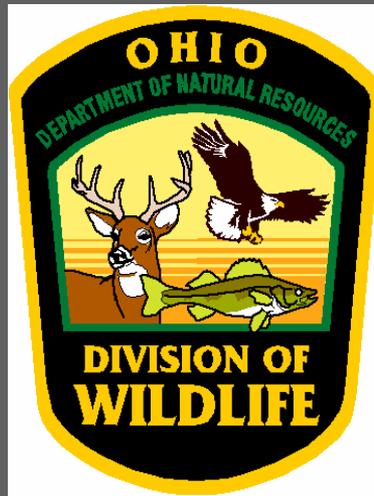


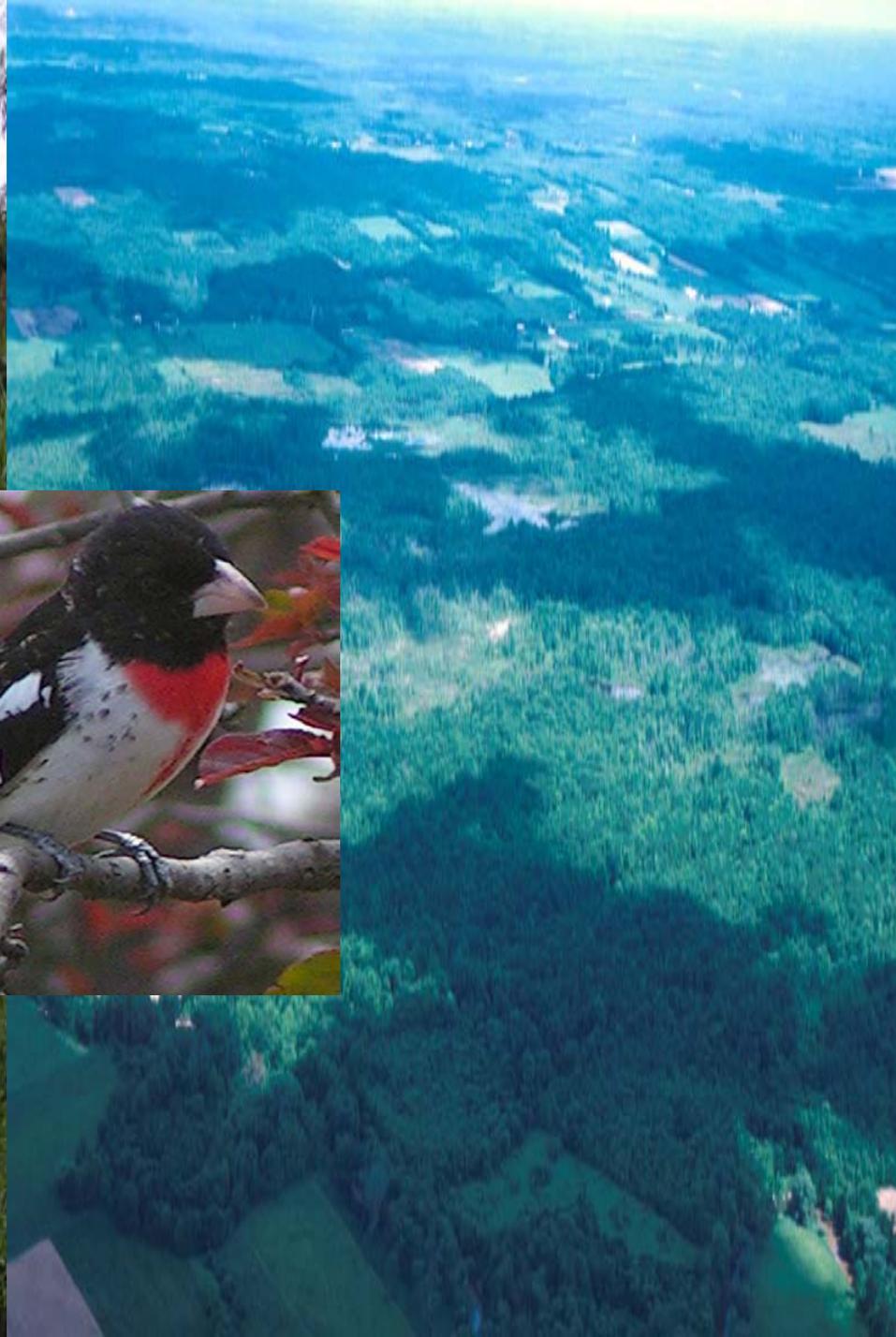
# Migratory Bird Stop-over Sites

emphasis on Lake Erie

Mark C. Shieldcastle

Ohio DNR, Division of Wildlife





# Stop-over Site Attributes

- Area of Site (habitat patch)
- Vegetation Species Composition
- Water Quality
- Food Availability
- Predators
- Landscape Pattern
- All in Time and Space



# Stopover Site Attributes

Attributes	Waterfowl	Shorebird	Waterbird	Landbirds	Raptors
High Insect productivity	X	X	Some	X	
Close to Great Lakes	X	X	X	X	X
Close to natural habitat	X	X	X	X	X
Minimal Disturbance	X	X	X	Some	Some
Few or No towers	Some	Some	Some	X	Some

