

User guide
for using and navigating
migratory bird stopover habitat
map interface

Version 1.0

Last updated February 24, 2013

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1. Basic Map Interface Information

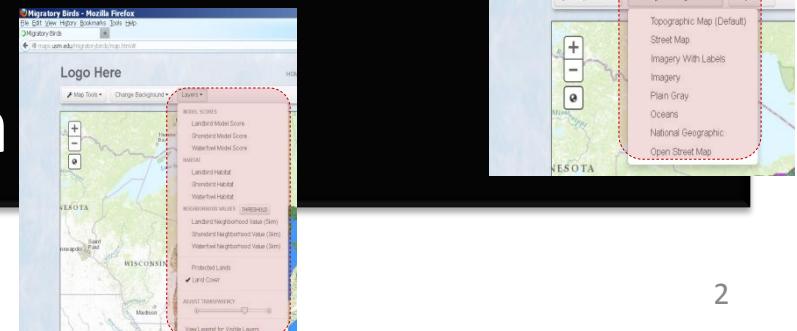
2. Map Tools Information

1. Map tools Summarize function

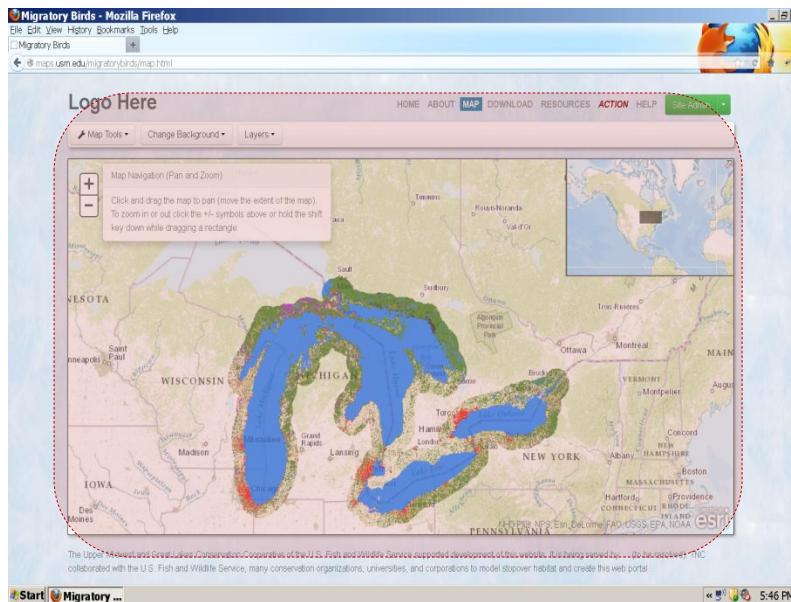
2. Map tools Compare function

3. Change Background Panel Information

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Basic Map Interface Information



Basic map interface Information

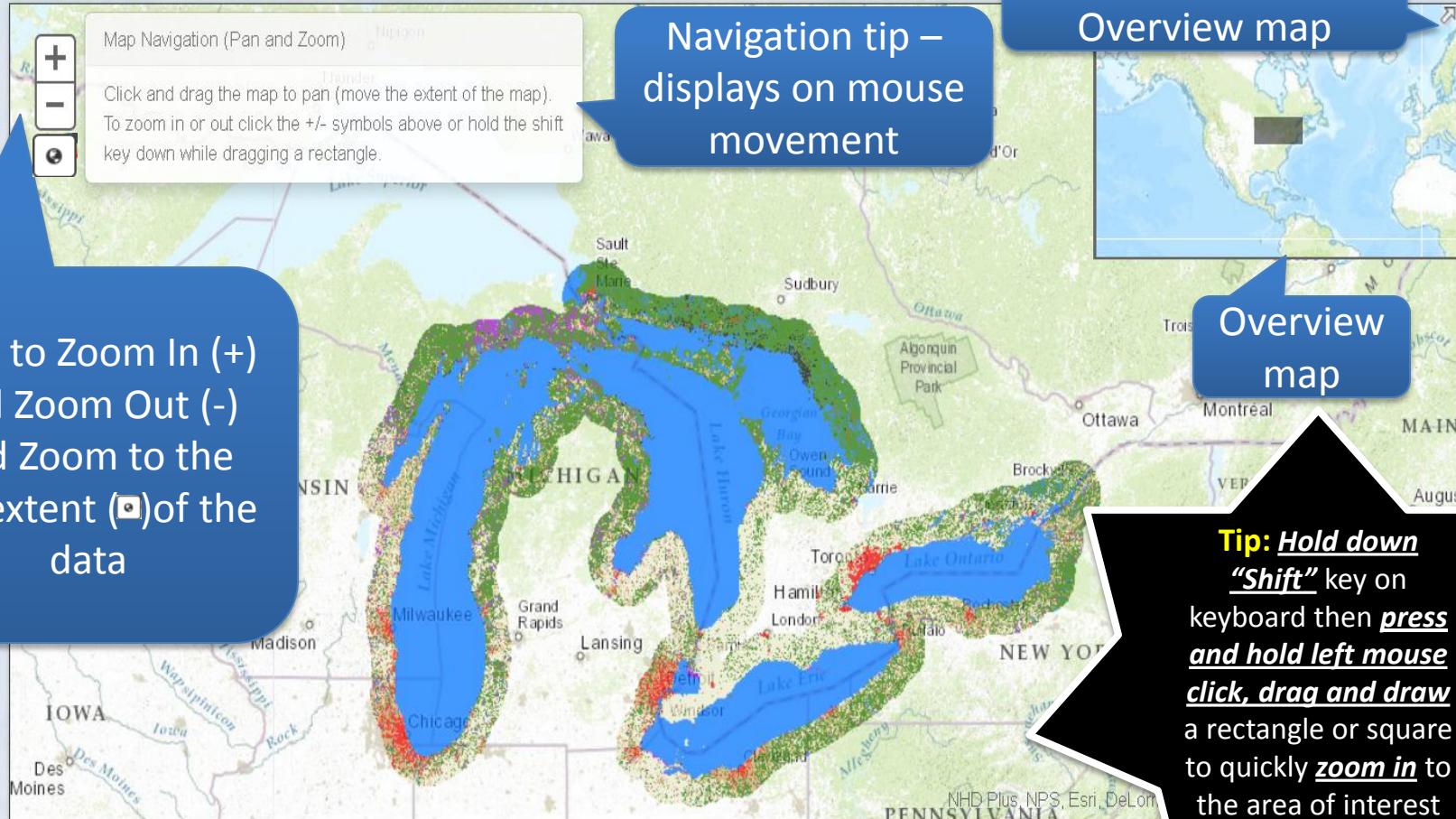


Select Analysis tool

Change basemap

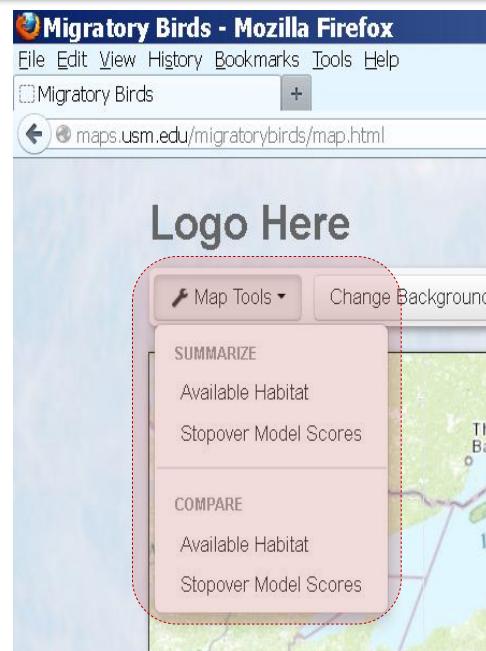
Select layer/theme to display

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The Upper Midwest and Great Lakes Conservation Cooperative of the U.S. Fish and Wildlife Service supported development of this website. It is being served collaboratively with the U.S. Fish and Wildlife Service, many conservation organizations, universities, and corporations to model stopover habitat and create the

Map Tools Information





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Two main groups:
Summarize and Compare

Summarize: Provides tool to generate summary information for “Available habitat” and “Stopover model scores” data layers using various geographies/polygon boundaries.

Compare: Provides tool to compare result of “summarize tool” for two geographic units

The Upper Midwest and Great Lakes Conservation Cooperative of the U.S. Fish and Wildlife Service supported development of this website. It is being served by.... (to be resolved). TNC collaborated with the U.S. Fish and Wildlife Service, many conservation organizations, universities, and corporations to model stopover habitat and create this web portal.

