

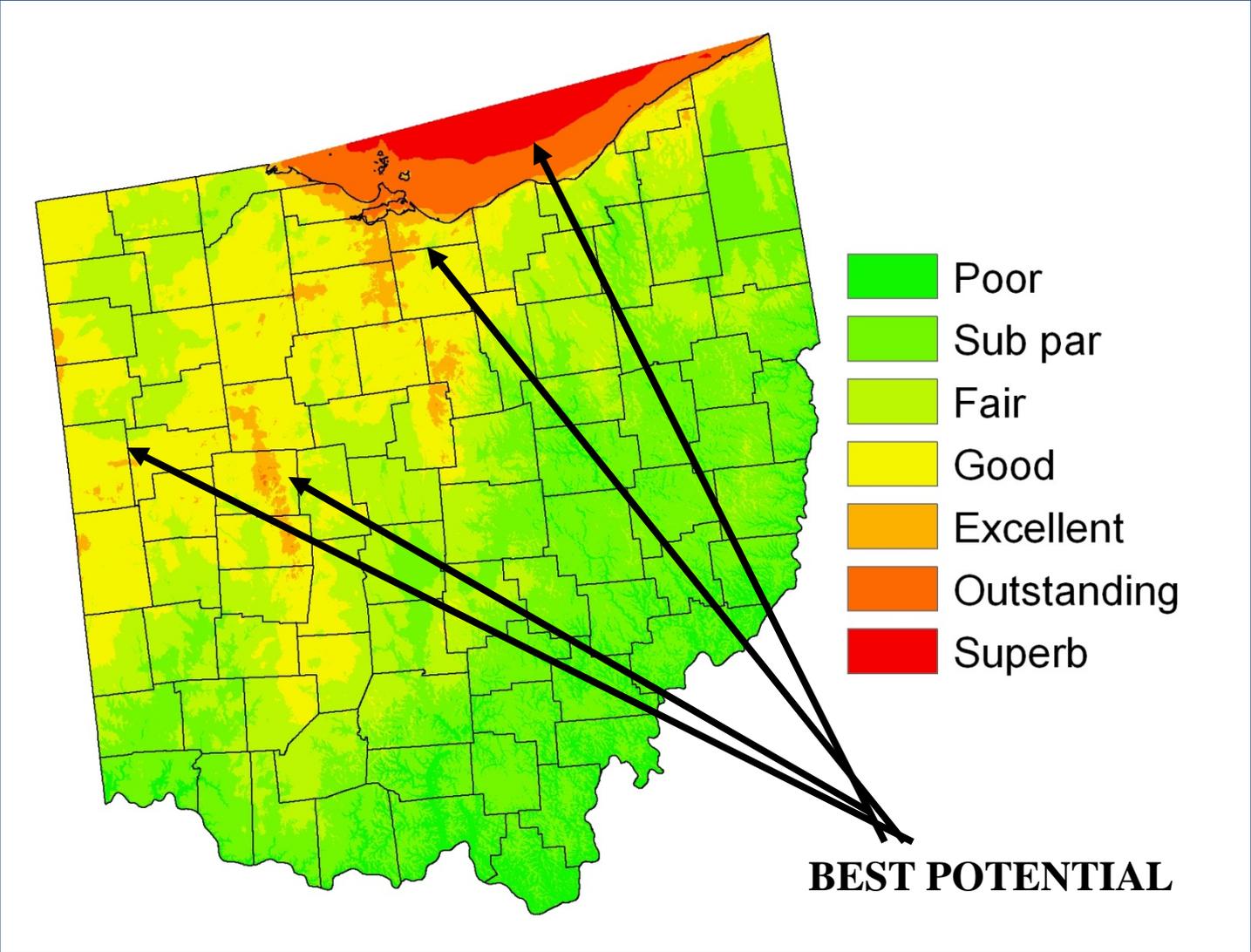


*A State Perspective:*  
**Ohio Protocols for Commercial  
Wind Facilities**

Jennifer L. Norris



# Ohio's Wind Energy Resources



# Renewable Energy Portfolio Standard

- **2008: Ohio Senate Bill 221**
  - 12.5% Ohio's energy source will be renewable by 2025
- **2008: Ohio House Bill 562**
  - Regulatory authority to the Ohio Power Siting Board (OPSB) for any wind facilities  $\geq 5$  megawatts
- **2009: ODNR DOW Pre- and Post-Construction Monitoring Protocol for Commercial Wind Energy Facilities in Ohio**



