

Introduction to Lake County Wetland Restoration and Preservation Plan (“WRAPP”) Decision Support Tool



Mike Prusila



Juli Crane



Glenn Westman

PSCC Annual Meeting

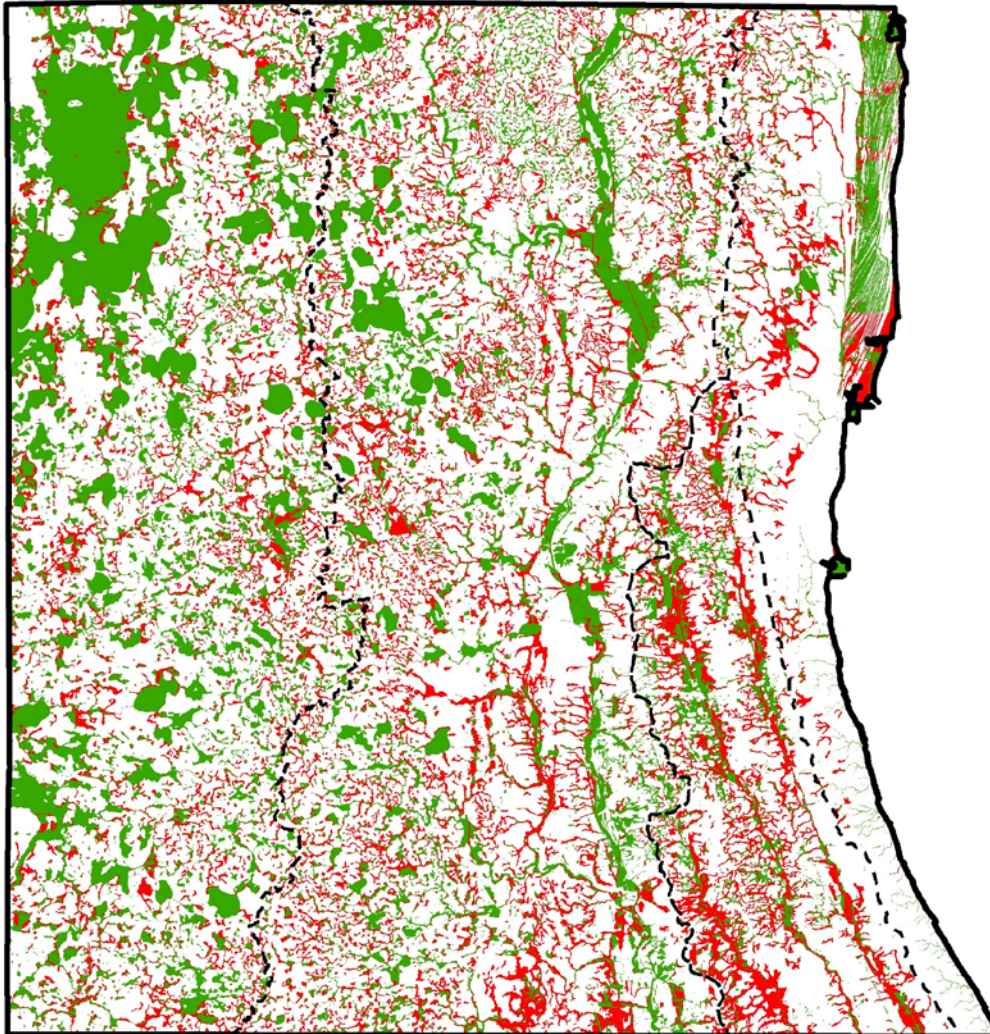
March 5, 2021



STORMWATER MANAGEMENT COMMISSION



WRAPP GIS Mapping Results



Countywide Results

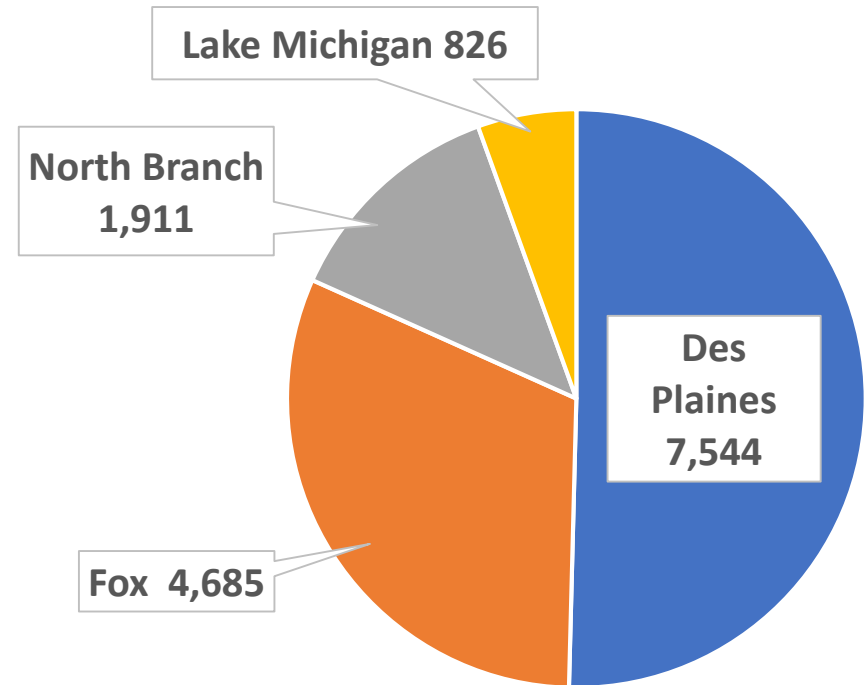
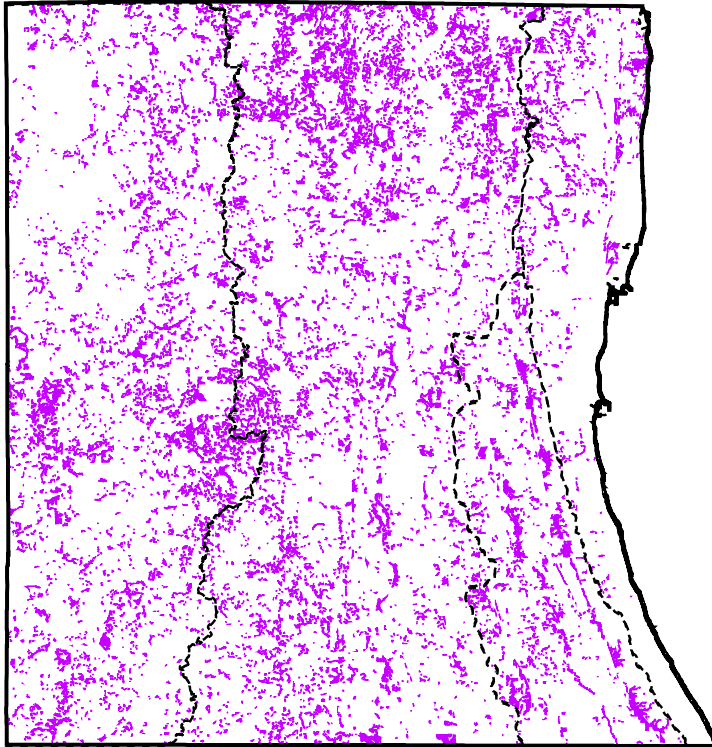
- 84,899 acres of historic wetland
- 37,825 acres of existing wetland
- **55% Loss of Wetland** (47,074 acres loss)

Existing Wetlands & Waters
Wetland/Water Loss



STORMWATER MANAGEMENT COMMISSION

Potentially Restorable Wetlands (PRWs)



14,966 acres County-wide
~18% of Pre-settlement wetland acres



STORMWATER MANAGEMENT COMMISSION

WRAPP Goal

*To provide a **wide audience of end-users** with decision-making support to help prioritize wetland restoration and preservation efforts.*



What the WRAPP does NOT do:

- ❖ Impose new development regulations
- ❖ Establish new protections for wetlands
- ❖ Recommend land acquisition or zoning changes
- ❖ Replace the need for a site-specific wetland delineation



STORMWATER MANAGEMENT COMMISSION

Wetland Functions

13 Functions Selected with TAG Input

Hydrologic Functions	Biodiversity Functions	Water Quality Functions
Flood Water Storage	Native Fish Habitat	Nutrient Transformation (P-focus)
Stream Baseflow Maintenance	Waterfowl Habitat	Sediment & Other Particulate Retention
	Other Wetland-dependent Bird Habitat	Shoreline/Stream Bank Stabilization
	Woodland Amphibian Habitat	Carbon Sequestration
	Unique Wetland Resources	
	Stream Shading	
	Wildlife Movement Corridors	