Map Tools in Action – SUMMARIZE and COMPARE



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e.g. Click on "Map Tools" >>> Select "Available Habitat" >>> Click "Summary Level"

Summarize Available Habitat

1 Choose a Summary Level

- Site (User Defined)
- ADMINISTRATIVE BOUNDARIES
 - States and Provinces
 - Counties and Census Divisions
 - Townships and Census Subdivisions
- WATERSHED BOUNDARIES
 - Entire Great Lakes Basin
 - Individual Great Lakes Basins
 - Watersheds
- PLANNING UNITS
 - Coastal Planning Units

Four main options for both Summarize and Compare groups:

Sites (User defined): Provides tool to *draw a custom area of interest*

Administrative boundaries: Provides option to *select standard geopolitical units* from townships to state/province level

Watershed boundaries: Provides option to *select various watershed units* from 10 digit HUC (U.S.), quaternary units (Canada) to entire Great Lakes basin

Planning Units: Provides option to *select units developed for Lake Michigan and Lake Erie conservation planning*

Procedure:

1. Click on “*Map Tools*”
2. Select “*Available Habitat*”, e.g., under “*Summarize*” group
3. Select “*Unit of Analysis*”, e.g. County or Site
4. *Select or draw desired polygon*
5. Click “*Submit*”
6. Then the result is displayed
7. **Repeat steps 1 – 6 for additional units *****

Summarize Available Habitat

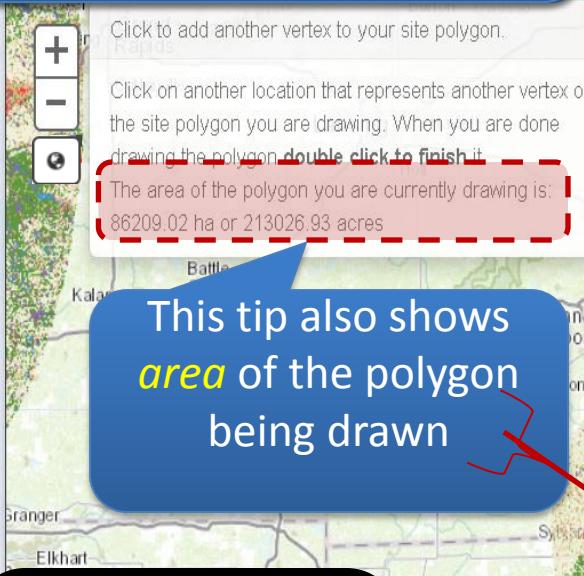
Map Tools in Action – ***SUMMARIZE***Available Habitat >>> ***Sites (User Defined) option***

3. After completing drawing polygon click **Submit** to perform summary analysis
OR
You can hit **Clear Selection** to draw a new polygon

Click “x” to “close” and “cancel” tool operation

intermediate vertices, then double click to finish the sketch. You may draw as many polygons as you like. Summarizing polygons will take minutes). When you are finished click "Submit" below.

Clear Selection Submit

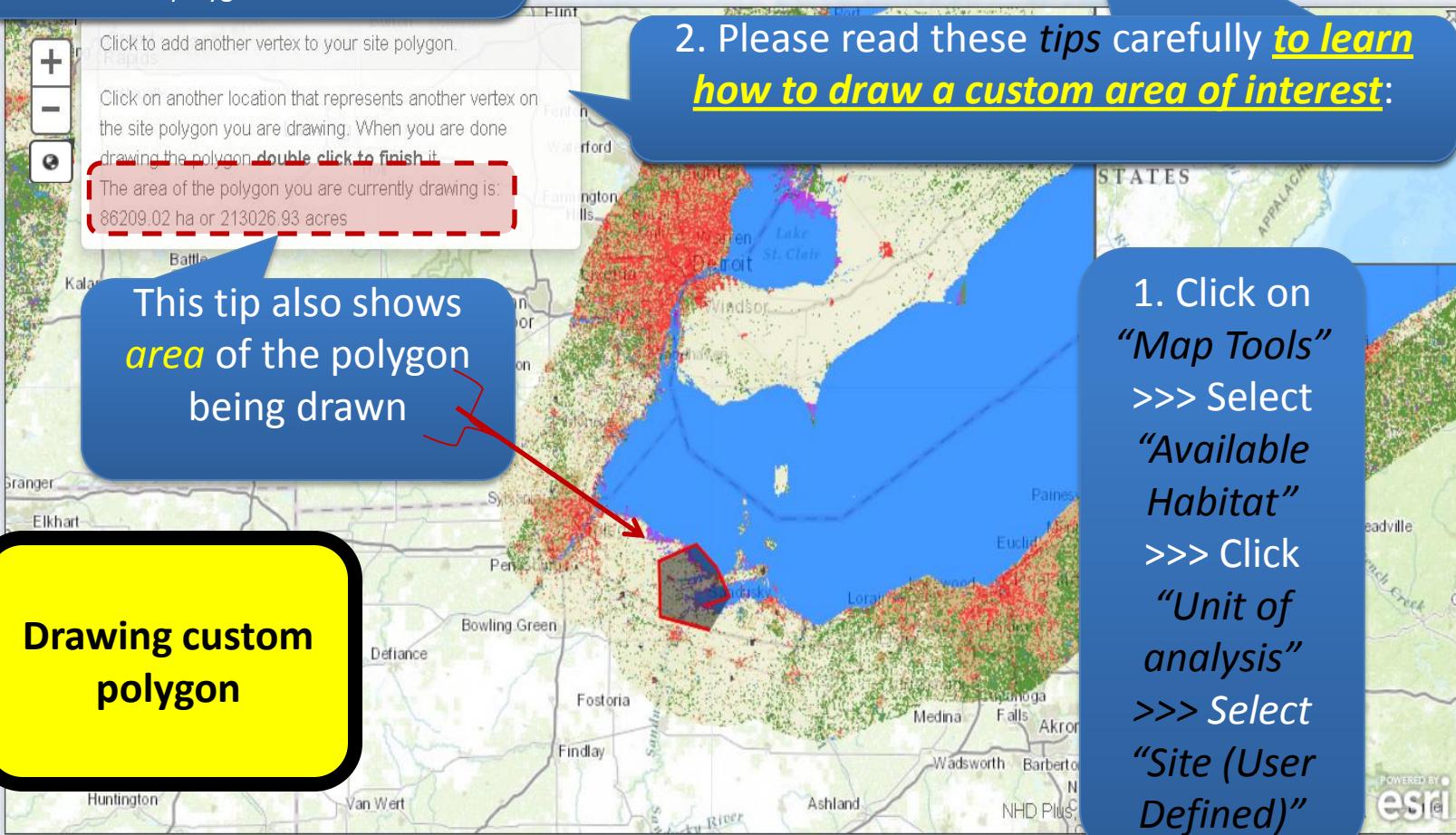


This tip also shows **area** of the polygon being drawn

Drawing custom polygon

2. Please read these *tips* carefully **to learn how to draw a custom area of interest:**

1. Click on **“Map Tools”** >>> Select **“Available Habitat”** >>> Click **“Unit of analysis”** >>> Select **“Site (User Defined)”**



Map Tools in Action – ***SUMMARIZE***Available Habitat >>> ***Sites (User Defined) option***

Summarize Available Habitat

Results Report

1. Important notes

Note: Darker color on each chart represents protected areas.