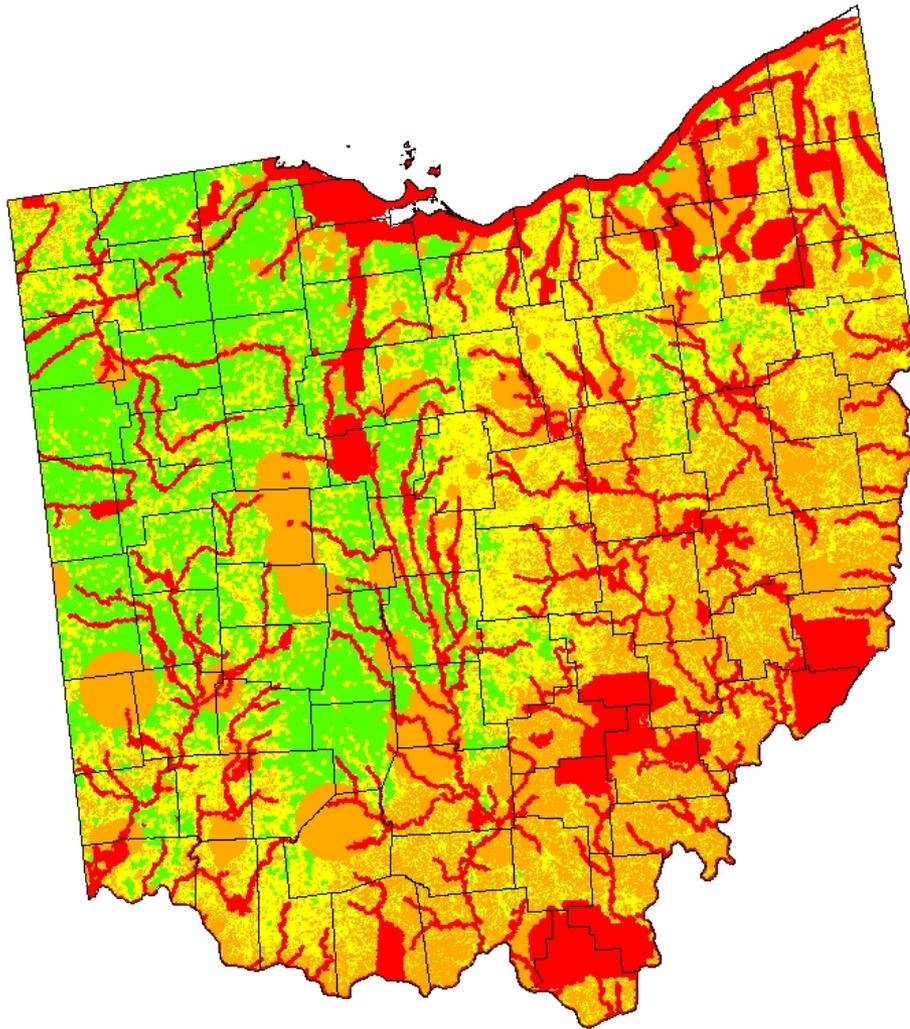
# ODNR-Division of Wildlife's Role

*How can we help wind energy development in Ohio and protect wildlife resources?*

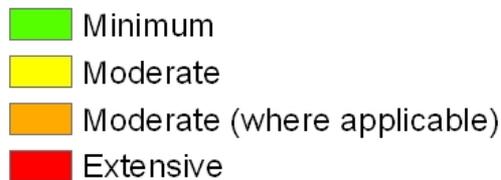
- Devote staff resources with experience and technical skills
- Coordinate with partnering agencies
- Develop tools for developers to assess risk
- Provide monitoring protocols to yield consistent data for project evaluations
- Communicate early and often with developers and consultants



# GIS-Based Planning



- **Sampling intensity commensurate with relative risk to wildlife resource**
- **Site projects in areas with the least potential impacts to wildlife**



