

**AERONAUTICAL CHARTING FORUM
Charting Group**

RECOMMENDATION DOCUMENT

FAA Control # (11-01-236)

Subject:

New symbol for VFR Sectional Charts.

Background/Discussion:

At the request of many pilots in Michigan, we recommend that a new symbol be developed to differentiate between radio towers and wind turbines.

Recommendations:

Utilize a new symbol to depict wind turbines on VFR charts.



Comments:

Provide better landmarks for pilots to increase situational awareness.

Submitted by: Randy L. Coller., A.A.E. D.P.E

Organization: State of Michigan, Department of Transportation

Phone: 517-335-8521

FAX: 517-886-0366

E-mail: collerer@michigan.gov

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MEETING 11-01: Mr. John Moore, FAA/AJV-3B, briefed on behalf of the submitter, Mr. Randy Coller, Michigan DOT, on a proposal to depict Wind Turbines on VFR Charts. The proposal would be to have a unique wind turbine symbol established to help pilots distinguish between wind turbines and other group obstructions on a VFR chart. Mr. Moore noted the current FAA practice of charting Wind Turbines using group obstruction symbols, with a border around the outer perimeter of the turbine area, and a boxed note.

Mr. Ron Haag, FAA/AJV-321, presented examples of current FAA VFR wind turbine practices and an example of ICAO's symbology for Wind Turbines.

Mr. Haag also made a presentation that included current FAA charting practices, ICAO symbology, and a NavCanada example. Mr. Haag noted that wind turbines and wind turbine farms are placed on VFR charts using cartographic judgment, not specific data. Currently, there are over 25,000 wind mills in the obstruction database, and wind mills comprise over one quarter of all obstructions charted on VFR charts.

Mr. Richard Boll, NBAA, commented on the proliferation of wind turbines and wind turbine farms. Mr. Boll expressed a concern with pilots being able to readily distinguish a higher, non-wind turbine obstacle within a depiction of a congested wind farm on a VFR chart.

ACTION: Mr. Ron Haag, FAA/AJV-321, Mr. Rick Fecht, FAA/AJV-321, and Ms. Valerie Watson, FAA/AJV-3B, to coordinate on a possible implementation plan and impact statement and report back at the next ACF.

ACTION: Ms. Valerie Watson, FAA/AJV-3B, to coordinate with the IACC, as appropriate, and report back at the next ACF.

MEETING 11-02: Mr. Ron Haag, FAA/AJV-321, reviewed current charting practices for depicting Wind Turbine Farms and Wind Turbines on FAA VFR Charts. The current depiction consists of a dashed line, same symbology as all other obstructions and a boxed note. Wind Mill farms have a high density of obstruction symbols within a dashed boundary line.

Mr. Haag [showed prototype depictions utilizing the newly proposed symbolization](#). The new wind turbine symbology being proposed utilizes the ICAO wind turbine symbol. The ICAO symbol reduces density of the symbols within the wind turbine farm dashed boundary line and the elevation, in MSL information of the highest wind turbine within the area would be depicted in a simple information box positioned inside the dashed line.

Ms. Valerie Watson, FAA/AJV-3B, commented that the IACC was amenable to adding the ICAO-compliant Wind Turbine symbology to the specifications.

Mr. Haag reviewed the timetable for implementation upon approval of an IACC RD. Implementation could begin as early as this winter, with the first charts depicting the new symbology published by summer 2012. Implementation across all FAA VFR charts could then be completed by the end of 2014.

ACTION: Mr. Ron Haag, FAA/AJV-321, will coordinate with Valerie Watson, FAA/AJV-3B, on the submission of an IACC RD.

ACTION: Mr. Ron Haag will update the status of the issue at the next ACF.

MEETING 12-01: Ms. Valerie Watson, FAA/AJV-3B, briefed on developments since last ACF. An RD proposing that wind turbines be represented on FAA Visual charts with the ICAO-accepted symbol has been formally drafted and submitted to MPOC/IACC. Ms. Watson anticipates the RD to be approved in the near future and expects to be able to report at the next ACF that implementation has begun.

STATUS: OPEN

ACTION: Ms. Valerie Watson, FAA/AJV-3B, to provide update on status and implementation at next ACF.

MEETING 12-02:

Ron Haag, FAA/AJV-321, provided a briefing on the actions taken since the last ACF. A Requirements Document (RD) was submitted and approved by the IACC in support of adoption of the ICAO-compliant Wind Turbine symbolization. Ron showed [graphic examples](#) of how the new symbolization will appear on the charts and pointed out that the new depiction lessens chart clutter, eliminates the need for identifying text and clarifies the outer parameters of turbine farms. The first set of updated VFR charts to utilize the new depiction will be released on 7 March 2013. All subsequent VFR charts will utilize the new ICAO-compliant symbol.

Bob Lamond, NBAA, mentioned a new airborne wind turbine which is tethered in place by steel cables. Lamond provided additional information on the new model of wind turbine and added that the company plans to start installing them in Texas in the near future. This may well be something that the FAA will need to investigate.

STATUS: CLOSED