CHAPTER TWO
INVENTORY OF EXISTING CONDITIONS AND FORECASTS OF AVIATION ACTIVITY

Introduction

Methow Valley State Airport is owned and operated by the Washington Department of Transportation (WSDOT) Aviation Division. The airport is also home to the U.S. Forest Service (USFS) North Cascades Smoke Jumper Base, which is located on USFS-owned property immediately adjacent to the east side of the runway.

Methow Valley State Airport accommodates both general aviation aircraft used in business, personal or government travel, and aircraft used in seasonal firefighting efforts. The majority of general aviation activity consists of small single-engine and multi-engine piston aircraft, although the airport also accommodates a variety of turbine aircraft (turboprop, business jets, etc.) on a limited basis. General aviation activity is generated by local residents, businesses, and visitors to the area. The Methow Valley is one of Washington's most unique year-round destinations and has long attracted visitors and part-time residents for its wilderness setting and unique recreational opportunities, including the nearby Sun Mountain Lodge. Fire-related activity includes some piston engine aircraft, but twin-engine turboprops and helicopters account for the majority of aircraft operations.

This chapter documents existing conditions at the airport. Existing airfield facilities were examined during on-site inspections to update facility inventory data collected in prior planning efforts. Data from a variety of sources are used in this evaluation:

- **Washington State Aviation System Plan (WSASP) Database – Airport Facilities and Services Report**
- **Washington Long Term Air Transportation Study (LATS) – Forecasts** (July 2007)
- **Methow Valley State Airport 2005 Pavement Management Report** (Applied Pavement Technology, Inc., 2005)
- **1995 Airport Layout Plan Set** (W&H Pacific)

- **Airport Master Plan - Intercity Airport/Methow Valley State Airport** (Reid Middleton & Associates and Robert O. Brown, April 1986)
- **FAA Airport Master Record Form (5010-1)**
- **FAA Terminal Area Forecasts**
- **Seattle Sectional Aeronautical Chart; IFR Enroute Low Altitude (L-1) Chart; Airport/Facility Directory** (U.S. DOT FAA, National Aeronautical Charting Office)

AIRPORT LOCALE

Methow Valley State Airport is located approximately 3 miles southeast of Winthrop and 4 miles northwest of Twisp, in the western part of Okanogan County in North-Central Washington. Okanogan County is Washington's largest county, totaling approximately 5,268 square miles. It is sparsely populated, with large portions located within the Okanogan National Forest and the Colville Indian Reservation. There are thirteen incorporated communities in Okanogan County, including Winthrop and Twisp, which are the western-most incorporated communities in the county. Omak is the county seat, located 46 miles east of Winthrop.

The airport is located in the Methow Valley, surrounded by mountainous terrain in all directions. A location map is provided in **Figure 2-1**. The Methow River forms the airport's southeast property line. Surface access to Methow Valley State Airport is provided via Twisp-Winthrop Eastside Road, which travels north and east of the Methow River and State Highway 20, connecting Twisp and Winthrop.

State Highway 20 is a major east-west travel route that extends through northern Washington from Puget Sound to eastern Washington. A section of Highway 20 located west of Winthrop is closed during the winter months; U.S. Highway 2 (Stevens Pass) and Interstate 90 (Snoqualmie Pass) provide the primary access to the west side of Washington during the winter months, via U.S. Highway 97. State Highway 153 connects Highway 20, east of Twisp, to U.S. Highway 97 at Pateros. By highway, Winthrop is located 8 miles from Twisp; 46 miles from Omak; 60 miles from Chelan; 99 miles from Wenatchee; and 133 miles from Burlington (Interstate 5).

AIRPORT HISTORY

As noted earlier, Methow Valley State Airport is home to the North Cascades Smoke Jumper Base, which is operated by the U.S. Forest Service (USFS). According to the USFS publications, modern smoke jumper techniques were developed in the Methow Valley beginning in 1939.

FIGURE 2-1: LOCATION MAP

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The current airport site was originally known as Inter-City Airport, constructed in the late 1940s. Historic airport pavement information indicates that some of the older taxiway pavements were constructed in 1955. Ownership of Intercity Airport was transferred from the USFS to the Aeronautics Division of WSDOT in 1982.[1] Several improvements such as runway reconstruction and lighting and construction of the public use aircraft apron have been completed by WSDOT Aviation since the mid-1990s.

AIRPORT FACILITIES

Methow Valley State Airport has a relatively small land base (approximately 65 acres[2]) with limited development areas available within airport property on the sides of the runway. The airport has a single runway oriented in a northwest-southeast direction, with landside facilities (aircraft parking aprons, hangars, etc.) located on the east and west sides of the runway. Vehicle access to both sides of the airport is provided by roadway connections to Twisp-Winthrop Eastside Road. **Table 2-1** summarizes airport data. **Figure 2-2** illustrates existing facilities at the airport.

