policy on the regulation of airport noise (operating curfews, aircraft restrictions, etc.), with the intent of standardizing noise controls throughout the national airport system.

State

The Growth Management Act (GMA) establishes requirements for towns, cities and counties to address airport land use compatibility. The following text (provided by WSDOT Aviation) briefly summarizes the intent of the Act:

In 1996, the Washington State Legislature passed land use legislation (RCW 36.70.547, RCW 36.70A.510) that requires all cities and counties to adopt comprehensive plan goals, policies and regulations to discourage development of incompatible land uses adjacent to public use airports. Local jurisdictions are also required to consult with aviation interests, including WSDOT Aviation, when adopting comprehensive plan amendments. Communities must address airport land use compatibility as part of their scheduled GMA Updates, subject to the schedule designated by state law.

The Washington State Airports and Compatible Land Use Guidebook (WSDOT Aviation), updated in April 2010, provides airport land use compatibility guidelines and technical resources to assist communities in their efforts to protect airports from incompatible land uses. The WSDOT guidelines include six defined safety zones that are located in the vicinity of runways that address varying levels of compatibility with adjacent lands, uses, and development density. The updated guidebook provides a variety of tools (implementation toolkit, step-by-step assessment techniques, etc.) that are designed to encourage effective land use compatibility planning the local level.

Local

Methow Valley State Airport is located in unincorporated Okanogan County. All land use controls are the responsibility of Okanogan County. The updated Airport Layout Plan set contains an Airport Land Use Plan drawing (see Chapter Six) that depicts local zoning and land use designations in the vicinity of the airport.

Zoning and Land Use Designations

Methow Valley State Airport is zoned **Airport Development District (AP)** (Okanogan County Code: Title 17 – Zoning, Chapter 17.12). The **AP** zone permits all aviation related uses and a wide variety of non-aviation uses (not including residential), either as outright permitted or conditional uses. The AP zone includes the airport and most of the adjoining areas between the airport and Twisp-Winthrop Eastside Road (excluding the county maintenance facility and the area located near the southeast corner of the airport, between Evans Road and the platted Methow Valley Airport Trading Center.

Chapter 17.12 Airport Development District - AP

Sections:

17.12.010 Purpose of Classification - The purpose of this district is to provide for future airport expansion; to set aside lands adjacent to airports for future uses compatible with air transportation; and to protect airport facilities by the establishment of development standards.

17.12.020 Permitted Uses - Indicated on the District Use Chart.

17.12.030 Conditional Uses - Indicated on the District Use Chart.

17.12.040 Accessory Uses - Normal accessory uses customary and incidental to the permitted and/or conditional use of the property.

17.12.050 Prohibited Uses

1. *Indicated on the District Use Chart.*
2. *Any use which is in conflict with the requirements listed in 17.12.105 Special Provisions.*

17.12.060 Lot Area and Width

1. *Minimum lot area is 10,000 square feet.*
2. *Minimum lot width is 50 feet.*

17.12.070 Density - Maximum floor area = Lot area.

17.12.080 Required Yard Setbacks

1. *Front - Minimum is 10' except when facing outward on the perimeter of the Airport District in which instance the setback shall be a minimum of 25', and shall be landscaped with a Type III See Through Buffer per 17.27.030 C).*
2. *Side - Minimum is 10' except when abutting a residential or agricultural land district in which instance the setback shall be a minimum of 25' and the fifteen foot portion of such setback adjacent to the property line shall be landscaped with a Type II Visual Buffer per 17.27.030 B).*
3. *Rear - None, except minimum is 25' when abutting the perimeter of the Airport district and the fifteen foot portion of such setback adjacent to the property line shall be landscaped with a Type II Visual Buffer per 17.27.030 B).*