2. Chart key

Habitat Value Key

Shorebird Values

- 1 – Emergent wetlands
- 0.5 – Agricultural fields with hydric soils
- 0.25 – Beach
- 0 represents other areas (not suitable)

Waterfowl Values

- 1 – Mixed emergent marsh adjacent to open water
- 0.75 – Emergent marsh or open water, not adjacent
- 0.25 – Shrub swamp or emergent marsh or wet meadow (not suitable)
- 0 represents other areas (not suitable)

Landbird Values

- 1 – Natural vegetated land
- 0.5 – Hay/pasture, palustrine, urban with high canopy cover
- 0 represents other areas (not suitable)

Collapse/Expand/
Minimize/Close
result page

Result page
Divided into
5 sections

Shorebirds Habitat Summary Chart

Waterfowl

Landbirds Habitat Summary Chart

Understanding
Result page
organization

3. Charts

Hover mouse cursor over bar graph to see numeric value
“e.g. 100 or 1500”

Area (Hectares)

10,000 20,000

Shorebirds

Landbirds

Map Tools in Action – ***SUMMARIZE***Available Habitat >>> ***Sites (User Defined) option***

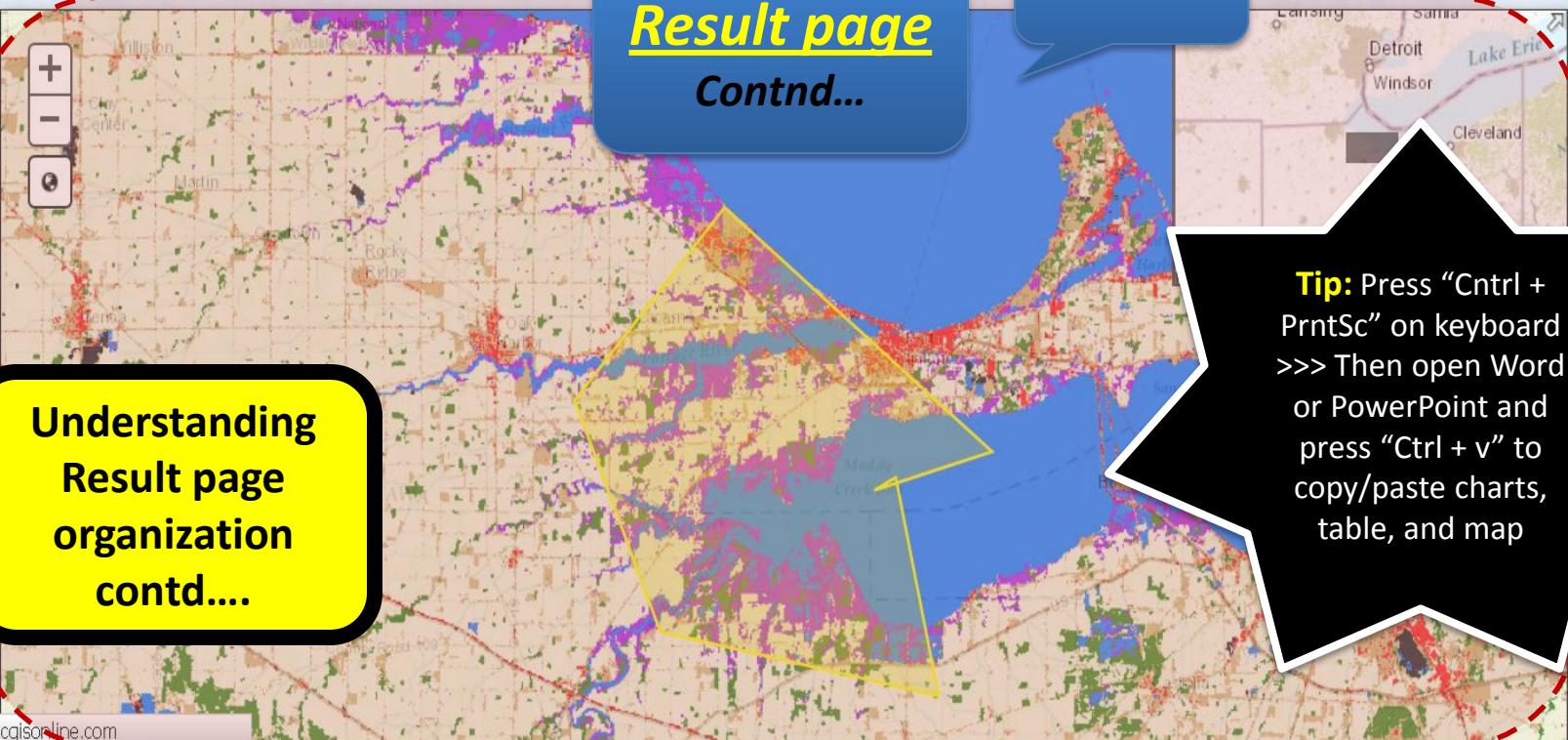
4. Table

	Shorebirds				Waterfowl				Landbirds				
	Area (Ha)	% of Total	Cumulative %	% Protected	Value	Area (Ha)	% of Total	Cumulative %	% Protected	Value	Area (Ha)	% of Total	Cumulative %
	6109	19.55	19.55	55.16	1	2499	8.00	8.00	49.90	1	6350	20.32	
	10390	33.25	52.79	12.91	0.75	13457	43.06	51.06	39.44	0.5	3925	12.56	
0.25	0	0.00	52.79		0.25	11555	36.97	88.03	17.97	0	20977	67.12	
0	14753	47.21	100.00	34.09	0	3741	11.97	100.00	29.67				

Repeat similar process to draw another polygon and run analysis

***Result page
Contnd...***

5. Map



Tip: Press “Cntrl + PrntSc” on keyboard
>>> Then open Word or PowerPoint and press “Ctrl + v” to copy/paste charts, table, and map

Map Tools in Action – **SUMMARIZE**

Available Habitat >>> **Townships option**



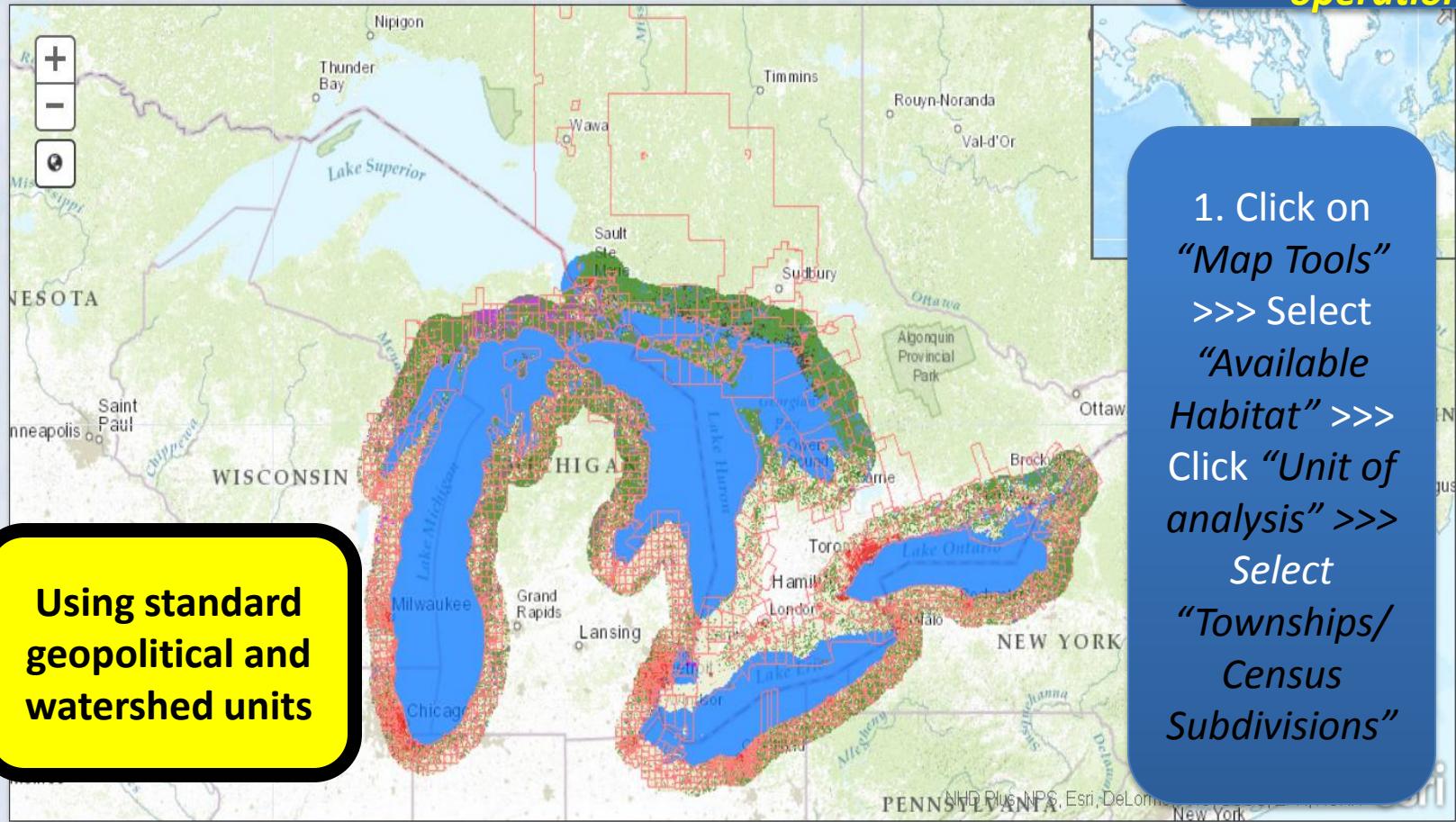
Summarize Available Habitat

2 Next, Choose the unit(s) you want to include. You may click directly on the unit(s) you want to select on the map, or choose them from the drop down menu below. When you have made the selection(s) you would like, click "Submit" below.