TABLE 2-1:
AIRPORT DATA

Airport Name/Designation	Methow Valley State Airport (S52)
Airport Owner	Washington Department of Transportation – Aviation Division
Date Established	1948 (estimated)
Airport Category	National Plan of Integrated Airport Systems (NPIAS) General Aviation FAA Airport Reference Code: A-II (as noted on the 1995 ALP) Washington Aviation System Designation: General Aviation Airport
Airport Acreage	Approx. 65 acres (as indicated on current FAA 5010 form and 1995 ALP)
Airport Coordinates	N 48º 25’ 30” W 120º 08’ 45”
Airport Elevation	1,706 feet Mean Sea Level (MSL)
Airport Traffic Pattern Configuration/Altitude	Left Traffic (Rwy 13 & 31) Approximately 2,500 to 2,700 feet above mean sea level (MSL)

[1] 1986 Airport Master Plan (Reid Middleton, Robert O. Brown)
[2] Airport Acreage as listed in the current FAA 5010 Airport Record Form

FIGURE 2-2: AIRPORT EXISTING FACILITIES

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Landside Facilities - West Side of Runway

The west side of the airport accommodates a public use aircraft parking apron located near the middle of the runway. A hangar previously located at the northwest corner of the apron was removed in 2008 after its roof collapsed. This area is also used for long-term vehicle parking. There are no other permanent facilities currently located on the west side of the runway, although it is reported that seasonal fire-related helicopter support operations are accommodated in the areas along the runway. Vehicle access to the west side of the airport is provided by Evans Road, which travels around the south end of the runway.

Landside Facilities – East Side of Runway

Aviation facilities on the east side of the runway are located both on and off airport property. The USFS facilities and several privately owned hangars are located off airport property and users access the airport through a variety of through-the-fence agreements with WSDOT Aviation.

The USFS facilities are located near the middle of the runway and the complex includes ten buildings, two aircraft aprons, and helicopter parking pads. The aircraft apron is connected to the runway by four short taxiways. The smokejumper base operates on a seasonal basis (summer months) and generates substantial aircraft activity including fixed wing turboprops (deHavilland DHC-6 Twin Otter, Casa 212, etc.) and variety of helicopters.

A private (off airport) hangar development is located north of the USFS facilities and currently includes four hangars and aircraft fuel storage and dispensing facilities (not currently in use). Aircraft access to these facilities is provided by a single taxiway that extends from the runway, approximately 200 feet north of the USFS apron. A preliminary plat for the site indicates up to 17 hangars could be accommodated in the planned development, including three newer hangars that have been constructed along the taxiway.

A newer 3-unit hangar and privately owned automated weather observation system (AWOS) is located off airport property, south of the USFS facilities. A taxiway extends from the runway to provide access to the hangar and a small apron.

Four older hangars are located on airport property on the east side of the runway, immediately south of the USFS facilities. A fifth hangar in this area was removed in 2008. These hangars are located on property that was acquired by WSDOT Aviation in the early 1990s to accommodate future runway-taxiway system improvements.

Vehicle access to the USFS facilities and some adjacent private hangars is provided by Inter-City Airport Road. Access to a newer 3-unit hangar is provided by a private roadway (Park Place). Surface access to four on-airport hangars located on the east side of the runway is not clearly

defined, which requires users to cross through private parcels or the USFS complex. Occasional conflicts are reported between vehicles and USFS operations, indicating a need to address access in the plan.

RUNWAYS & TAXIWAYS

Table 2-2 summarizes existing runway and taxiway facilities.

Runway

Methow Valley State Airport has one runway (13/31) that is oriented in a northwest-southeast direction (130-310 degree magnetic alignment). Runway 13/31 is paved and lighted with a published length of 5,049 feet and a width of 75 feet. Both ends of Runway 13/31 have displaced thresholds to improve obstruction clearance for the runway approaches.

Runway 13 has a 130-foot displaced threshold. The FAA 5010 Airport Record Form indicates that the controlling obstruction for Runway 13 is a fence, resulting in a 5:1 clear approach slope. The WSDOT Airport Facilities and Services Report indicates that the controlling obstruction for Runway 13 has an elevation of 1,712 feet (6 feet above the runway end elevation), is located 236 feet from the runway end, and results in a 5:1 actual slope. The type of obstruction is not indicated, but it appears to be consistent with a typical range fence.