**To migrate long distances, birds must have fat!**





# MICHIGAN

# OHIO

# INDIANA

Calhoun

Jackson

Washtenaw

Wayne

Joseph

Branch

Hillsdale

Lenawee

Monroe

La Grange

Steuben

Williams

Fulton

Lucas

Ottawa

Noble

DeKalb

Delancey

Henry

Wood

Sandusky

Erie

Whitley

Allen

Paulding

# OHIO

Seneca

Huron

Huntington

Wells

Adams

Van Wert

Allen

Hancock

Wandot

Crawford

Richland

Ashland

Blackford

Blackford

Jay

Mercer

Auglaize

Hardin

Marion

Morrow

Knox

Delaware

Randolph

Darke

Shelby

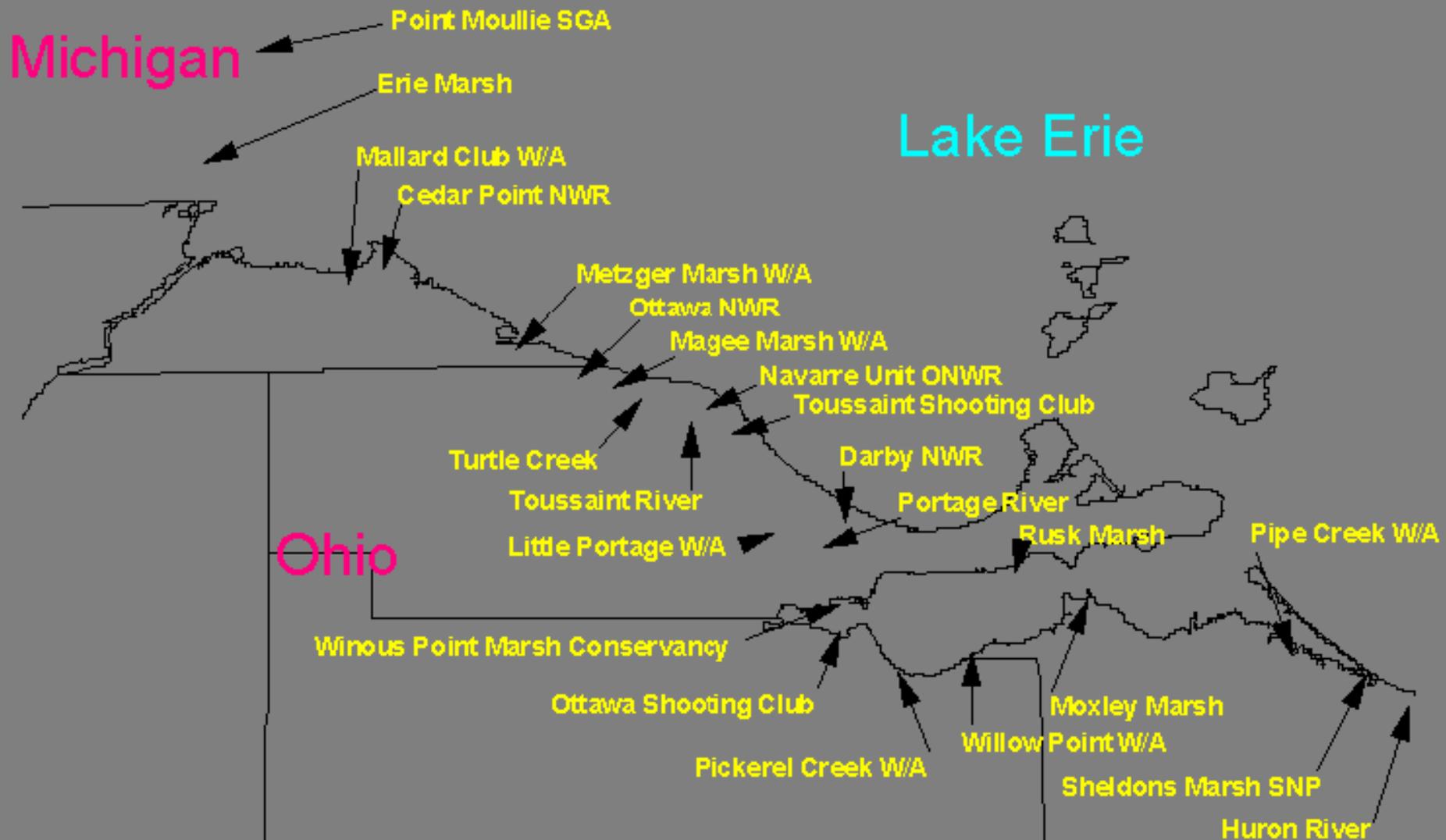
Logan

Union

Delaware

Champaign

# Primary Marsh Sites, Lake Erie Marsh Region





# Habitat Fragmentation





# Lake Erie Marshes

## Continental Importance

- **Focus Area – North American Waterfowl Management Plan**
- **Regional Site - Western Hemispheric Shorebird Reserve Network**
- **Globally Important Bird Area - Partners in Flight**
- **West Sister Is.- Most important Colonial Waterbird Breeding Colony in the U.S. Great Lakes**