Clear Selection

Submit

**Click “x” to “close”
and “cancel” tool
operation**



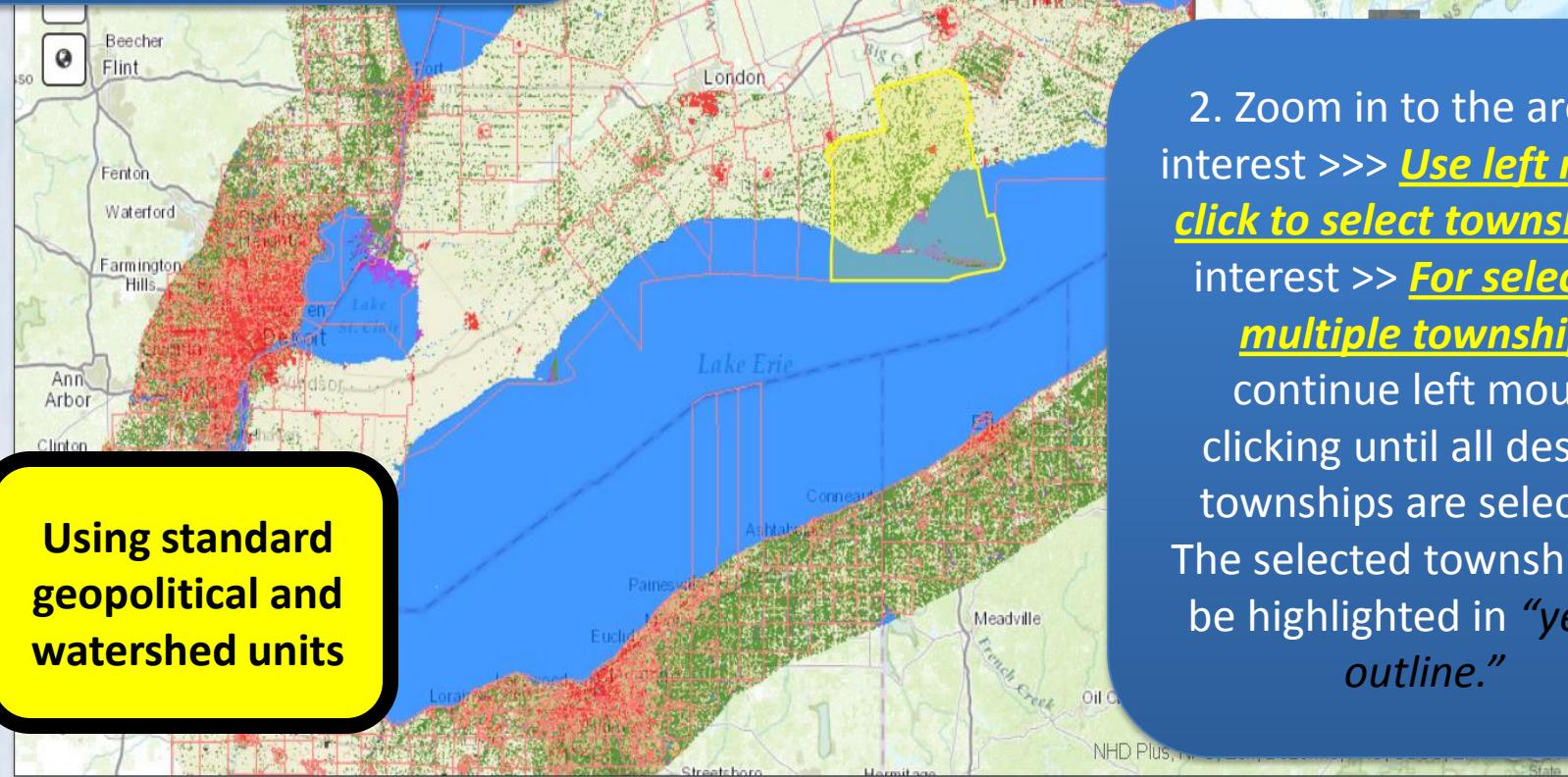
Map Tools in Action – **SUMMARIZE** Available Habitat >>> **Townships option**

3. After completing township selection click "**Submit**" to perform summary analysis

OR

You can hit "**Clear Selection**" to perform new selection

Click "x" to "close" and "cancel" tool operation



2. Zoom in to the area of interest >>> **Use left mouse click to select township** of interest >> **For selecting multiple townships** continue left mouse clicking until all desired townships are selected. The selected township will be highlighted in "yellow outline."

Map Tools in Action – SUMMARIZE

Available Habitat >> **Townships option**



Summarize Available Habitat

Results Report

1. Important notes

Note: Darker color on each chart represents protected areas.

2. Chart key

Habitat Value Key

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Collapse/Expand/
Minimize/Close
result page

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Divided into
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Shorebirds Habitat Summary Chart

Waterfowl

Landbirds Habitat Summary Chart

**Understanding
Result page
organization**

3. Charts

Hover mouse cursor over bar graph to see numeric value
“e.g. 100 or 1500”

Map Tools in Action – **SUMMARIZE**

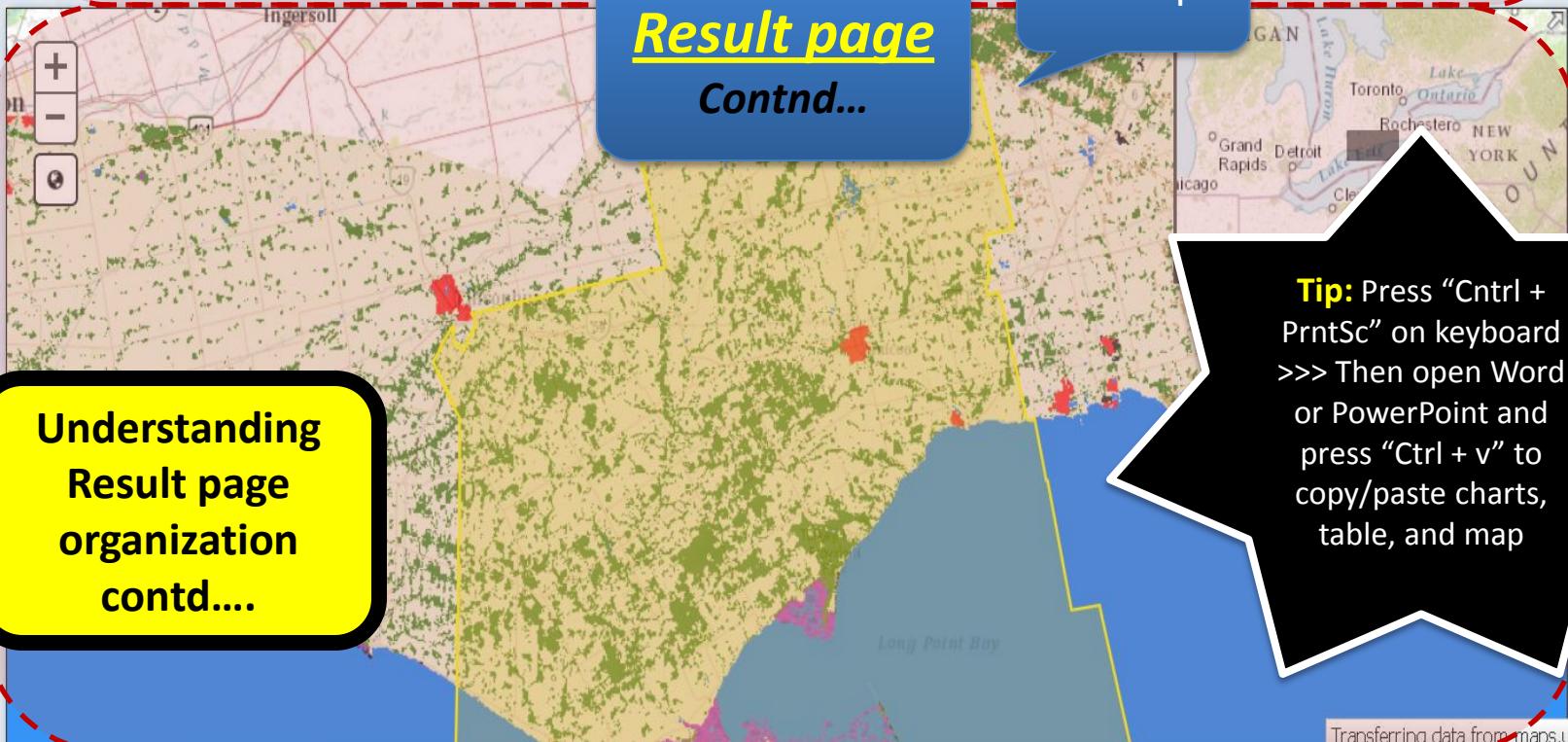
Available Habitat >> **Townships option**