Runway 31 has a 231-foot displaced threshold. The FAA 5010 Airport Record Form indicates that the controlling obstruction for Runway 31 is a road, resulting in a 0:1 clear approach slope. Evans Road passes beyond the end of Runway 31 and provides public access to the west side of the airfield. As a public roadway, a vehicle height of 15 feet is added to the road elevation in order to determine the height of the obstruction. The WSDOT Airport Facilities and Services Report indicates that the controlling obstruction for Runway 31 has an elevation of 1,685 feet (3 feet below the runway end elevation), is located 202 feet from the runway end, and results in a 0:1 actual slope. The type of obstruction is not indicated. It appears that the survey data does not include the height of a vehicle on the roadway since the road and runway are relatively level in this area.

The effective gradient of Runway 13/31 is approximately 0.356 percent, with the high point (surveyed 1,706 feet MSL) located at the north end (Rwy 13) of the runway. The runway has a published weight bearing capacity of 30,000 pounds for aircraft equipped with single-wheel landing gear. The runway has edge lighting and threshold lighting. Neither runway end is equipped with visual guidance indicators (VGI).

TABLE 2-2: RUNWAY & TAXIWAY DATA

Runway 13/31	
Dimensions	5,049 x 75 feet Rwy 13 Displaced Threshold: 130' Rwy 31 Displaced Threshold: 231'
Effective Gradient	0.356%
Surface/Condition	Asphalt/Very Good (as rated in the 2005 Pavement Report)
Weight Bearing Capacity	30,000 pounds (single wheel landing gear)
Marking	Basic (white paint): runway numbers, centerline stripe, threshold bars, displaced threshold markings (both runway ends); taxiway lead-in lines (yellow paint)
Lighting	Medium Intensity Runway Edge Lighting (MIRL); threshold lights (flush mounted on Rwy 31) ; Pilot activated by radio CTAF 122.8 MHz
Signage	Directional, Informational, 4 Dual Sided Distance To Go Signs [4] [3] [2] [1]
Other Items	Segmented circle and tetrahedron (west side of runway); lighted wind cone located adjacent to west tiedown apron; wind cone roof mounted on USFS operations building.
Wind Coverage	N/A
Taxiways	
East USFS Apron Taxiways (4)	Approximately 175 x 40 feet (asphalt surface). Taxiways connect the smoke jumper apron and runway. Yellow centerline stripes on 2 exits; aircraft hold lines on all connections to the runway (125 feet from runway centerline).
East Hangar Taxiway	Approximately 600 x 30 feet (asphalt surface). Taxiway provides access to hangars and aircraft fueling area. Yellow centerline stripe (partial) and aircraft hold line 125 feet from runway centerline.
South (east) Hangar Taxiway	Approximately 500 x 38 feet (asphalt surface). No markings or aircraft hold lines observed. Centerline of parallel section of taxiway is approximately 85 feet east of the runway centerline.
West Tiedown Apron Taxiway	Approximately 244 x 35 feet (asphalt surface). Yellow centerline stripe and aircraft hold line 125 feet from runway centerline.
Aircraft Turnarounds (Rwy 13 & 31 ends)	Approximately 75 x 183 feet. Located immediately adjacent to the runway on east side. No markings observed.
Taxiway/Taxilane Lighting	No taxiway lighting observed. Blue cylindrical edge reflectors on USFS east apron taxiways. No reflectors observed on west apron taxiway or on east hangar taxiway.

Runway 13/31 has basic (visual) markings (runway numbers and centerline stripe). Threshold bars (10 feet wide) are located at each runway end, corresponding with the displaced thresholds. The displaced threshold markings at both ends of the runway include a centerline arrow and three arrow heads leading to the threshold bar. The markings are generally in fair condition, although some markings were in poor condition (worn paint). All runway markings are painted in white.

Moderate transverse and block cracking was observed on the runway during a recent site visit. Some cracks are approximately ¾-inch to 1 ½-inch wide, although most are less than 3/4-inch wide. Some prior crackfilling is evident, although most cracks have re-opened. Isolated areas of cracking were observed (early 2008 site visit) that were wide enough to reveal the aggregate course under the asphalt. The surface is moderately weathered and some wear from snowplows (tire chains) was observed. The runway condition was rated "very good" in the most recent (2005) comprehensive pavement evaluation. It appears that crackfilling/repair, sealcoating and repainting markings will be required in the near future.

Taxiways and Taxilanes

Runway 13/31 is not served by a parallel taxiway. The runway has aircraft turnarounds located on its east side at both ends. Aircraft access between the runway and adjacent landside facilities is provided by seven paved taxiways (all 90-degree exits) and by directly taxiing from hangars on unpaved surfaces. Most of the taxiways were rated "very good" or "excellent" in the 2005 pavement evaluation.