# Habitats

- Islands
- Open Lake



# Habitats

- Sand Dunes
- Beach Ridges



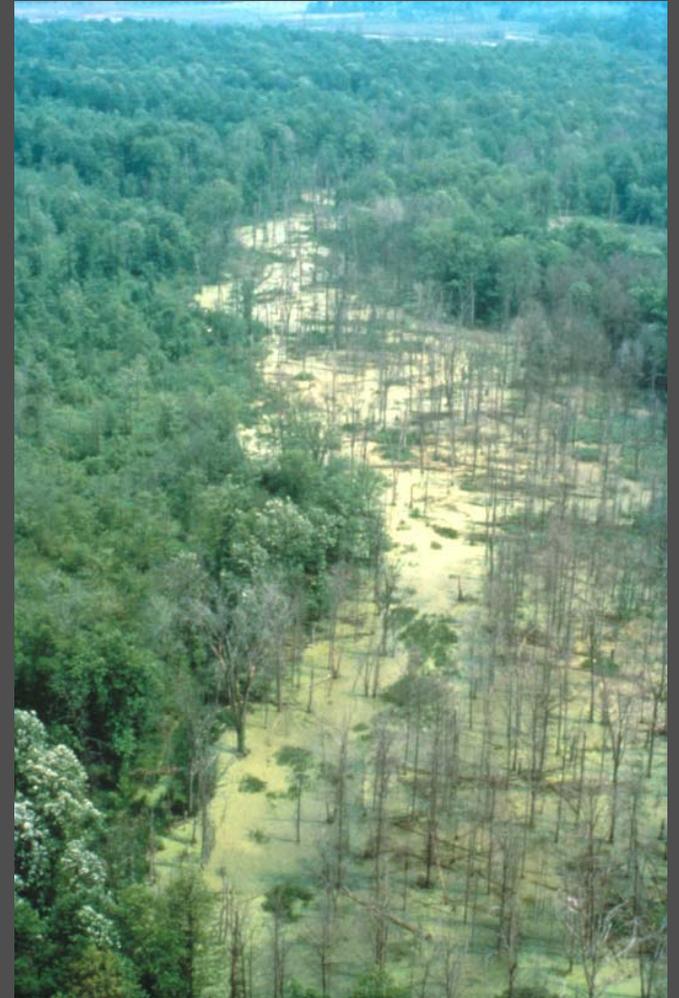
# Habitats

- Emergent Wetlands
- Wet Meadow



# Habitats

- Shrub Swamp
- Swamp Forest



# Habitats

- Upland Marsh
- Prairie



# Habitats

- Forest



# Bird Groups

- Waterfowl
- Shorebirds
- Raptors
- Landbirds
- Waterbirds



# Waterfowl

- **Recognized as area of continental significance**
- **More than 30 species and 3 million birds annually**
- **Spring : February – early May**
- **Fall : late August – early January**









# Shorebirds

- **Regional WHRSN site in the Western basin**
- **38 species - > 100,000 birds**