4. Table

Value	Shorebirds				Value	Waterfowl				Value	Landbirds			
	Area (Ha)	% of Total	Cumulative %	% Protected		Area (Ha)	% of Total	Cumulative %	% Protected		Area (Ha)	% of Total	Cumulative %	% Protected
6825	1.46	1.46	0.00	1	5061	1.08	1.08	0.00	1	81928	17.48	17.48	0.00	
66795	14.25	15.71	0.00	0.75	169915	36.25	37.33	0.00	0.5	3679	0.78	18.27	0.00	
680	0.15	15.85	0.00	0.25	68426	14.60	51.93	0.00	0	383075	81.73	100.00	0.00	
394382	84.15	100.00	0.00	0	225280	48.07	100.00	0.00						

5. Map



Understanding
Result page
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contd....

Map Tools in Action – **SUMMARIZE**

Available Habitat >> **ALL other options**



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Map Tools ▾ Change Background ▾ Layers ▾

Summarize Available Habitat

1 Choose a

Summary Level ▾

Site (User Defined)

ADMINISTRATIVE BOUNDARIES

States and Provinces

Counties and Census Divisions

Townships and Census Subdivisions

WATERSHED BOUNDARIES

Entire Great Lakes Basin

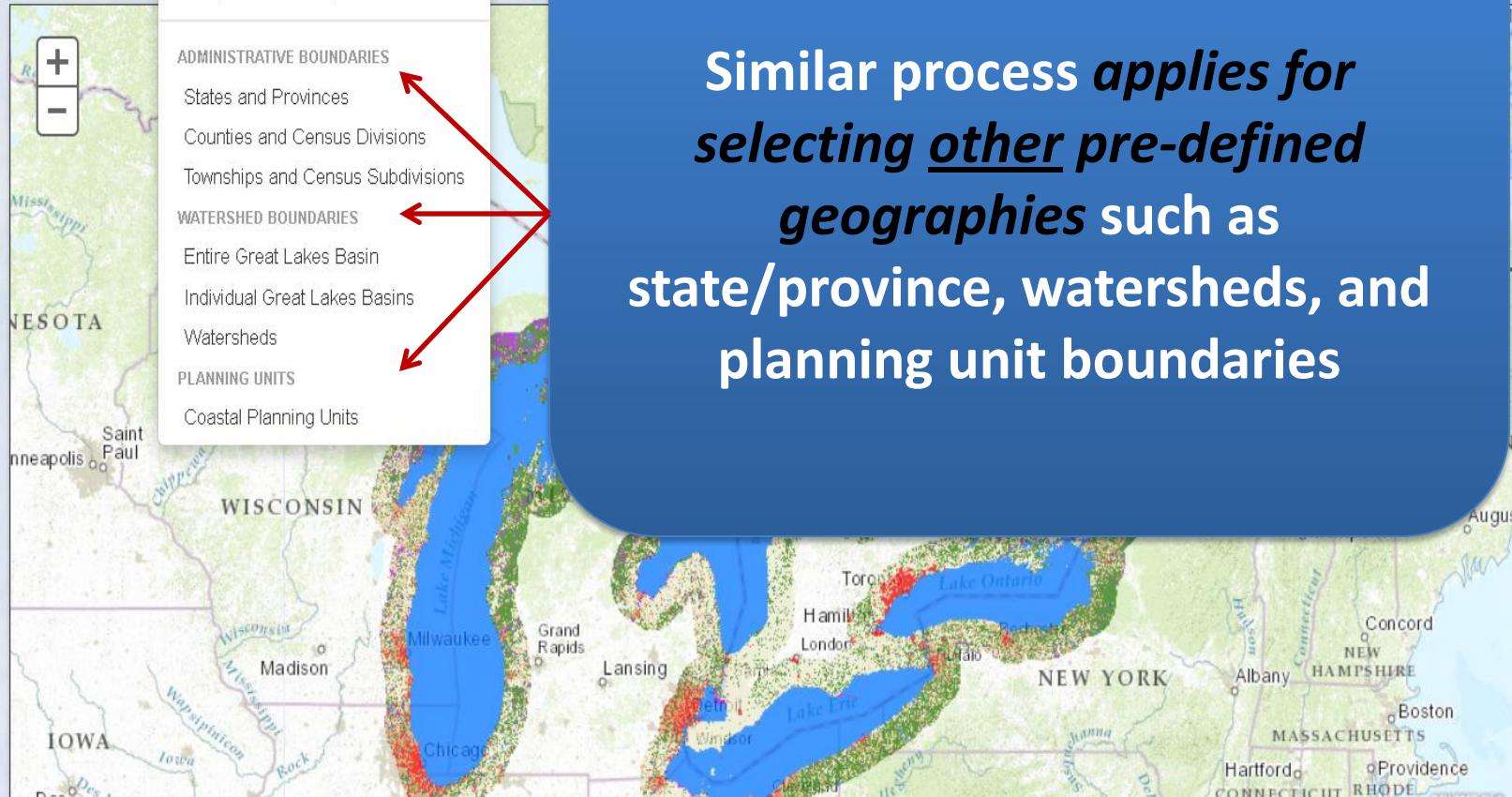
Individual Great Lakes Basins

Watersheds

PLANNING UNITS

Coastal Planning Units

Similar process *applies for selecting other pre-defined geographies such as state/province, watersheds, and planning unit boundaries*



Map Tools in Action – **SUMMARIZE**
Stopover Model Scores >>> **ALL options**

Summarize Stopover Model Scores

Results Report

Associated Layers

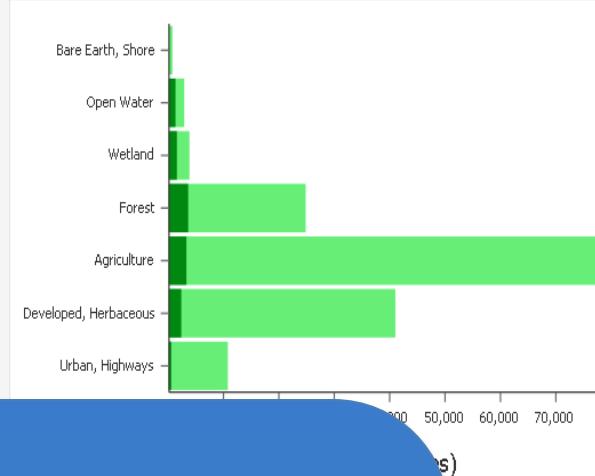
Check to toggle visibility

 Input Area

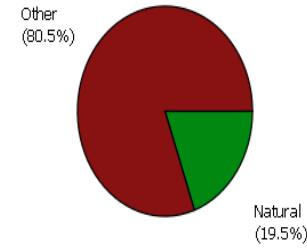
Note: Darker color on each chart represents protected areas.

Scores represent.... 5 is highest meaning the best habitat while 1 is lowest meaning poor habitat.

Land Cover Summary Chart

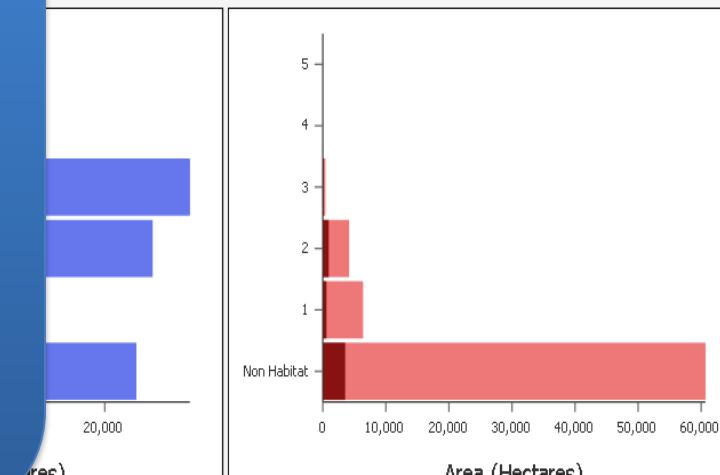


Natural Land Cover Chart



chart

Landbirds Score Summary Chart



Similar process applies to

“Stopover Model Scores” – part of
result page for “Stopover Model
Scores” is displayed here.