Four paved taxiways extend from the runway to adjacent USFS facilities. The taxiways are short exits (175 feet by 40 feet) that connect to the main aircraft apron. A taxiway (approximately 600 feet by 30 feet) located north of the USFS complex provides access to a private aircraft hangar development. The hangar taxiway is in good condition, although a portion of the taxiway was observed to have considerable buildups of dirt and gravel on the surface (near the corner where the diagonal section begins) which made it difficult to determine the condition of pavement edge. The short connecting taxiways are in excellent condition and have edge reflectors. The USFS apron has a single taxilane (parallel to the runway) located approximately 170 feet east of the runway centerline.

A paved taxiway (approximately 500 feet long and 38 feet wide) is located south of the USFS complex that serves a large 3-unit hangar and several smaller hangars on the east side of the runway. A portion of the taxiway is parallel to the runway, with a centerline-to-centerline separation of approximately 85 feet. This taxiway is in good condition and has no markings, lighting or reflectors.

A single taxiway is located on the west side of the runway (244 feet by 35 feet) that connects the aircraft apron to the runway. The apron has a single taxilane (parallel to the runway) that

provides access to two rows of aircraft tiedowns. The taxilane centerline is located approximately 310 feet east of the runway centerline. The taxiway and apron taxilane appears to be in similar condition as the runway, although the cracking was light to moderate.

Markings include taxiway/taxilane lead-in lines (yellow paint) that guide aircraft from the runway to taxiway exits and continue as taxiway/taxilane centerline stripes. Lead-in lines are located for three east-side taxiways and the west taxiway. Aircraft hold lines (yellow paint) are located on all of the taxiways that connect to the runway, with the exception of the southern-most taxiway on the east side of the runway, which has no markings. All aircraft hold lines are located 125 feet from runway centerline, which correspond to the edge of the obstacle free zone (OFZ) for runways serving small airplanes. The USFS hangar taxiway has a partial centerline stripe that ends at the aircraft hold line. Some taxiway markings are worn and require repainting.

Aircraft Apron

Methow Valley State Airport has a one public aircraft apron located on the west side of Runway 13/31 that accommodates locally-based and transient aircraft parking and provides access to an adjacent hangar area. Several apron areas on the east side of the runway are located off airport property. Most apron sections were rated "very good" or "excellent" in the 2005 pavement evaluation. **Table 2-3** summarizes existing aircraft apron facilities.

West Tiedown Apron

The main aircraft tiedown apron is located near the middle of Runway 13/31, with a single taxiway connection to the runway. The airport name "Methow Valley" is painted on the main apron (20 foot tall white letters). The paved apron is approximately 450 feet by 189 feet and has eleven (11) small aircraft tiedowns and two (2) large aircraft tiedowns in two single rows. The large tiedowns are 48 feet wide and 41 feet deep (anchor spacing in the "T"); the smaller tiedowns are standard size for small aircraft. The tiedowns are configured with the parking positions facing inward toward a taxilane that runs the length of the apron (parallel to the runway). The tops of the painted tiedowns are located 41 feet from the taxilane centerline.

The apron appears to be in similar condition as the runway, with surface weathering and light-to-moderate cracking (½ to ¾-inch). The apron condition was rated "very good" in the 2005 pavement inspection. The apron markings (taxilane centerline stripe and aircraft tiedowns) appear to be in good or fair condition.

USFS Apron

The apron includes a rectangular section (approximately 600 feet long and 100 feet wide) located immediately adjacent to the runway; a rear section of apron is connected to the southern portion of the rectangular apron. The rectangular apron section has a single taxilane (parallel to the runway) with four short taxiway connections to the runway. According to the airport's pavement maintenance plan, most sections of the USFS apron were constructed or resurfaced between 1996 and 2003. The pavement and markings appear to be in very good condition.

Southeast Hangar Apron

A small apron is located in front of the newer 3-unit hangar located near the southeast corner of the airport. The apron is located at the end of the taxiway that extends from the runway to the hangar. The apron condition was rated "very good" in the 2005 pavement inspection.

TABLE 2-3:
AIRCRAFT APRON DATA

Tiedown Apron (West)	Approximately 189' x 450' (9,444 square yards) Surface: Asphalt (with concrete tiedown anchors) 11 Small Aircraft Tiedowns 2 Large Aircraft Tiedowns
USFS Main Apron	Approximately 600' x 100' (6,994 square yards) Surface: Asphalt 0 Aircraft Tiedowns *(apron used primarily for aircraft ground operations)*
USFS Apron (Rear Section)	Approximately 400' long (variable width) (4,679 square yards) Surface: Asphalt 0 Aircraft Tiedowns *(apron used primarily for aircraft ground operations)*
Southeast Hangar Apron	Approximately 190' wide (variable depth) (2,274 square yards) Surface: Asphalt 0 Aircraft Tiedowns *(apron used primarily for hangar access and temporary aircraft parking)*
Northeast Hangar Apron	Approximately 100' x 80' Surface: Asphalt 0 Aircraft Tiedowns *(apron used primarily for hangar access and temporary aircraft parking)*

Airfield Pavement Condition

WSDOT Aviation manages a statewide program of pavement evaluation and maintenance for Washington's general aviation airports. This evaluation provides standardized pavement condition index (PCI) ratings, pavement features and current conditions. Through the use of MicroPAVER computer software, current pavement condition ratings are entered into the system with the specifics of each pavement section. The program is able to predict the future condition of the pavements if no action is taken (i.e., rate of deterioration) while also identifying the recommended measures needed to extend the useful life of the pavement section.