17.12.090 Height

1. *Maximum height is 65', however no obstruction (structural or natural) shall extend into the transitional, approach, horizontal or conical surfaces of the runway. See Safety Standards section 17.32.*
2. *Maximum height shall be 100' for: air traffic control towers; communication facilities (amateur radio poles or antennas; commercial or public agency radio and TV, microwave or other antennas for transmitting and receiving); fire towers; hose towers. However, not obstruction (structural or natural shall extend into the transitional, approach, horizontal or conical surfaces of the runway, unless the structure is absolutely essential to the operation of the airport. See safety standards, section 17.32.*

17.12.100 Lot Coverage - Maximum lot coverage is 70%.

17.12.105 Parking - As indicated in Chapter 17.25.

17.12.106 Special Provisions

1. *No use shall be permitted within this district which creates electrical interference with navigational signals or radio communications between the airport and aircraft.*
2. *Any use which would foster an increased bird population and thereby increase the likelihood of a bird strike problem shall provide a waste management/bird control plan as part of their development proposal.*
3. *There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may conflict with any present or planned operations of the airport.*
4. *All uses within the Airport Development District shall be directly served by safe and usable access, as determined by the County Department of Public Works.*
5. *Building materials shall not produce glare which may conflict with any present or planned operation of the airport.*
6. *Storage of flammable substances such as fuel or petroleum products shall be in conformance with current laws. Mobile aviation fuel trucks and lubricating oil shall be permitted.*
7. *A site plan review and approval is required prior to the development and operation of any use.*
8. *Those uses not specifically identified in the District Use Chart as allowed or allowed by conditional use permit but which are similar uses, shall only be allowed by the Administrator subject to the provisions of Chapter 17.21 if they are related to air transportation.*
9. *Signs shall be indirectly illuminated, made of non-glare materials, and no larger than thirty-two (32) square feet.*
10. *Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project into the runway, taxiway, or approach zone or areas.*

Current FEMA mapping depicts the 100-year floodplain for the Methow River adjacent to the southwest part of the airport. The airfield is considerably higher than the adjacent river channel or the areas located west of the river. The floodplain extends well beyond the river on its west side in the low-lying areas west of the airport. It does not appear that the developable areas of the airport are affected by the adjacent floodway.

Okanogan County zoning maps identify the land areas surrounding the airport as having **Valley Floor** zoning. A **Valley Floor** zoning is defined in Chapter 17.14 – **Methow Review District (MRD)**. The **MRD** is established to “protect” the sensitive environment, aesthetic, and economic qualities of the Methow Valley through review and the imposition of more stringent development and subdivision standards.” The legal description of the **Methow Review District** indicates that **MRD**

zones are located along the valley floor. The **MRD** designated areas in the vicinity of the airport are **MRD 5 or 20** acre parcels (1 dwelling unit per 5 or 20 acres).

Existing zoning permits low density residential development immediately adjacent to Methow Valley State Airport and under the both the airport traffic pattern and the approaches for both runway ends. The boundaries of the incorporated communities Winthrop and Twisp are located approximately 2 miles from the airport, northwest and south, beyond the airspace surfaces associated the airport.

Airport Overlay Zoning

Okanogan County has limited airport overlay zoning in place for Methow Valley State Airport (**Airport Safety Overlay District – Chapter 17.32**). The ordinance indicates that restrictions apply to the “transition and approach zones.” As noted earlier, the FAR Part 77 airspace surfaces previously defined for Runway 13/31 were based on small airplane standards; current airport use by large aircraft indicates a need to update the ordinance and mapping when the airport layout plan is adopted.

Chapter 17.32 Airport Safety Overlay District

The purpose of this section is to protect lives and property on lands which lie within the transition and approach zones surrounding an airport or landing field. Also, the district is intended to prevent the establishment of air space obstructions through height restrictions and other land use controls for the safety of persons airborne. This section shall be applied to lands where airports are classified by the Federal Aviation Administration as visual (paved), utility, non-precision and precision runways. Use requirements and standards of the underlying zone shall apply unless in conflict with provisions of this section.

17.32.010 - The dimensions of the transition and approach zones shall be determined by the current Federal Aviation Administration use classification and standards.

17.32.020 - Uses such as schools, churches, auditoriums, etc. where large groups of people assemble shall not be allowed within the Airport Safety Overlay District.

