



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

## **FAA Form 5100-138, Data Requirements for an Office of Airports Automated Weather Observation System (AWOS) Benefit Cost Analysis (BCA)**

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## Data Requirements for an Office of Airports Automated Weather Observation System (AWOS) Benefit Cost Analysis (BCA)

Airport Name:

LocID:

Airport Asset Category (from the latest copy of Federal Aviation Administration (FAA) "General Aviation Airports: A National Asset" or National Plan of Integrated Airport Systems (NPIAS) Report, whichever is most recent):

### Preparer's Contact Information

Name:

Address:

Telephone:

Fax:

Email:

### Data Requirements

1. Type of AWOS with all features (e.g., AWOS III-PT):
2. First month and year of operation:           Month:                           Year:
3. Percent share of General Aviation (GA) operations operating in Instrument Flight Rules (IFR) conditions at airport:           %
4. Standard Instrument Approach Procedure(s) (SIAP) (or if in FAA queue to be published, provide estimated publication date)

Description	SIAP 1	SIAP 2	SIAP 3	SIAP 4
Type of Published SIAP				
Runway End				
Runway Length				
Share of operations using each SIAP (please provide best estimate)				
a. General Aviation	%	%	%	%
b. Air Taxi	%	%	%	%
c. Air Carrier	%	%	%	%
d. Military	%	%	%	%
SIAP Ceiling Minima Source:				
a. Without AWOS (ft.)				
b. With AWOS (ft.)				
SIAP Visibility Minima Source:				
a. Without AWOS (SM)				
b. With AWOS (SM)				

Description	SIAP 1	SIAP 2	SIAP 3	SIAP 4

5. Equipment and construction costs of proposed AWOS

- a. Design and consulting fees: \$
- b. Land acquisition (if applicable): \$
- c. Site improvements including utilities: \$
- d. AWOS equipment: \$
- e. Installation/construction: \$

6. Recurring annual costs

- f. Annual Operations and Maintenance (O&M) costs, including replacement parts (provide justification if below \$5,500 annually):

\$

- g. Annual third party cost upload AWOS data to FAA National Airspace Data Interchange Network (NADIN) (required for all AWOS IIIs):

\$

- h. Annual cost for the FAA to conduct inspection of the AWOS III depends on the following factors. Which best applies?

- Airport has other non-federal facilities that require annual inspection
- Airport does not have other non-federal facilities requiring annual inspection
- The AWOS will be installed in a remote location without direct access

7. Location (city/state), LocID, equipment type and distance (NM) of three nearest FAA/National Weather Service (NWS) contract surface observation stations

	Location (city/state)	LocID	AWOS Type	Distance (NM)
1.				
2.				
3.				

8. Current and forecast operations

Source:

Type	Current	+5 years	+10 years	+15 years
Air Carrier				
Air Taxi				
Military				
General Aviation (itinerant)				
General Aviation (local)				

- 9. Percent of operations for business travel (non-military): %

- 10. Percent of operations for personal/recreational travel (non-military): %

11. Percent General Aviation operations by aircraft category

- a. Piston engine airplanes 1 to 3 seats (<=200hp): %
- b. Piston engine airplanes 1 to 3 seats (>200hp): %
- c. Piston engine airplanes 4 to 9 seats one-engine (<=200hp): %
- d. Piston engine airplanes 4 to 9 seats one-engine (>200hp): %
- e. Piston engine airplanes 4 to 9 seats multiengine: %
- f. Piston engine airplanes 10 or more seats: %
- g. Turboprop airplanes 1 to 9 seats one-engine: %
- h. Turboprop airplanes 1 to 9 seats multiengine: %
- i. Turboprop airplanes 10 to 19 seats: %
- j. Turboprop airplanes 20 or more seats: %
- k. Turbojet/Turbofan airplanes <=12,500 lbs: %
- l. Turbojet/Turbofan airplanes >12,500 lbs and <= 65,000 lbs: %
- m. Turbojet/Turbofan airplanes >65,000 lbs: %
- n. Rotorcraft piston <=6,000 lbs: %
- o. Rotorcraft turbine <=6,000 lbs: %
- p. Rotorcraft piston >6,000 lbs: %
- q. Rotorcraft turbine >6,000 lbs: %
- r. Other: %