Table 2-4 summarizes airfield pavement conditions for Methow Valley State Airport based on the data contained in the airport's 2005 pavement study.[3] The 2005 inspection branch report indicated that Methow Valley State Airport had approximately 706,792 square feet (SF) of airfield pavement, which equals approximately 16.23 acres of surface area. In 2005, the area-weighted average condition for all airfield pavements at Methow Valley State Airport was 84 (= very good rating) with ratings ranging from 13 to 100.

[3] Methow Valley State Airport 2005 Pavement Management Report (Applied Pavement Technology, Inc., February 2006)

In the 2005 inspection, the runway and most taxiways and aprons were rated “very good” or better. Two small sections of apron were rated “good” and “fair.” The circular taxiway located adjacent to the fueling area was rated “very poor.”

The condition of the airfield pavements observed during recent site visits conducted for this project were generally consistent with the 2005 pavement evaluations. The runway and taxiway pavement surfaces are in generally good condition, with moderate transverse and longitudinal cracking, some weathering (oxidation) and surface wear observed. Although the older cracks (1/2-inch to 1-1/2 inch) have been previously filled, many have reopened and newer cracks have appeared. In some isolated areas of the runway, the crushed aggregate base beneath the 3-inch asphalt surface course was visible through open cracks. It appears that the pavement surfaces will require maintenance (crack filling, repair and sealcoats) in the near term.

TABLE 2-4:
SUMMARY OF AIRFIELD PAVEMENT CONDITION
(2005 PCI DATA)

Pavement	Section Design/Age	PCI Rating[1]	Condition
Runway 13/31	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	82-83	Very Good
Holding Areas at Rwy 13 & 31 Ends	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	Rwy 13: 89 Rwy 31: 88	Excellent
West Access Taxiway (to apron)	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	90	Excellent
West Tiedown Apron	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	81	Very Good
East Access Taxiways to USFS Operations Apron (4)	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	94-100	Excellent
USFS Operations Apron (main section)	Unknown AC (2003)	97	Excellent
USFS Operations Area (east sections)	Unknown AC (2003)	57 -100	Fair to Excellent
East Access Taxiway (to Hangars)	3" Asphalt (AC) Surface (1996); 6" Crushed Aggregate Base (1996); 5" Aggregate Base (1996)	83	Very Good
East Hangar Access Taxiway (diagonal section)	Unknown AC (2002)	100	Excellent
East Hangar Access Taxiway (circular section)	Unknown AC (1955)	12	Very Poor
East Access Taxiway (southeast hangars)	Unknown AC (1996)	80	Very Good
Southeast Hangar Apron	Unknown AC (1996)	85	Very Good

1. The Pavement Condition Index (PCI) scale ranges from 0 to 100, with seven general condition categories ranging from "failed" to "excellent."

LANDSIDE FACILITIES

Hangars and Airport Buildings

There are nine conventional hangars currently located at the airport.—all located on the east side of the runway. Two older hangars (one on each side of the runway) have been recently removed due to their deteriorated condition. All existing hangars are privately owned. Five hangars are located off airport property and four hangars are located on airport property. The USFS facilities are located off airport property and include ten buildings that support a variety of uses within the smokejumper base complex. Existing aviation-related buildings are summarized in **Table 2-5** and depicted in **Figure 2-2**, earlier in the chapter.

TABLE 2-5:
AIRPORT (AVIATION RELATED) BUILDINGS

Bldg. No.	Building
1	Small Conventional Hangar (east side of runway; on airport)
2	Small Conventional Hangar (east side of runway; on airport)
3	Small Conventional Hangar (east side of runway; on airport)
4	Small Conventional Hangar (east side of runway; on airport)
5	USFS Large Operations Building (adjacent to older section of apron; off airport)
6	USFS Operations Building (on east side of apron; off airport)
7	USFS Operations Quonset Building (on east side of apron; off airport)
8	USFS Operations Building (on east side of apron; off airport)
9	Conventional Hangar (Large – north of USFS of apron; off airport)
10	Conventional Hangar (Medium – adjacent to diagonal taxiway; off airport)
11	Conventional Hangar (Medium – adjacent to diagonal taxiway; off airport)
12	Conventional Hangar (Medium – adjacent to diagonal taxiway; off airport)
13	Aircraft Fueling Building (adjacent to diagonal & circular taxiways; off airport)
14	Large (3-unit) Conventional Hangar (east side of runway- south of USFS apron; off airport)