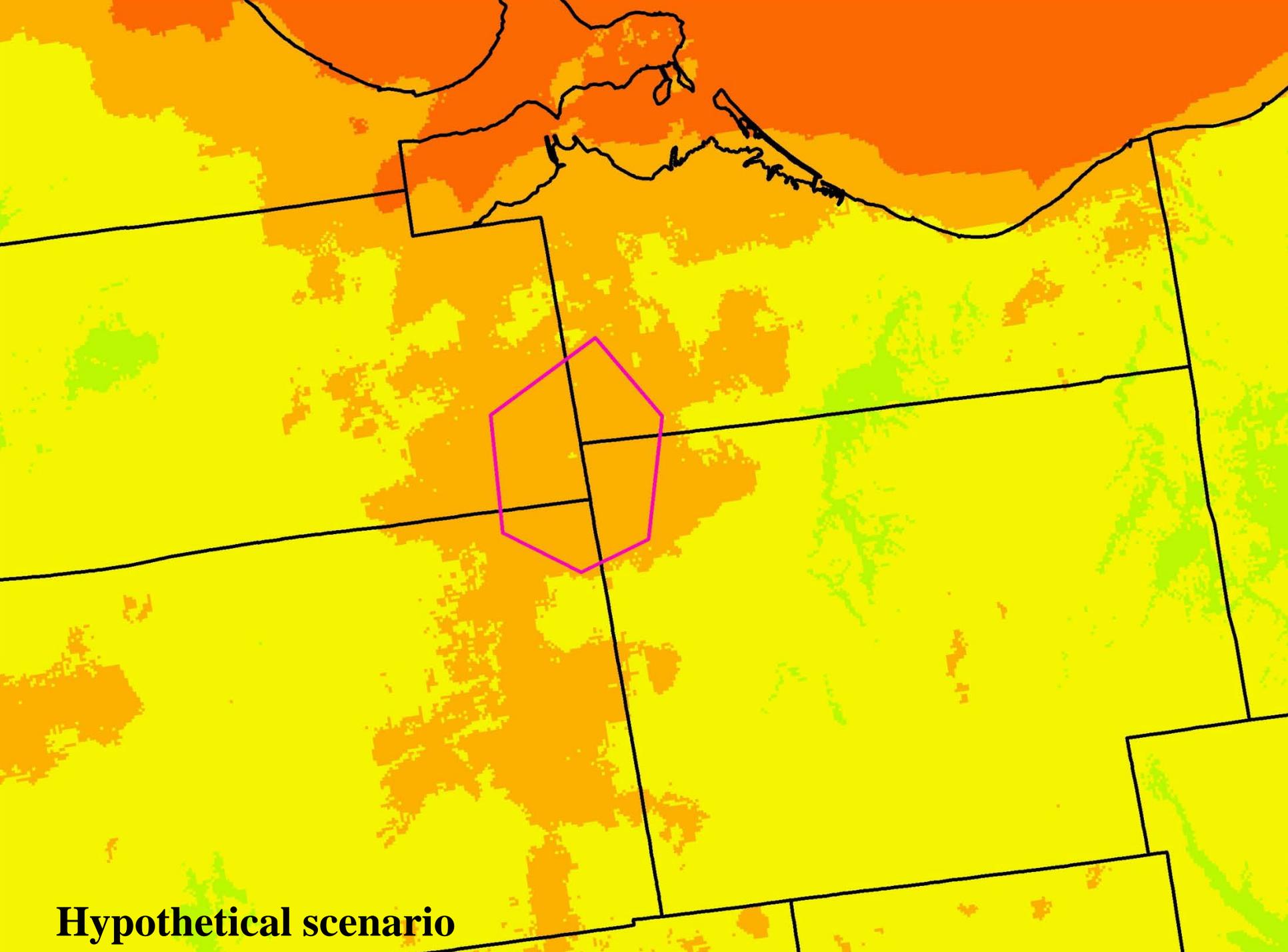
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