

# Wind Power and Wildlife in Ohio

Presentation to the Wind Turbine  
Guidelines Federal Advisory Committee

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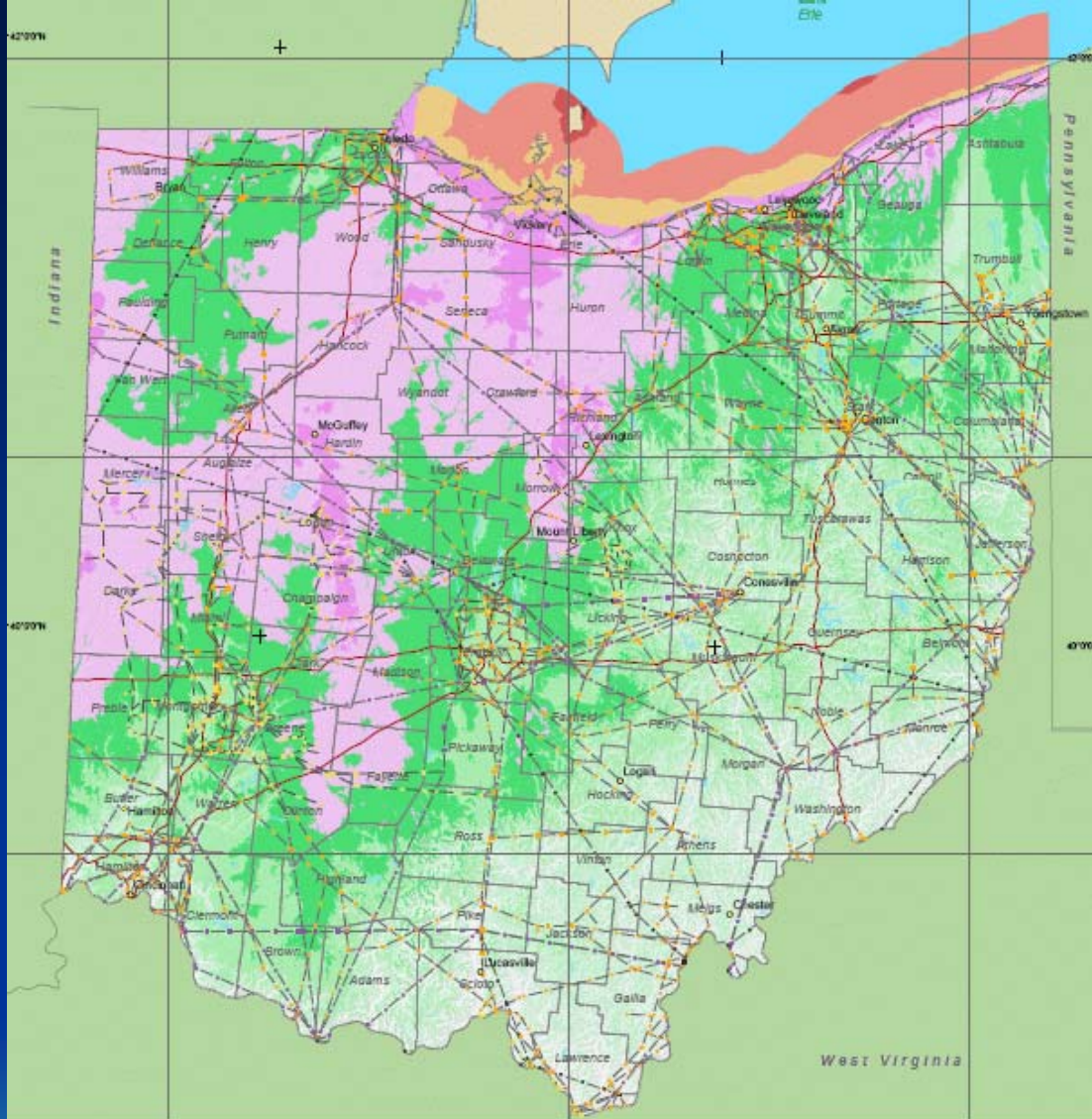
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# Overview

- Status of wind power development in Ohio
- Use of FWS Interim Guidelines in Ohio
- Ohio Department of Natural Resources Cooperative Agreement
- Examples of projects in Ohio
- Summary





Wind Resource of Ohio Mean Annual Wind Speed at 100 Meters



# Status of Wind Power in OH

- One MW-scale project in Bowling Green, OH
  - Four 1.8 MW turbines
- At least 6 utility-scale projects in various stages of planning
- One offshore (Lake Erie) demonstration project in planning
- Projects over 50 MW regulated by Ohio Power Siting Board; smaller projects subject to local zoning only



# Status of Wind Power in Ohio

- Ohio Wind Working Group



- Key stakeholders interested in smart and successful wind energy development in the State of Ohio
- FWS and ODNR co-chair Environmental Action Team
- Address wildlife issues early in the wind development process, at a state-wide level