Airport Lighting

Methow Valley State Airport accommodates day and night operations in visual flight rules (VFR) conditions. The airport is equipped with a rotating beacon, runway edge lights and a lighted wind sock. The airport is not equipped with visual guidance indicators (VGI), such as visual approach slope indicators (VASI) or precision approach path indicators (PAPI). **Table 2-6** summarizes existing airfield lighting at the airport. The FAA Airport/Facility Directory indicates that both the runway lights and airport beacon are pilot-activated on the Common Traffic Advisory Frequency (CTAF) at 122.8 MHz.

The runway edge lights and Runway 31 threshold lights are mounted on 30-inch elevated standards to improve visibility when snow accumulates along the sides of the runway. The lights appear to be in generally good condition, although the functionality could not be determined during a recent daytime site visit. Some edge lights appeared to be illuminated during daytime hours, although no aircraft activity was observed.

TABLE 2-6:
AIRPORT LIGHTING

Component	Type	
Runway 13/31	Medium Intensity Runway Edge Lighting (MIRL); Threshold Lights	Good/Fair
Taxiway Lighting	None (Blue edge reflectors)	N/A *(Reflectors – Good/Fair)*
Lighted Airfield Signage	None (Reflective Signs)	*N/A* *(Reflective Signs– Good)*
Runway Approach Lighting	None	N/A
Visual Guidance Indicators	None	N/A
Wind Indictors	Lighted Wind Cone (west side of runway) Unlighted Wind Cone (roof mounted east side of runway) Tetrahedron (west side of runway, within segmented circle)	Good (wind cones) Poor (tetrahedron)
Airport Lighting & Weather	Rotating Beacon (west side of runway)	Good

Threshold lights are located adjacent to both displaced thresholds; no lights are located at either end of the runway pavement. Since displaced thresholds are part of the useable runway, threshold lights should be located both at the end of the runway and at the landing threshold. The recommended lens colors for threshold lights depend on the runway configuration and whether standard runway safety areas are provided beyond the runway ends. The threshold lights for both displaced thresholds consist of 3 units per side with split red/green lenses.

- Runway 13 has flushed-mounted threshold lights. The lights located left (east) of runway centerline are imbedded in the asphalt surfaced aircraft turnaround. The lights appear to function properly, although minor damage (scraped and worn surface) was observed from snow plowing operations. The flush mounted threshold lights located right of centerline (west side) are installed directly into the ground surface. These lights appear to operate normally and are in good condition.

- Runway 31 threshold lights are mounted on 30" standards on both sides of the runway.

The airport beacon is mounted on a pole near the northwest corner of the west apron. The beacon appears to be in good condition. A rotating beacon mounted on the roof of a USFS building is not operational.

The airport has a lighted wind cone mounted on a pole adjacent to the west tiedown apron (SW corner). An unlighted wind cone is mounted on the roof of the USFS Quonset operations building adjacent to the east apron.

No taxiway lighting is installed on the airport; blue cylindrical taxiway edge reflectors are installed on the taxiways serving the USFS apron. Edge reflectors were not observed on the west apron taxiway or other taxiways on the airport.

Airport signage includes Taxiway/Runway Hold Position Signs [red background with white numbers: **13-31** and **31-13**] on the two main taxiways connected to the runway; a directional sign [yellow background with black letters: **TRANSIENT PARKING→**]; and four Runway Distance Remaining Signs [green background with white numbers: **4, 3, 2, 1**]. All signs are reflective (non-illuminated) and are in good condition.

AIRSPACE, NAVIGATIONAL AIDS

Methow Valley State Airport has no electronic navigational aids or published instrument approaches and operates under visual flight rules (VFR) conditions. The airspace surfaces

previously planned for Runway 13/31 are based on visual approach capabilities for small aircraft.[4]

As part of this project, the FAA Flight Procedures Office will conduct a preliminary evaluation of the feasibility of establishing an instrument approach to the airport. Based on a review of the terrain surrounding the airport and FAA instrument approach planning criteria, it will be determined if it is feasible to develop a non-precision instrument approach to Runway 13 or 31, or to the airport environment (circling approach). The airspace surfaces for Runway 13/31 defined in previous planning documents are based on visual approach capabilities. It is noted that the 1992 Airport Master Plan concluded that a conventional instrument approach would not provide effective minimum descent altitudes for Runway 13/31. However, the master plan suggested a microwave landing system (MLS) could provide effective approach capabilities in the mountainous area. The FAA phase out of the MLS program coincided with development of satellite based instrument approaches (i.e., global positioning system), which became the primary area for technology advancement.