Procedure:

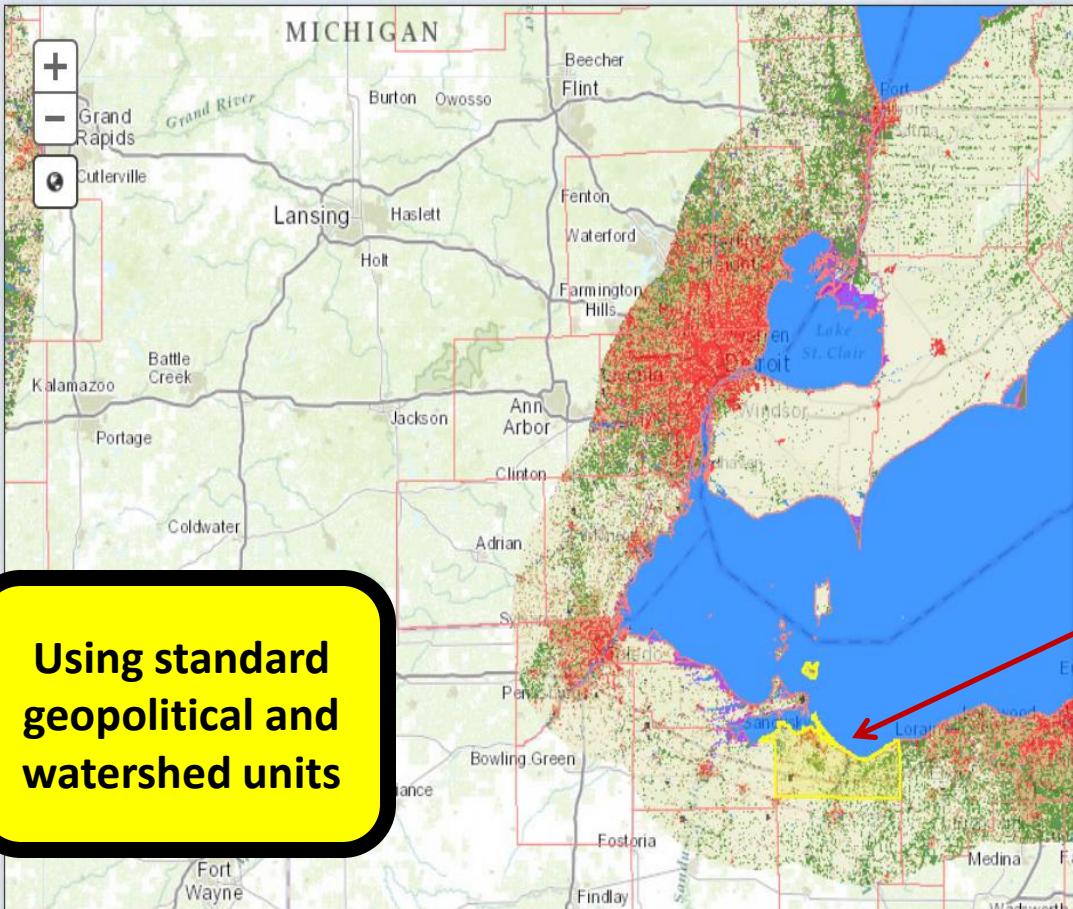
1. Click on “*Map Tools*”
2. Select “*Available Habitat*”, e.g., under “*Compare*” group
3. Select “*Unit of Analysis*”, e.g. County or Site
4. *Select or draw desired polygon*
5. Click “*Submit*”
6. *Repeat steps 3 – 5 ****
7. Then the result is displayed

Map Tools in Action – ***COMPARE***Available Habitat >>> ***County***

Compare Available Habitat

- 2 Next, Choose the unit(s) you want to include. You may click directly on the unit(s) you want to select on the map, or choose them from the drop down menu below. When you have made the selection(s) you would like, click "Submit" below.

**Click “x” to “close”
and “cancel” tool
operation**



Basically works same as
“Summarize” tool.

1. Click on “Map Tools” >>>
2. Select “Available Habitat” under “Compare” group >>>
3. Click “Unit of Analysis” >>>
4. Select “Counties..” >>>
5. Click on desired county/ies of interest >>>
6. Click “Submit”

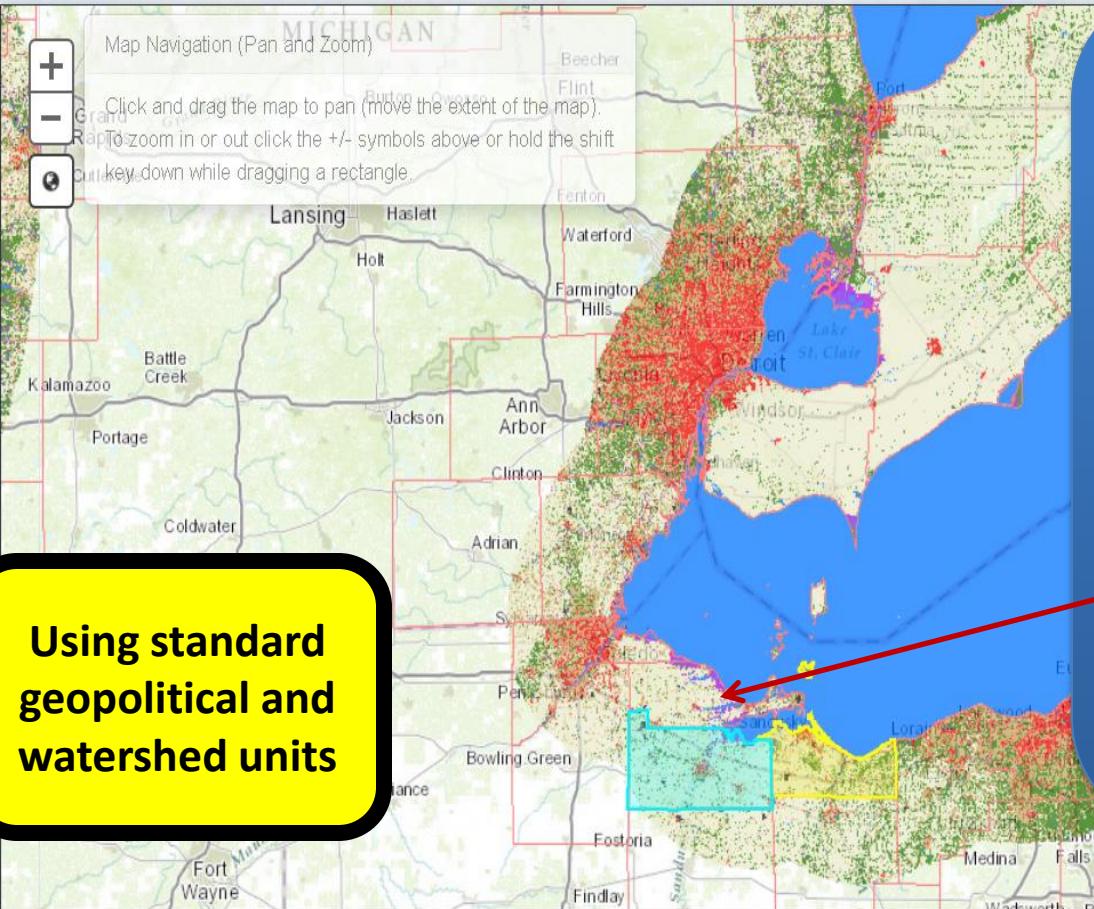
Map Tools in Action – ***COMPARE***

Available Habitat >> ***County***

Compare Available Habitat

- 4 Next, Choose the unit(s) you want to include. You may click directly on the unit(s) you want to select on the map, or choose them from the list below. When you have made the selection(s) you would like, click "Submit" below.

Click “x” to “close” and “cancel” tool operation



Repeat same process of selecting and submitting another unit of analysis for comparison. Process is given below again for convenience.