17.32.030 - No use shall be permitted within this district in such a manner as to create electrical interference with navigational signals or radio communications between the airport and aircraft.

17.32.040 - No use shall be permitted within this district which would foster an increased bird population and thereby increase the likelihood of a bird strike problem.

17.32.050 - No structure shall be allowed in the designated "clear zones."

17.32.060 - Storage of flammable substances such as fuel or petroleum products shall be in accordance with all current standards and regulations.

17.32.070 - There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may conflict with any present or planned operations of the airport.

17.32.080 - Roadways shall be located in such a manner that vehicle lights will not make it difficult for pilots to distinguish between airport runway landing lights or result in glare or in any other way impair visibility in the vicinity of the landing or take-off approach.

17.32.090 - Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project into the runway, taxiway, or approach zone.

17.32.100 - Building materials shall not produce glare which may conflict with any present or planned operation of the airport.

17.32.110 - No obstructions (structural or natural) shall extend into the transitional or approach surface of the runway.

POTENTIAL LAND USE ACTIONS

Okanogan County should consider several measures to protect Methow Valley State Airport, consistent with its designation as an Essential Public Facility:

- Comprehensive Planning –The rural land use composition of lands in the vicinity of the airport should be maintained.
- Essential Public Facilities (EPF) – Okanogan County should ensure that Methow Valley State Airport is designated as an EPF in future comprehensive plan and development regulation revisions.
- Zoning - Okanogan County should discourage up-zoning in the vicinity of Methow Valley State Airport that could result in increased population densities.
- Airport Overlay Zoning – Okanogan County should update current approach and transition overlay zones and mapping to reflect recommended runway configuration depicted in updated airport layout plan drawings.

- Airport Overlay Zoning – Okanogan County should consider expanding its existing airport overlay zone to include land use compatibility guidelines from the WSDOT Aviation Division.

AIRPORT OPERATIONAL PROCEDURES

No special operational procedures are in effect at Methow Valley State Airport, although extended straight out approaches and departures are required for heavy aircraft due to mountainous terrain surrounding the airport. The traffic pattern for Runway 13/31 is also dictated by the mountainous terrain, which limits operational procedures that can be implemented at the airport.

WSDOT AVIATION DIVISION - LAND USE PLANNING GUIDELINES

The following items/issues of interest are identified to help evaluate airport land use compatibility. These items have been organized in a checklist format; evaluation of specific items and review of county land use planning policies and zoning for consistency with these guidelines will be conducted both through the completion of this project and through future Okanogan County comprehensive plan updates.

TABLE 7-1: SUMMARY OF AIRPORT LAND USE CONTROLS

Existing Land Uses	
Are there existing obstructions to the airspace?	Yes (terrain, trees, fences, and vehicles on roadways). Partial mitigation is considered feasible.
What are the existing land uses located under the airport traffic pattern? What are the densities and intensities of existing uses?	Both sides of the airport are surrounded by rural residential and resource land uses, with low densities. The Winthrop and Twisp town centers are located approximately 2 miles from the airport. This area supports a variety of land uses including commercial and low density residential.
Are there any significant topographical features that may affect airspace if development were to occur there?	Yes. The proximity of the Methow River and mountainous terrain affects recommended runway improvements; developable on the airport areas are relatively level.
Comprehensive Plan Goals and Policies	
Are airport facilities and operations described in the transportation inventory? If so, what is included?	No description of the facility or its activity is provided.
Is the airport recognized as an Essential Public Facility?	Methow Valley State Airport is not specially identified as an EPF. No description of the criteria for identifying EPFs is provided beyond reference to RCW 36.70A.
Does the plan include a policy that discourages development of incompatible land uses adjacent to the airport? If so, what is the policy and where is it included in the plan?	Airport Safety Overlay District – Chapter 17.32 limits height of structures but does not prohibit residential land use; uses that result in large public gatherings are prohibited.
Does the plan include other policies relevant to the airport, such as a policy that recognizes the significance of the airport for economic development and recreation? If so, what are the policies and where are they included in the plan?	No.
Which future land uses are anticipated under the airport traffic pattern, according to the comprehensive plan land use map?	Residential, Commercial, and Undeveloped.
Does the Comprehensive Plan . . .	
. . . describe airport facilities and operations, existing and future, in the transportation inventory?	No.
. . . recognize the airport as an Essential Public Facility?	Not specifically recognized, although development regulations indicate intent to do so.
. . . include a policy discouraging development of incompatible land uses adjacent to the airport?	Airport Safety Overlay District – Chapter 17.32 limits height of structures but does not prohibit residential land use; uses that result in large public gatherings are prohibited. AP zone for adjacent lands does not permit residential development.
. . . include a policy recognizing the significance of the airport for economic development and recreation?	No.
. . . identify Part 77 Imaginary Surfaces in the comprehensive plan maps?	Outdated FAR Part 77 surfaces are reflected in code (Chapter 17.32); overlay zone does not appear on zoning map.