- **Spring : March – early June**
- **Fall : early July - November**

# Southwest Lake Erie Marsh Region

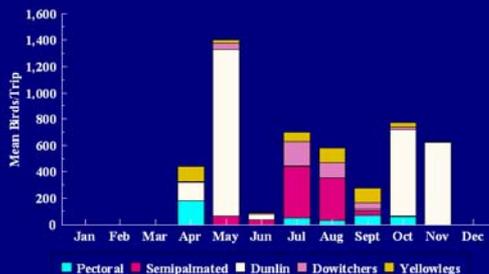


## *WHSRN Regional Site:*

- Designated as Regionally significant in 2000
- Most significant site between Delaware Bay and Cheyenne Bottoms, KS



**Selected Species Migrational Timing  
1993-1996**





# Waterbirds

- **Diverse group – waders, marshbirds, terns, and gulls**
- **Spring : March – May**
- **Wide variety of habitat needs**





# Landbirds

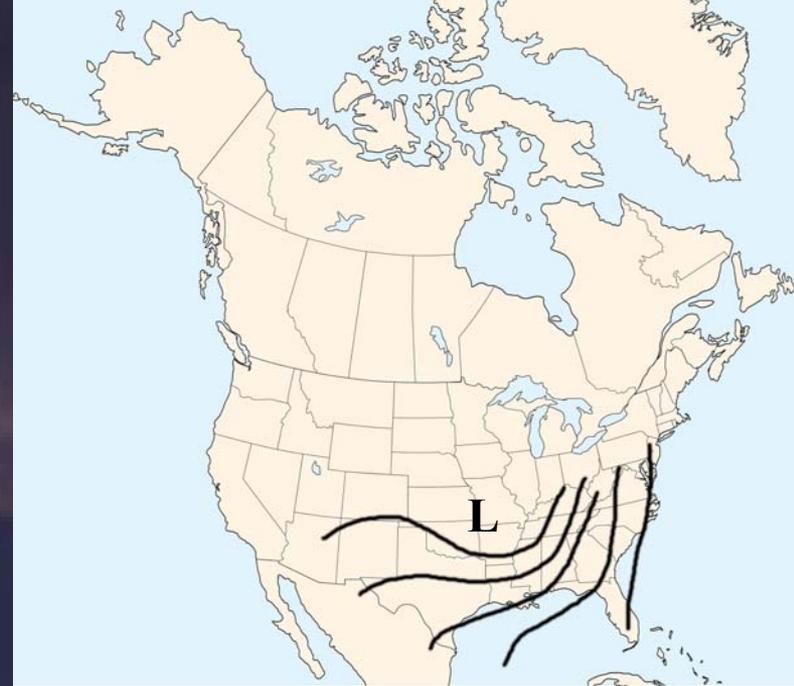
- **Broad range of habitat uses**
- **Species – 150+**
- **Millions of individuals**
- **Beach ridges of greatest importance**