1. Click on “Map Tools” >>
2. Select “Available Habitat” under “Compare” group >>
3. Click “Unit of Analysis” >>
4. Select “Counties..” >>
5. Click on desired county/ies of interest >>
6. Click “Submit”

Map Tools in Action – ***COMPARE***Available Habitat >> **County**

Compare Available Habitat

Results Report

Note: Darker color on each chart represents protected areas.

1. Important notes

Habitat Value Key

Shorebird Values

- 1 – Emergent wetlands
- 0 – Agricultural fields with hydric soils
- Beach
- 0 represents other areas (not suitable)

Waterfowl Values

- 1 – Mixed emergent marsh adjacent to open water
- 0.75 – Shallow water adjacent to emergent marsh
- 0.25 – Shallow water adjacent to non-emergent fields
- 0 represents other areas (not suitable)

Landbird Values

- 1 – Natural vegetated landcover
- 0.5 – Hay/pasture, palustrine wetlands, urban with high canopy cover
- 0 represents other areas (not suitable)

2. Chart key

Result page
Divided into
5 sections

Area 1 (Yellow)

Associated Layers

Check to toggle visibility

 Input Area

Area 2 (Cyan)

Associated Layers

Check to toggle visibility

 Input Area

**Understanding
Result page
organization**

Collapse/Expand/
Minimize/Close
result page

Tip: Press “Cntrl +
PrntSc” on keyboard
>> Then open Word
or PowerPoint and
press “Ctrl + v” to
copy/paste charts,
table, and map

Map Tools in Action – ***COMPARE***Available Habitat >> **County**

Area 1 (Yellow)

Associated Layers

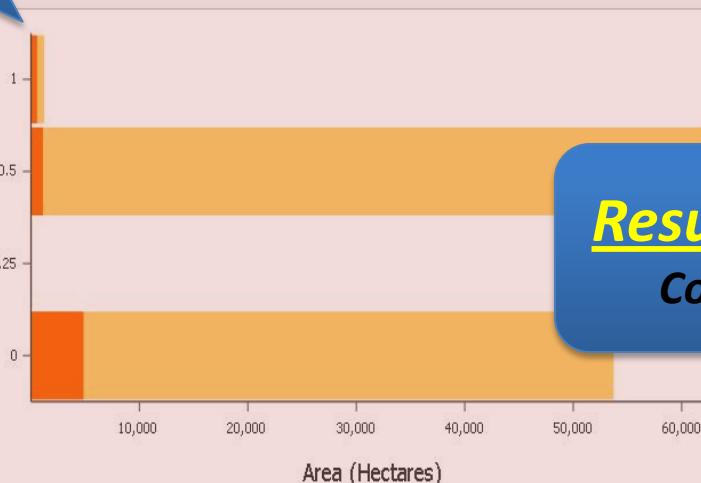
Check to toggle visibility

 Input Area

3. Chart

CHART FOR AREA 1

Shorebirds Habitat Summary Chart



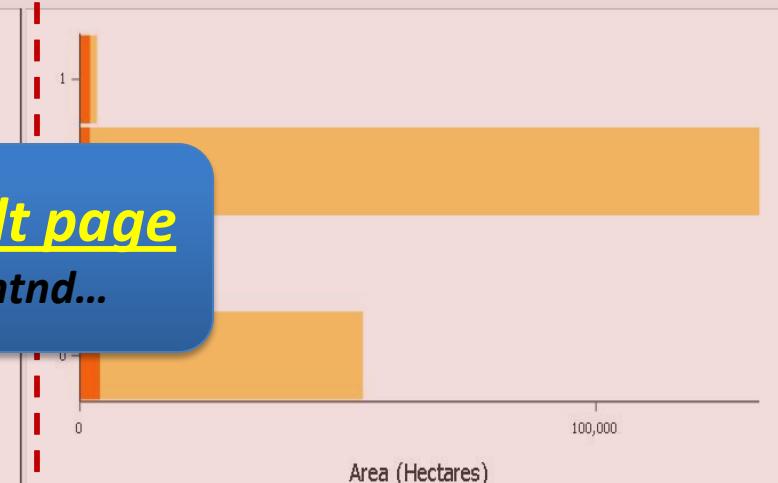
Area 2 (Cyan)

Associated Layers

Check to toggle visibility

 Input Area**CHART FOR AREA 2**

Shorebirds Habitat Summary Chart

***Result page******Contnd...*****Understanding
Result page
organization
contd....**

Map Tools in Action – **COMPARE** Available Habitat >> **County**



4. Table

TABLE FOR AREA 1

Waterfowl

**Result page
Contnd...**

Shorebirds

TABLE FOR AREA 2

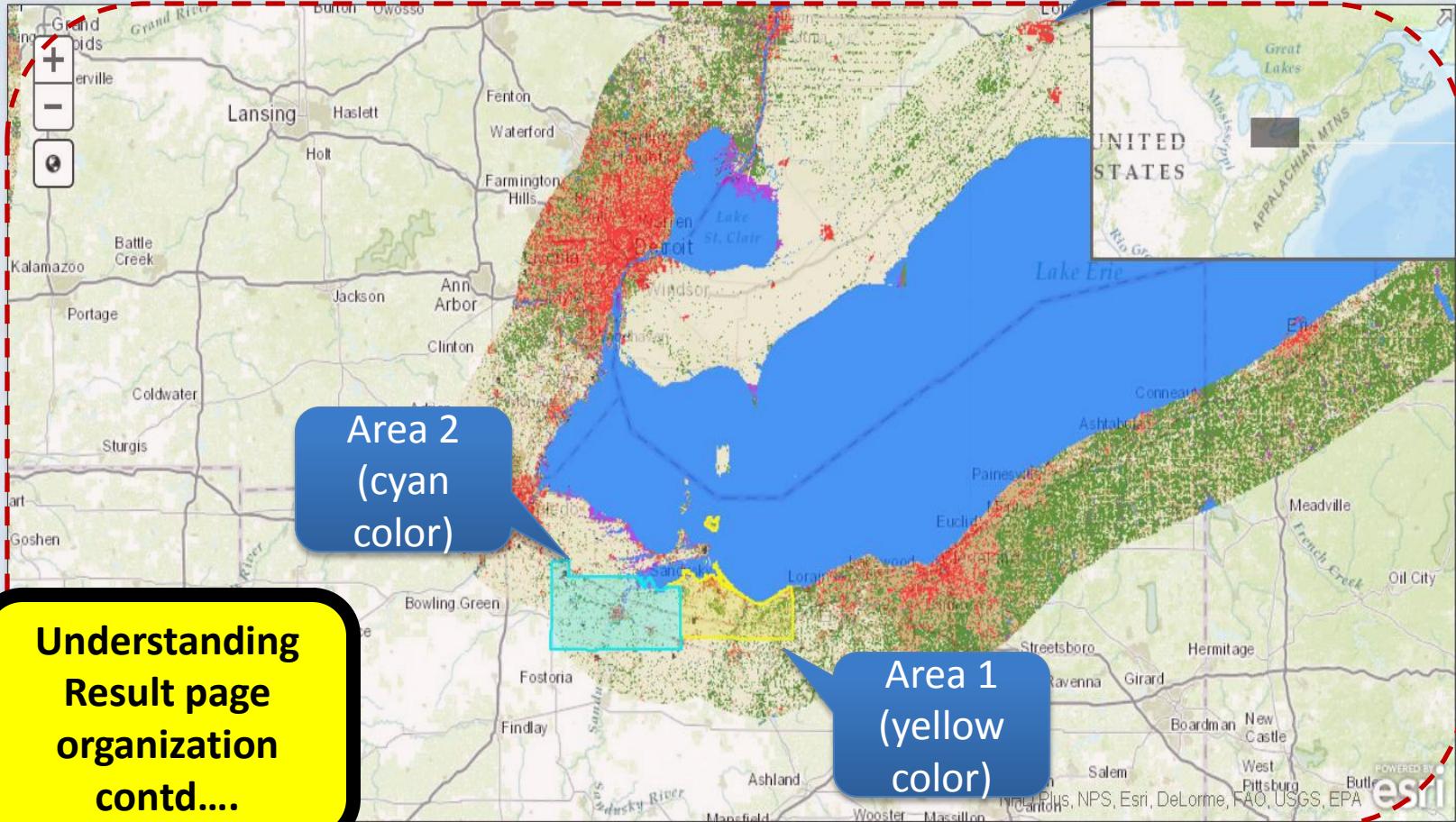
Waterfowl

**Understanding
Result page
organization
contd....**

Map Tools in Action – ***COMPARE***Available Habitat >> **County**

0.05	14253	12.11	31.08	5.05	0.05	13546	7.15	13.84	9.36
0	81155	68.92	100.00	2.69	0	163245	86.16		1.94