The airport has a privately owned Automated Weather Observation System (AWOS-3) that is located on the east side of the runway, adjacent to the southern most hangar (off airport property).

Table 2-7 summarizes existing navigational aids and related items. **Table 2-8** summarizes special airspace designations and established aircraft routes in the vicinity of Methow Valley State Airport, as identified on the Seattle Sectional Aeronautical Chart. **Figure 2-3** depicts the airspace surrounding Methow Valley State Airport. The airport is located within the boundaries of a defined area of Class E airspace (with the floor at 8,500 feet above mean sea level). Beneath the floor of the Class E airspace is uncontrolled airspace (Class G) that extends from the surface upward. The nearest enroute instrument airway is Victor 120, approximately 60 miles south of the airport at its nearest point. The airway extends between the Wenatchee, Seattle and Ephrata VORTACs with a minimum enroute altitude of 5,500 feet MSL (12,000 feet MSL west of Wenatchee VORTAC).

IR 348, a military training route (MTR), passes about 8 miles northwest of Methow Valley State Airport, with the direction of flight identified as southwest to northeast. As noted in aeronautical charts, MTRs may extend upward from the surface and there is no specific width defined.

[4] FAR Part 77. Utility aircraft weighing less than 12,500 pounds, as depicted on the 1995 Airport Layout Plan (W&H Pacific)

TABLE 2-7: NAVIGATIONAL AIDS AND RELATED ITEMS

Type	Facilities
Electronic Navigational Aids	None Nearby Facilities: Wenatchee VOR/DME (EAT) Frequency: 111.00 MHz - 61 nm S) Ephrata VORTAC (EPH) Frequency: 112.60 MHz - (69 nm SE) Moses Lake VOR/DME (MWH) Frequency: 115.00 MHz - (80 nm SE) Omak NDB (OMK); Frequency: 219 LHz; - (25 nm E)
Instrument Approaches	None
Weather Observation	AWOS-3 118.425 MHz; (509) 997-0142 (on site) Nearby Facilities: Wenatchee ASOS 119.925 MHz 61 nm S) Moses Lake ASOS (509) 762-5082 HIWAS 115.0 MHz (80 nm SE) Omak ASOS: 118.325 MHz (25 nm E) Ephrata ASOS: 135.775 MHz (69 nm SE)
Communication	Unicom/Common Traffic Advisory Frequency (CTAF)(122.8 MHz)

TABLE 2-8: NEARBY AIRSPACE/INSTRUMENT ROUTES/ LOCAL OBSTRUCTIONS

AIRSPACE ITEM	*DESCRIPTION*	Location
Military Training Routes (MTR)	Surface Upward	Low-altitude training routes located within 8 miles of airport (northwest)
Military Operations Areas (MOA)	300 feet AGL to 18,000 feet MSL	Okanogan A & B surrounds the airport in all directions; 3 nautical mile radii extending from Methow Valley State and Twisp airports define an area that is excluded from MOA (below 1,500 feet AGL).
Lake Chelan Sawtooth Wilderness Area	2,000 feet AGL altitude restrictions for over flights.	Begins 7- 10 miles NW & SW of airport

FIGURE 2-3: AREA AIRSPACE

<graphic to be inserted>

AIRPORT SUPPORT FACILITIES/SERVICES

Aircraft Fuel

Methow Valley State Airport does not have aviation fuel available for purchase. A privately owned fuel storage and dispensing facility is located off airport property on the east side of the runway (north of the USFS facility). Aircraft fueling associated with USFS operations is accomplished through use of mobile fuel storage tanks or trucks.

Surface Access and Vehicle Parking

Surface access to Methow Valley State Airport is provided via Twisp-Winthrop Eastside Road, which connects Twisp and Winthrop and State Highway 20. All access to the airport and surrounding parcels is provided through connections to the highway. The roadways serving the airport and surrounding areas are gravel surfaced or dirt.

Inter-City Airport Road connects directly to Twisp-Winthrop Eastside Road and provides access to several facilities located on the east side of airport including the North Cascades Smoke Jumper Base, a county road maintenance shop, a commercial lumber yard (Bear Creek Lumber), and a private hangar development (Ram's Head) located north of the USFS facilities. A second road (Park Place) located immediately south of the lumber yard serves a private development area on the airport's east side, south of the USFS facilities. This area includes a newer 3-unit hangar that is located within the Methow Valley Airport Trading Center, a platted 10-lot industrial/business park.