# NIGHT MIGRATION

FREES DAYS FOR FOOD

ATMOSPHERE MORE STABLE

COOLER – REDUCES HEAT & WATER LOSS







# Landbird Comparisons

<b>Site</b>	<b>Birds/100 net hours</b>	<b>Site</b>	<b>Birds/100 net hours</b>
<b>NAVARRE, ONWR</b>	<b>120</b>	<b>Dearborn, MI</b>	<b>40</b>
<b>Alma, MI</b>	<b>50</b>	<b>Braddock Bay, NY</b>	<b>42</b>
<b>Powermill, PA</b>	<b>28</b>	<b>Appledorf, ME</b>	<b>69</b>
<b>Long Point, ONT</b>	<b>87</b>	<b>Ruthven, ONT</b>	<b>31</b>
<b>Manitou Beach, NY</b>	<b>44</b>	<b>Selkirk, ONT</b>	<b>20</b>



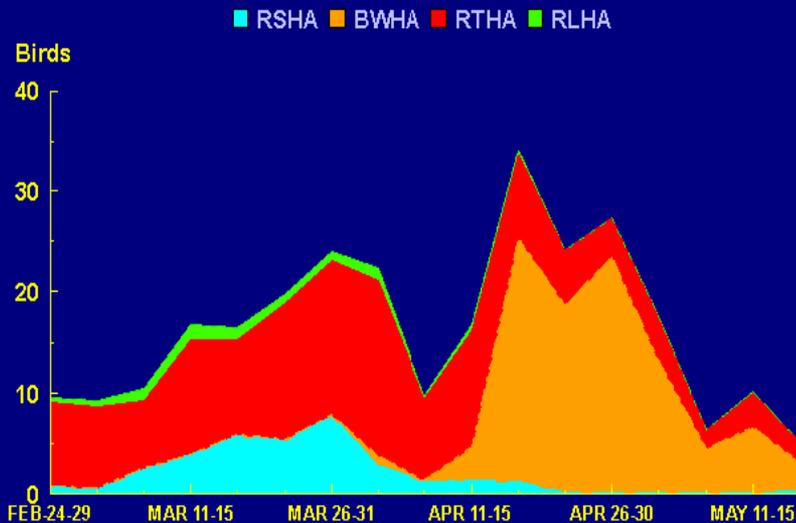
# Raptors

- **Passive migration**
- **Spring : south shore > 15,000 annual**
- **Fall : north shore > 250,000 annual**
- **Spring : February – May**
- **Fall : September - November**

# Species Specific And Temporal Differences

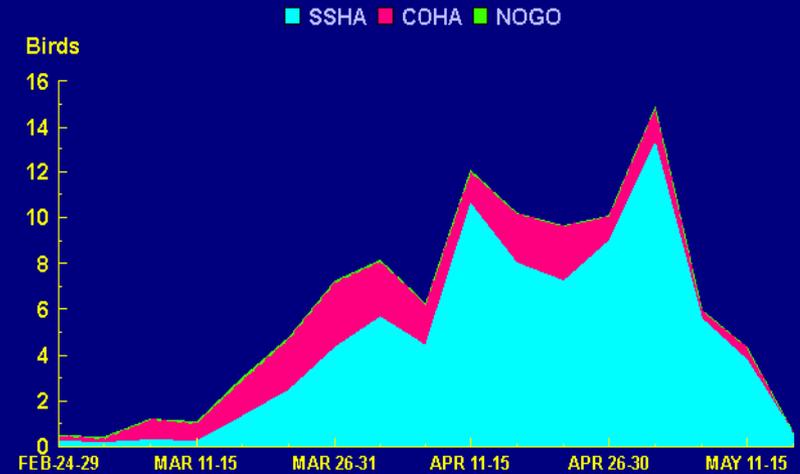
## Average Daily Raptor Migration by 5-day Increments