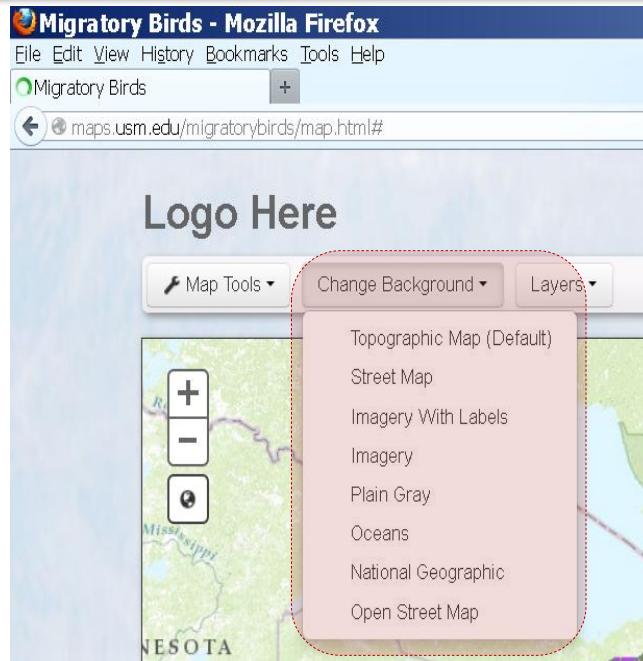
5. Map



The Upper Midwest and Great Lakes Conservation Cooperative of the U.S. Fish and Wildlife Service supported development of this website. It is being served by.... (to be resolved). TNC collaborated with the U.S. Fish and Wildlife Service, many conservation organizations, universities, and corporations to model stopover habitat and create this web portal.

Transferring data from serverapi.arcgisonline.com...

Change Background Panel Information



Change Background Panel Information



Logo Here

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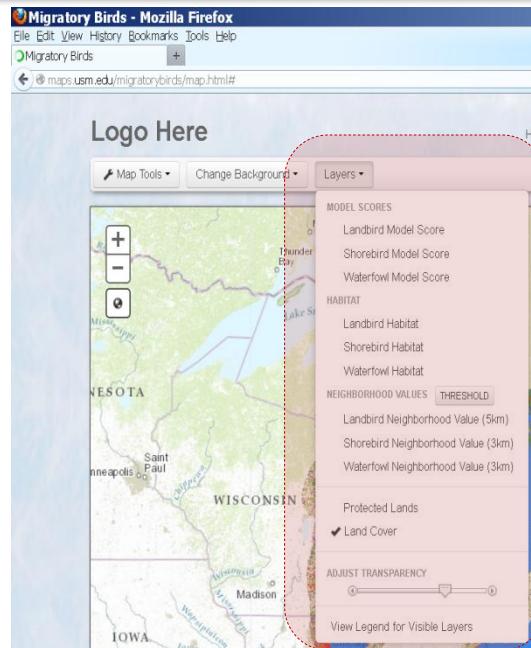
The screenshot shows a map of the Great Lakes region and surrounding areas. A red dashed box highlights the 'Change Background' button in the top left corner of the map tools toolbar. A blue callout bubble points to this button with the text: "Provides option to turn on and off various basemap layers." Below the button is a dropdown menu listing seven basemap options: Topographic Map (Default), Street Map, Imagery With Labels, Imagery, Plain Gray, Oceans, National Geographic, and Open Street Map. A blue callout bubble points to the 'Imagery' option with the text: "Click on a layer's name to turn it on and off." Another blue callout bubble points to the 'Topographic Map (Default)' option with the text: "✓ next to layer's name = Layer is turned on". A third blue callout bubble points to the bottom right of the map with the text: "Turning on one layer turns off other layer. i.e. can display only one layer at a time". The map itself shows various layers of data, including lakebeds, coastlines, and land cover.

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Change Layers Panel Information



Change Layers Panel Information



Logo Here

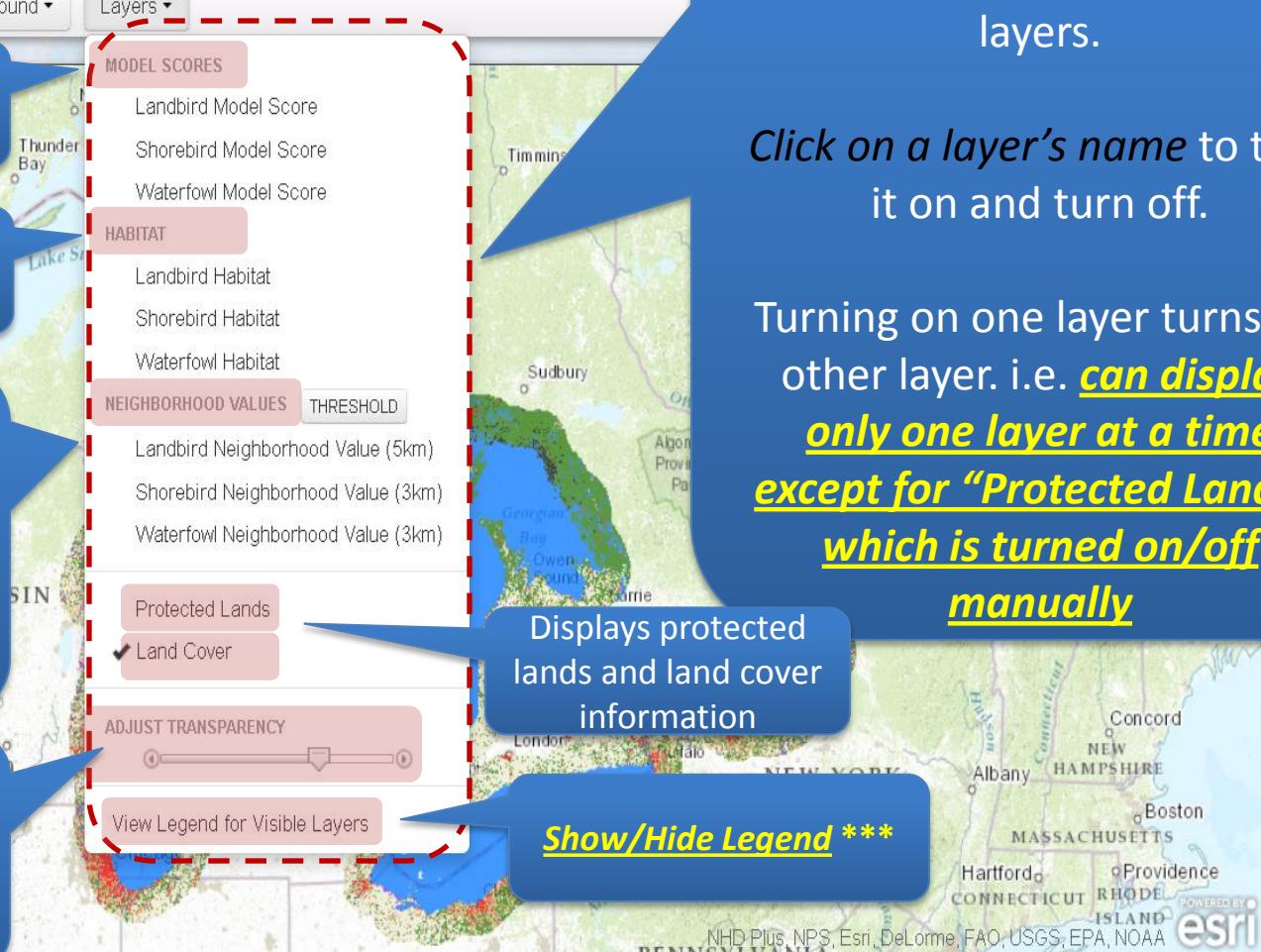
HOME ABOUT MAP DO

Displays final model score
for each bird group

Displays suitable and
unsuitable habitat for each
bird group

Displays habitat
information
influenced/weighted by
adjacent habitat. Click on
“Threshold” to see
categorical information
***** Turn on “Legend” to
see class information**

Allows to control layer
transparency. *Slide to right*
to decrease transparency.
Slide to left to increase
transparency



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End