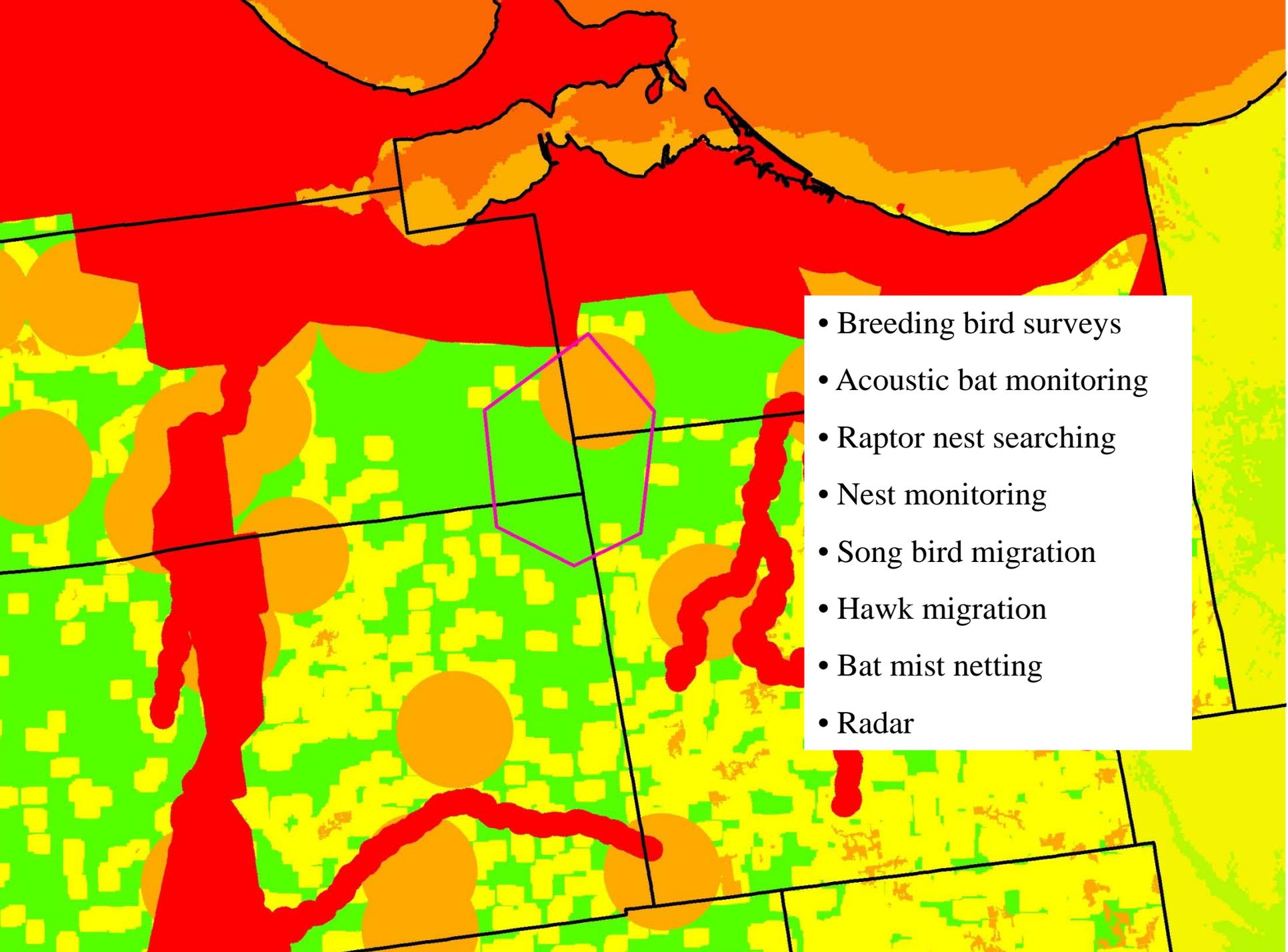
# Pre-Construction Monitoring