No defined vehicle access is provided to four older privately owned hangars located on the east side of the runway, immediately south of the USFS facilities. Access is obtained by traveling through the USFS aviation facilities (apron) or other unimproved routes within the USFS complex, or from Park Place and the private road that serves the new 3-unit hangar, which is not fenced or gated. Vehicle access to these hangars and inadvertent public intrusion into the non-public areas within USFS complex have been identified as important issues that need to be addressed in the plan update.

Evans Road provides access to the west side of the airport, in addition to serving several residential parcels located along the Methow River. Evans Road connects with Twisp-Winthrop Eastside Road approximately 0.6 miles south of Inter-City Airport Road and passes within 75 feet of the end of Runway 31 before heading north northwest along the west of the runway. An unpaved airport access road (approximately 150 feet long) connects to Evans Road and ends the at the east end of the aircraft apron.

Vehicle parking is currently accommodated along the back of the west aircraft apron. It appears that many of the vehicles are parked for extended periods by part-time residents or regular visitors. Vehicles also park adjacent to hangars on the east side of the airport.

Fencing

Limited range fencing is located along portions of the airport perimeter. A small double swing gate is located at the airport access road connection to Evans Road. Sections of wood post/wire fencing are located along the north property line (eastern section). A continuous line of large concrete barriers are installed along approximately 1,500 feet of Evans Road to limit unauthorized access to the runway end.

Utilities

The airport has electrical power, but no water or sanitary sewer service. Adjacent off-airport facilities have separate water and septic, in addition to electrical service.

AIRPORT SERVICE AREA

The airport service area refers to the area surrounding an airport that is directly affected by the activities at that airport. Normally a 30 or 60-minute surface travel time is used to approximate the boundaries of a service area. **Table 2-9** lists the public airports within a 50 nautical mile radius of Methow Valley State Airport. However, despite their relatively close proximity to Winthrop, the surface travel times to these airports are substantial due to limited surface access routes available. There are four public use airports located within about a 60 to 70 minute drive time from Winthrop: Twisp, Okanogan, Omak, and Chelan. According to current airport facility directories, aviation fuel is not available for purchase at Twisp, but is available at Okanogan, Omak and Chelan.

Based on its close proximity, activities such as recent hangar construction at Twisp Municipal Airport appear to have the potential of affecting facility demand at Methow Valley State Airport. Twisp Municipal Airport has a single paved and lighted runway (Runway 10/28 - 2,701 x 36 feet). In 2007, Twisp Municipal had 21 based aircraft and 19 hangars.

TABLE 2-9:
PUBLIC USE AIRPORTS IN VICINITY

Airport	Location	Runway Dimension (feet)	Surface	Lighted Runway?	Fuel Available?
Twisp Municipal	4.9 NM SE	2,701 x 36'	Asphalt	Yes	No
Stehekin State	23.4 NM W	2,630 x 100'	Turf	No	No
Okanogan Legion Field	23.5 NM E	2,533 x 36'	Asphalt	Yes	Yes
Omak Airport	25.1 NM E	4,667 x 150'	Asphalt	Yes	Yes
Anderson Field (Brewster)	25.6 NM SE	4,000 x 60'	Asphalt	Yes	Yes
Tonasket Airport	32.5 NM NE	3,053 x 50'	Asphalt	Yes	No
Lake Chelan Airport	33.5 NM S	3,503 x 60'	Asphalt	Yes	Yes
Dorothy Scott Airport (Oroville)	43.3 NM NE	4,014 x 50'	Asphalt	Yes	Yes
Lake Wenatchee State	43 NM SW	2,473 x 100'	Turf	No	No
Mansfield Airport	42.2 NM SE	2,570 x 46'	Asphalt	Yes	No
Waterville Airport	46.3 NM S	2,978 x 50'	Asphalt	Yes	Yes

LAND USE

Methow Valley State Airport is zoned **Airport Development District (AP)** by Okanogan County (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.

Okanogan County zoning maps identify the land areas surrounding the airport as having **Valley Floor** zoning. A review of the county zoning ordinance does not identify a **Valley Floor** zoning district. However, Chapter 17.14 - **Methow Review District (MRD)** is established to "protect the sensitive environmental, 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. It appears that 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). Zoning and land use information will be updated through coordination with local planning officials and addressed in detail in Chapter Seven.

The boundaries of the incorporated communities Winthrop and Twisp are located approximately 2 miles from the airport, northwest and south.

Okanogan County has airport overlay zoning in place (**Airport Safety Overlay District – Chapter 17.32**) for Methow Valley State Airport. The ordinance indicates that restrictions apply to the "transition and approach zones." This suggests that the runway approach and transitional surface dimensions previously defined for the airport in prior airport layout plans represent the boundaries of the district. This information will also be reviewed in the land use chapter (Chapter Seven), with recommendations for update or revision, as appropriate.