



# Interagency Aviation Accident Prevention Bulletin



No. IA 09-04

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**Subject: Hazard Map Preparation**

**Area of Concern: Aviation Safety of Flight**

**Distribution: All Aviation Activities**

**Discussion:**



Figure 1. Meteorological Evaluation Tower



Figure 2. Wind Turbine Generator Farm  
Banning Pass, CA.

Wind turbine generators are becoming more prevalent and seem to pop-up over night. Ever wonder how folks know where to put a wind turbine generator? They start by erecting a meteorological evaluation tower (MET) to see if the environmental conditions will support it (Figure 1). The MET gathers data for at least a year and then, if the results are favorable, they are replaced by wind turbine generators (Figure 2). The evaluation towers are very skinny and usually less than 200 feet AGL. Not only are the towers difficult to see, **the guy wires are nearly invisible.**

I know, you're asking yourself, what about safety of flight? According to the FAA, a sponsor proposing any type of construction or alteration of a structure that may affect the National Airspace System (NAS) is required, under the provisions of Title 14 Code of Federal Regulations (14 CFR part 77, *Objects Affecting Navigable Airspace*), to notify the FAA by completing the Notice of Proposed Construction or Alteration form (FAA Form 7460-1).

Generally, any structure that exceeds an overall height of 200 feet above ground level (AGL) or exceeds any obstruction standard contained in 14 CFR part 77 should be marked and/or lighted. Because of the lighting requirement, most METs are just under 200 feet AGL. However, even if the tower is under 200 feet AGL, or meets 14 CFR part 77 standards, the FAA may still recommend marking and/or lighting because of its particular location.

## Subject: Hazard Map Preparation

Wind turbine generators are usually painted white because it's the most effective daytime early warning device. Other colors, such as light gray or blue, appear to be significantly less effective in providing daytime warning. A word of caution; **daytime lighting of wind turbines, regardless of height, is not required**, as long as the structures are painted in a bright white color or light off-white color.

So, if you're on a special-use mission, flying below 500 ft AGL, **keep heads-up in order to see all towers and wind turbine generators**. If you do see obstacles that are not annotated on your hazard map, take note of their location and add it to the map when you return. **You just may save someone's life**. If the obstacle is not lit and you feel it should be, contact your state or regional aviation manager. And by the way, did you know that hazard maps are required for Department of Interior and Forest Service operations? That's right, for DOI, 352 DM 1.9D requires a low-level flight hazard map be constructed for local operational areas. For the Forest Service, hazard map requirements are located in various guides listed in FSM 5703.4 for helicopter operations and FSM 5703.5 for fixed-wing operations.

John Selkirk (BLM, NM State Aviation Manager), Al Sandoval (BLM, NM Fire GIS Specialist), and Dale Guenther (R6-FS, Fire & Aviation Management System Analyst), have been gathering data on all FAA and DoD hazard and flight restrictions, including wind turbine generators and MET tower locations, nationwide. Give them a call if you have any questions on how to find towers in your area. Their phone numbers are:

John Selkirk	505-438-7431
Al Sandoval	505-438-7453
Dale Guenther	503-808-2188

Before you launch, make sure that the hazard map for your area of operations is up-to-date and shows all new, as well as existing, hazards.

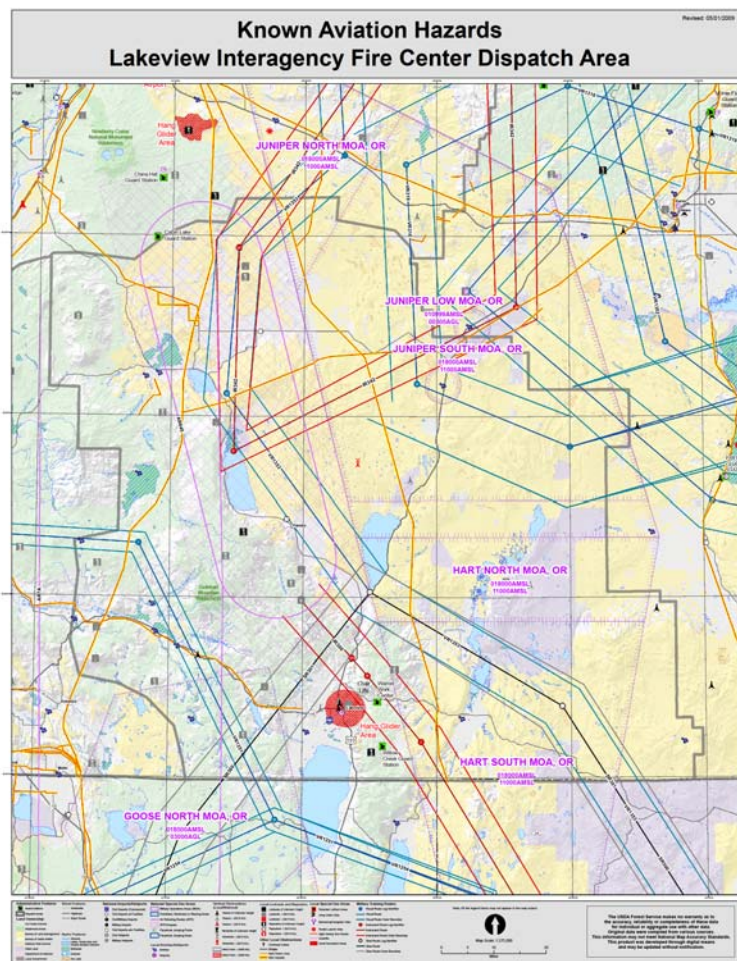


Figure 3. Aviation Hazard Map

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