- **Minimum**
  - Breeding bird surveys
  - Acoustic bat monitoring
  - Raptor nest searching
- **Moderate**
  - Passerine migration
  - Diurnal bird/raptor migration
  - Owl playback surveys
  - Bat mist-netting
  - Nocturnal marsh bird surveys
  - Waterfowl surveys
  - Shorebird migration
- **Extensive**
  - Radar monitoring

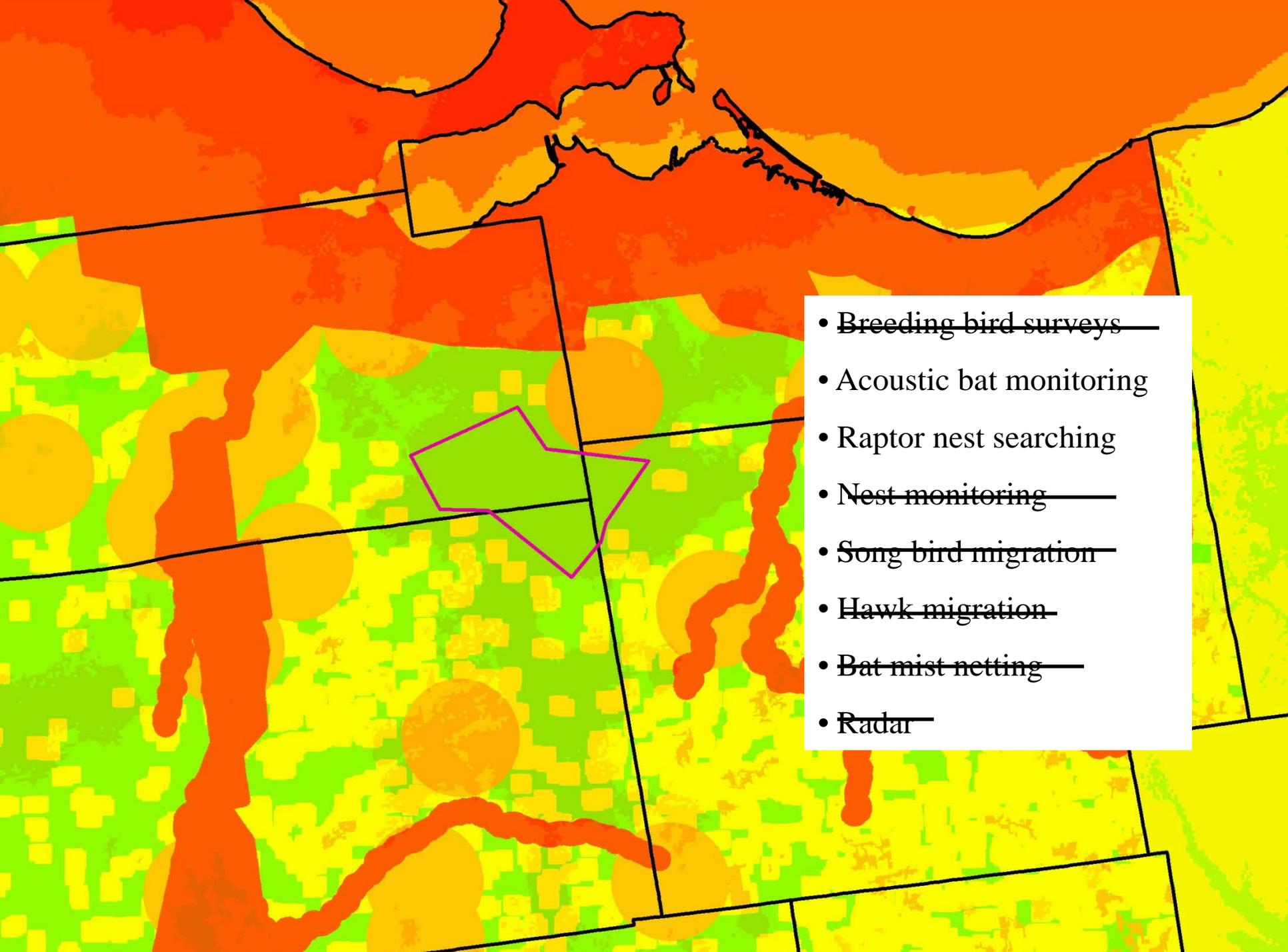




**Hypothetical scenario**



- Breeding bird surveys
- Acoustic bat monitoring
- Raptor nest searching
- Nest monitoring
- Song bird migration
- Hawk migration
- Bat mist netting
- Radar



- ~~Breeding bird surveys~~
- Acoustic bat monitoring
- Raptor nest searching
- ~~Nest monitoring~~
- ~~Song bird migration~~
- ~~Hawk migration~~
- ~~Bat mist netting~~
- ~~Radar~~

# Post-construction Monitoring

- **Adaptive approach:** 1+ years of monitoring
- **April 1- November 15**
- **2009 → Option A:**
  - 25% of turbines searched daily, twice blade length distance
- **2011 → Option B:**
  - 10% of turbines searched like Option A
  - Remainder of original 25% searched on a 3-day interval with a 60-m search radius, and double-sampling roads and pads at all turbines