### Buteos



## Average Daily Raptor Migration by 5-day Increments

### Accipiters







# Wildlife Recreation

- Nationally Recognized
- Waterfowl Hunting
- Bird Watching
- Photography



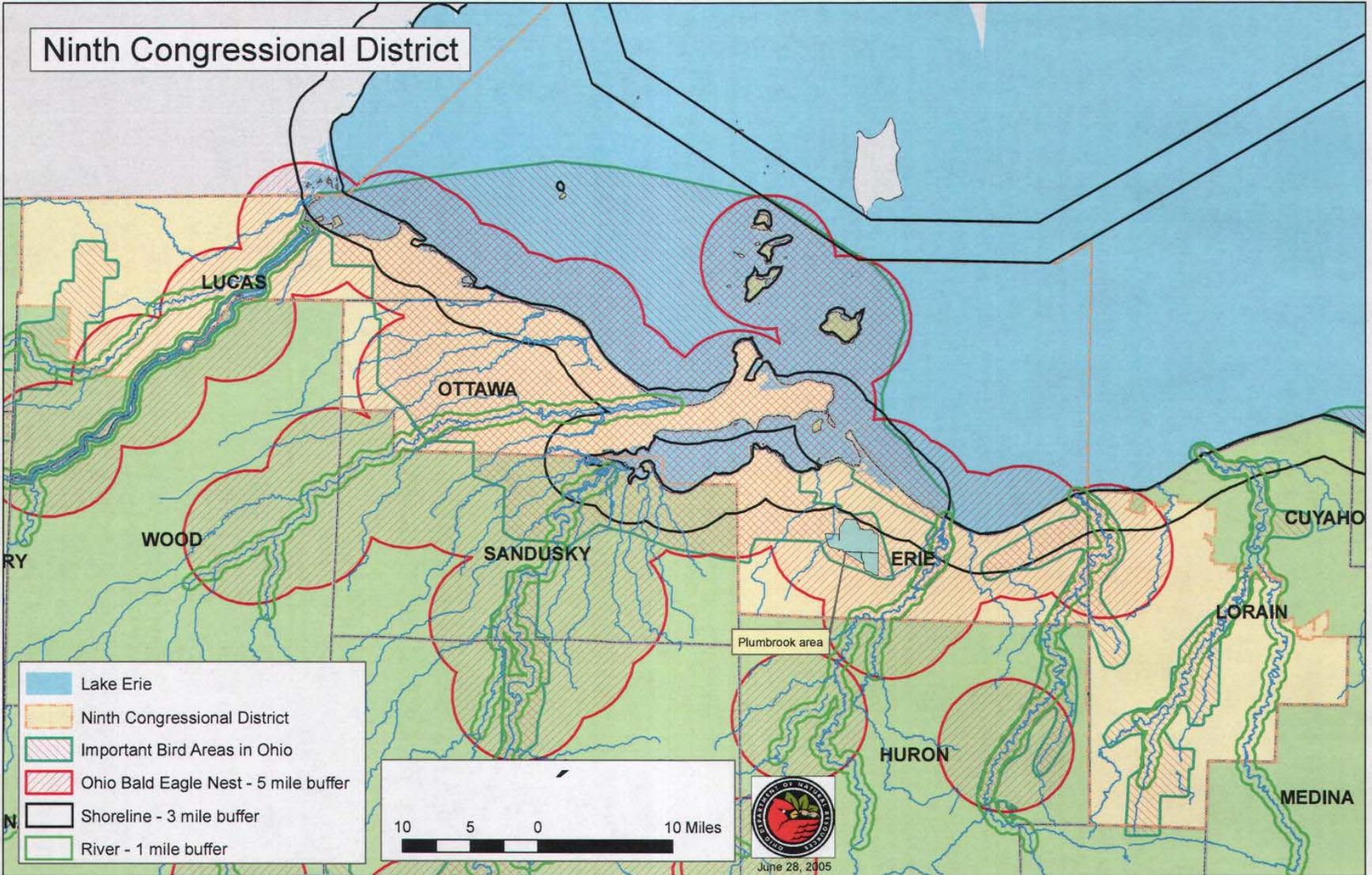


# Ohio's First Wind Farm

## Bowling Green



# Ninth Congressional District



**Any Questions ?**