# FWS Interim Guidelines

- Site Evaluation Process
- Studies to address data gaps pre-construction and to assess mortality post-construction
- General Site Development Recommendations
- General Turbine Design and Operation Recommendations



# Use of Guidelines in Ohio

- Guidelines are referenced and excerpted in initial FWS letter to developer:

“The Service’s voluntary Interim Guidance on Avoiding and Minimizing Impacts from Wind Turbines (<http://www.fws.gov/habitatconservation/wind.htm>) may be helpful as you evaluate your proposed wind power generation site. The guidance contains a pre-development site evaluation and ranking process to assess potential project impacts, as well as recommendations for conducting post-construction monitoring.”



# Use of Guidelines in Ohio

- After initial FWS letter to developer, follow-up with meeting to discuss issues
- Additional follow-up between FWS, Developer and ODNR to establish pre-construction survey protocol





# Use of Guidelines in Ohio—Site Evaluation Process

- To date, no projects have fully utilized FWS Site Evaluation Process
  - Broad-scale site has already been chosen when FWS is contacted (eg., 80 sq.mi. area in Logan Co. for ~150 turbines)
  - Developers describe their own method of site evaluation which includes: ecological issues, wind speed, topography, roads, homes, access to transmission, land ownership, “red flags,” etc.



# Use of Guidelines in Ohio—Studies

- To date, developers have been willing to implement some level of pre-construction wildlife studies

- Birds—breeding, migration, raptor
- Bats—acoustic monitoring, mist netting

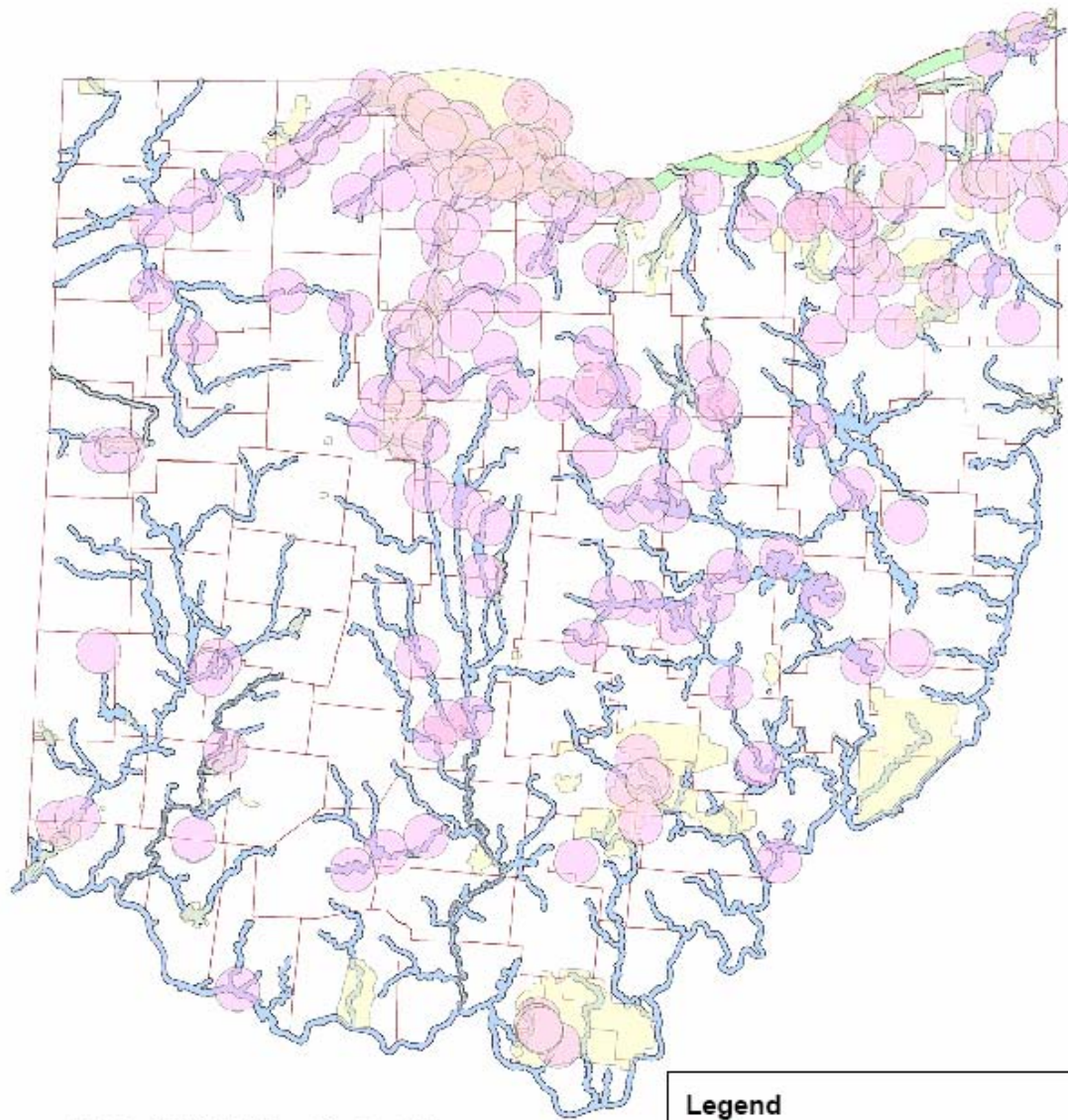
- Developers have agreed in concept to post-construction studies, but plans have not been finalized