Zoning	
Describe permitted or conditional land uses allowed in zoning districts located under the airport traffic pattern:	Residential uses permitted outright with low densities (one dwelling unit per 5-acre parcel) in immediate vicinity of airport in all directions. Areas of residential land use are located within ½ mile of the airport. Commercial, Industrial (uses permitted in AP zone)
Is residential development allowed? If so, at what density?	Yes. 1 DU per 5 acres.
At what intensity are non-residential uses allowed?	Rural densities of non-residential uses permitted outright or conditional.
Are high-intensity or special function land uses allowed in areas under the airport traffic pattern?	No. (restricted only in approach and transitional overlay zones)
What is the zoning of the airport property?	Airport Development (AP), except for a narrow strip acquired in 1991 which is zoned Valley Floor 5.
Does the zoning allow development of wildlife attractants such as landfills, storm water detention ponds or stockyards?	No.
Note any inconsistencies between the comprehensive plan map and zoning.	Valley Floor 5 zoning designation definition not included in county code (appears on zoning maps).
Does the existing zoning . . .	
. . . limit structure heights to prohibit penetration of FAR Part 77 Imaginary Surfaces?	Yes. (partial – approach and transition zones only)
. . . prohibit wildlife attractants, light and glare, smoke and dust, and other airspace obstructions?	Yes. (partial – approach and transition zones only)
. . . allow compatible uses such as aviation-related, light industrial, commercial or agriculture?	Yes. The AP zoning on the airport permits compatible industrial land uses.
. . . prohibit residential development or limit residential density under the airport traffic pattern?	No. Residential development not prohibited; densities are rural (1 DU per 5 acres).
. . . prohibit high-intensity and special function land uses under the airport traffic pattern?	Yes. Low density, rural uses permitted.
. . . require an aviation activity title notice and/or easement in areas under the airport traffic pattern?	No.
. . . permit aviation activities as a primary use on airport property?	Yes.
Describe existing height restrictions adjacent to the airport.	
Do the restrictions prohibit penetration of the Part 77 Imaginary Surfaces?	Yes. (partial – approach and transition zones only)
What are the height limits in zoning districts adjacent to the airport?	65 feet (AD zone)
Review the jurisdiction's storm water regulations and note any implications for managing stormwater adjacent to the airport.	Increase in impervious surfaces on airport will require evaluation of stormwater volumes and required control measures.

Evaluation (Alternatives)

Evaluate the current comprehensive plan and zoning, and describe the ways in which planned airport improvements may affect and/or may be affected by existing and proposed land uses. How well do existing goals, policies and development regulations protect the airport from encroachment by incompatible land uses?

Preferred alternative includes minor relocation/realignment of a public road (within airport property) to meet FAA standards for existing runway. No property acquisition is required. Existing rural zoning and land uses surrounding the airport provide reasonable compatibility, although the potential long-term development of residential lands in vicinity of airport is a concern. Maintaining effective land use buffers between the airport and adjacent residential land uses is recommended where feasible.