12. Percent Air Taxi operations by aircraft category

- a. Piston engine airplanes 1 to 3 seats (<=200hp): %
- b. Piston engine airplanes 1 to 3 seats (>200hp): %
- c. Piston engine airplanes 4 to 9 seats one-engine (<=200hp): %
- d. Piston engine airplanes 4 to 9 seats one-engine (>200hp): %
- e. Piston engine airplanes 4 to 9 seats multiengine: %
- f. Piston engine airplanes 10 or more seats: %
- g. Turboprop airplanes 1 to 9 seats one-engine: %
- h. Turboprop airplanes 1 to 9 seats multiengine: %
- i. Turboprop airplanes 10 to 19 seats: %
- j. Turboprop airplanes 20 or more seats: %
- k. Turbojet/Turbofan airplanes <=12,500 lbs: %
- l. Turbojet/Turbofan airplanes >12,500 lbs and <= 65,000 lbs: %
- m. Turbojet/Turbofan airplanes >65,000 lbs: %
- n. Rotorcraft piston <=6,000 lbs: %

- o. Rotorcraft turbine <=6,000 lbs: %
- p. Rotorcraft piston >6,000 lbs: %
- q. Rotorcraft turbine >6,000 lbs: %
- r. Other: %

13. Percent Air Carrier operations per aircraft category

- a. Two-Engine Narrow-Body: %
- b. Two-Engine Wide-Body: %
- c. Three-Engine Narrow-Body: %
- d. Three-Engine Wide-Body: %
- e. Four-Engine Narrow-Body: %
- f. Four-Engine Wide-Body: %
- g. Regional Jet under 70 seats: %
- h. Regional Jet 70 to 100 seats: %
- i. Turboprops under 20 seats (Part 23): %
- j. Turboprops under 20 seats (Part 25): %
- k. Turboprops with 20 or more seats: %
- l. Piston Engine (Part 23): %
- m. Piston Engine (Part 25): %

14. Please provide a separate narrative for project justification and acknowledgement

- a. What weather conditions does the airport currently experience on a normal basis (fog, low ceilings, etc.)?
  
- b. Have there been complaints of a lack of weather data? Has the lack of weather data caused aircraft to divert?
  
- c. Why do they need this system over an AWOS A or AWOS II/AV?
  
- d. Any other information that justifies an AWOS (e.g., Does the airport have unique operations with a specialized contribution to the national system? If so, what are the economic impacts for flights not accommodated due to not having the proposed AWOS at the airport)?

## 15. Coordination

- a. Has the Sponsor or Airports District Office (ADO) coordinated the installation of the proposed AWOS with the Service Center Non-Federal Program Implementation Manager (PIM)?
- b. Has the Sponsor coordinated the installation of the proposed AWOS with the Spectrum Engineering Services Group (AJW) per FAA Order 6050.32B *Spectrum Management Regulations and Procedures Manual*?
- c. Explain the Sponsor's proposed arrangements to upload the AWOS III data to NADIN per the requirements of FAA 7110.104 *Non-Federal Automated Weather Observation System (AWOS) Connection to the Weather Message Switching Center (WMSC)*?
- d. Acknowledge that the Sponsor is aware that they are required to have the AWOS properly commissioned and must operate and maintain AWOS equipment during its life cycle per FAA Order 5100.38C *Airport Improvement Program (AIP) Handbook (Appendix 7)*.  
FAA Order 6700.20 *Non-Federal Navigational Aids and Air Traffic Control Facilities and FAA AC 170-11, Amendment of FAR Part 171 – Cost of Flight & Ground Inspections*.
- e. Acknowledge that the Sponsor submitted a FAA Form 7460 for the proposed installation/construction of the AWOS?

## Resources

Additional information and requirements regarding the installation, frequency, commissioning and NADIN requirements can be found in:

1. FAA AC 150/5220-16D *Automated Weather Observation Systems (AWOS) for Non-Federal Applications*.
2. FAA Resource Bulletin No. 2010-01 *General Requirements when Commissioning Airport Weather Observation Systems (AWOS)*; Airports Division, Great Lakes Region