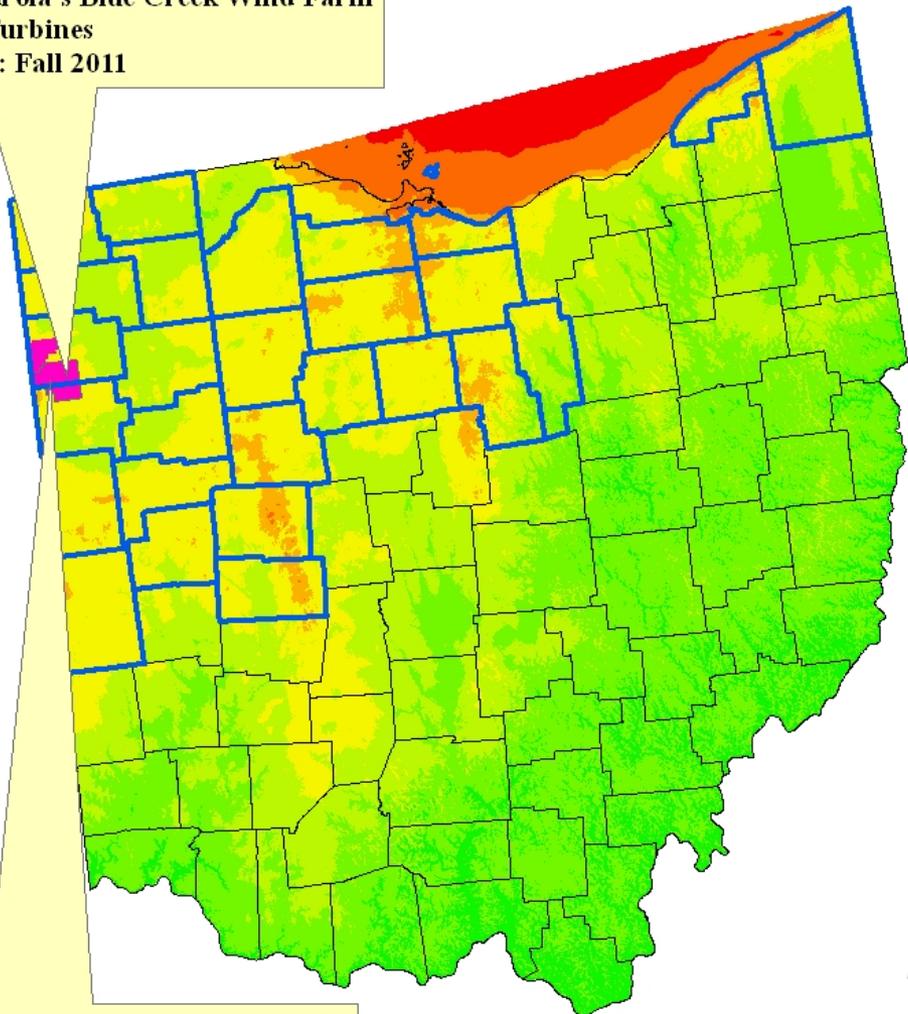


# Objectives

- **Determine if wind energy facility operations are causing an unacceptable level of impact on wildlife.**
- **Evaluate potential rare events.**
- **Examine bird and bat species impacted, as well as temporal and spatial variations.**
- **Make recommendations on minimization or mitigation measures.**
- **Assess the predictive value of pre-construction monitoring, and provide Ohio-specific data.**



Iberdrola's Blue Creek Wind Farm  
153 Turbines  
COD: Fall 2011



EDP's Timber Road Wind Farm  
59 Turbines  
COD: Summer 2011

# STATUS OF WIND ENERGY DEVELOPMENT

- Over 70 proposed projects
- 7 projects with OPSB Certificates
  - 1 of which developed an HCP
- 2 projects constructed and undergoing post-construction monitoring



 Commercial-Sized Wind Projects Proposed  
 Commercial-Sized Wind Projects Operating

State	RPS <sup>a</sup>	Implementing Agency	Post-construction Surveys	Standardize Mortality Protocol
OH	✓	Public Utilities Commission	Mandatory	Yes (2009 and 2011)
PA	✓	Public Service Commission	Mandatory	Yes (2007)
NY	✓	Public Service Commission	Mandatory	Yes (2009)
WV	✗	Public Service Commission	Mandatory	Site-specific
MN	✓	Department of Commerce	Mandatory	Site-specific
WI	✓	Public Service Commission	Voluntary	Site-specific
IN	✗	Utility Regulatory Commission	Voluntary	No
IL	✓	Department of Commerce	Voluntary	No
IO	✓	Utilities Board	Voluntary	No
MI	✓	Public Service Commission	Voluntary	No

# Final Thoughts

- Regulatory certainties for industry
- State wildlife laws/ authorities
- Coordination between state agencies and USFWS Land Based Wind Energy Guidelines