# Use of Guidelines in Ohio—Site Development Recommendations

- Avoidance of turbines near: listed species, refuges, bird migration concentrations, bat hibernation sites, raptor concentration areas, etc.
- FWS and ODNR have developed a map and accompanying guidance document identifying some of these areas





## Ohio Wildlife Data Map

Sources: U.S. Fish and Wildlife Service and  
Ohio Department of Natural Resources  
Current as of September 2007

### Legend

- Indiana Bat
- Bald Eagle
- Audubon Ohio Important Bird Areas
- River Buffer
- Lake Erie Buffer
- County Boundary

# Use of Guidelines in Ohio—Turbine Design & Operation Recommendations

- Most Ohio projects are not to this stage yet
- Most meteorological towers have guy wires





# ODNR Cooperative Agreement

- Currently in draft form and accepting comments
- Agreement between Developer and ODNR, modeled after PA agreement
- Addresses coordination roles, timeframes, wildlife survey protocols, “mitigation” measures, and enforcement of state wildlife laws



# ODNR Cooperative Agreement

- Wildlife Survey Protocol
  - Minimum, Moderate, Extensive survey levels, depending on habitat/wildlife present
  - Pre- and Post-construction protocols
  - Mitigation possible, depending on mortality levels



# ODNR Cooperative Agreement



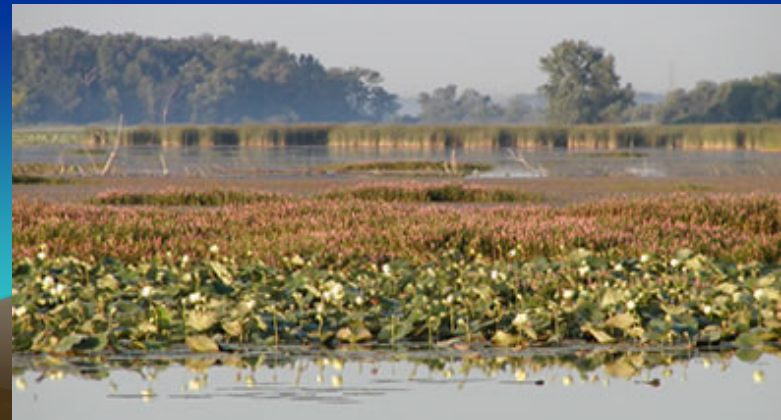
- “Carrots and Sticks”
  - Enforcement of state wildlife laws limited if developer signs on\*\*
  - Predictability of recommendations
  - Good PR for those that sign on
  - Will become “standard” over time, local govts. will likely adopt it
- \*\*ODNR must enforce wildlife laws for those that do not sign on





# Ohio Case Study #1

- Proposed utility-scale project adjacent to Ohio's only NWR, within 2 mi of Lake Erie and marshes, several eagle nests within boundaries, major migration stopover area
- FWS and ODNR submitted strong comments, hosted site visit, conference calls, and meeting
- Recommended avoiding this area, but if project does move forward, substantial bird surveys necessary
- Project is "on back burner"



# Ohio Case Study #2

- Proposed utility-scale project in west-central Ohio along ridge
- Karst region, documented caves within project area; Mix of forest blocks, agriculture, rural residential
- Currently conducting variety of bat surveys (netting, acoustic, radiotelemetry, hibernacula searches)
- Conducting bird surveys as well



# Ohio Case Study #3

- Proposed offshore demonstration project in Lake Erie near Cleveland, 2-10 turbines
- R&D focus; want to “do it the right way”
- Developing scope of avian assessment, including analysis of NEXRAD radar
- Considering scope, design of aquatic assessment
- Precedent-setting



# Lessons Learned that are Applicable to FACA

- Voluntary guidelines will only work if carrots are delicious and stick is poised to strike
- Industry is growing very quickly--Get involved early and stay actively involved; timeliness is critical
- All sites are not equal--Any guidelines must have site-specific flexibility built in
- Standardized, peer-reviewed pre- and post-construction survey protocols would be helpful to biologists reviewing on-the-ground projects