STORMWATER MANAGEMENT COMMISSION

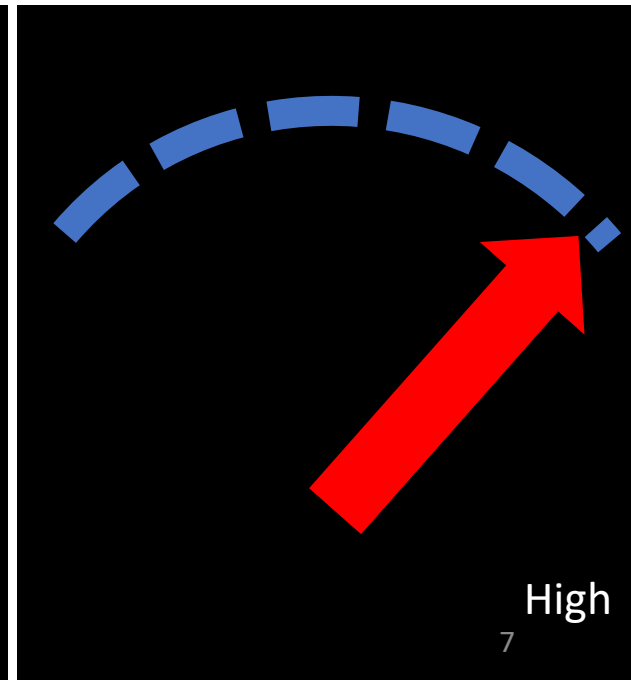
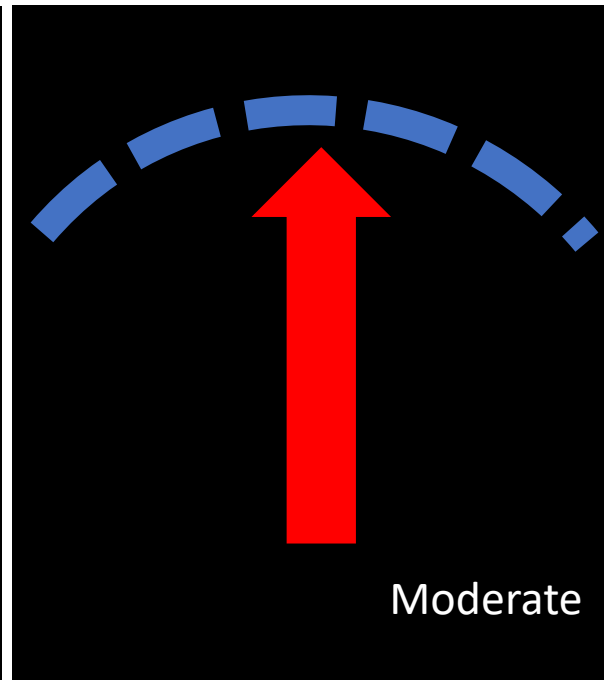
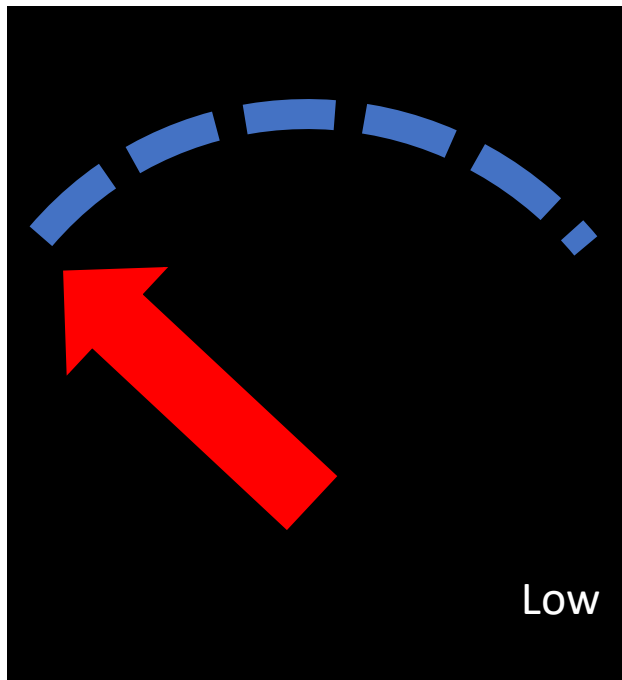
Wetland/Water Body Functions

Functional Significance Ratings

- ❖ Relative measure (comparing wetlands/ water bodies to each other)
- ❖ Qualitative levels used, without regard to social values or quantitative limits.

“High” simply means
**“performing process at a
better/higher rate than other
wetlands in the area”**

Wortman & Ashby, 2014





STORMWATER MANAGEMENT COMMISSION

Wetland/Water Body Functions

Functional Assessment Criteria

Flood Water Storage	High	<ul style="list-style-type: none">Wetlands & waters associated with a mapped special flood hazard area, excluding slope wetlandsTerrene basins with > 0.75 acre-feet of storageThroughflow & Throughflow-Intermittent ponds and associated basin, fringe, and island wetlandsPolygons identified as stormwater basins
	Moderate	<ul style="list-style-type: none">Wetlands & waters that intersect the USGS flood of record not already rated HighWetlands & waters associated with rivers, streams, and lakes with no mapped FEMA floodplain or outside of the mapped floodplain and not already rated highFlat wetlands outside of mapped floodplainsAll remaining Ponds not already ranked high or moderateRemaining fringe and island wetlands and remaining Lentic and Lotic wetlandsRemaining Basin wetlands that are isolated or impounded and not slough wetlands
	Low	<ul style="list-style-type: none">Remaining wetlands that are not slope wetlands, including slough wetlandsSlope wetlands within FEMA 100 or 500 yr floodplain
	N/A	<ul style="list-style-type: none">All remaining Slope wetlands



Decision Support Tool ("DST")

Navigating the On-Line Mapping Tool





STORMWATER MANAGEMENT COMMISSION

DST Title Page

Lake County Wetland Restoration and Preservation Plan ("WRAPP")

Decision Support Tool ("DST") DRAFT Version 1.0

The WRAPP-DST is designed to provide a wide audience of end-users with an easy-to-use, interactive mapping tool to assist in identifying and prioritizing wetlands in Lake County, Illinois, for restoration or preservation. It integrates digital map data with other resource information to display the approximate extent of existing wetlands and water bodies and Potentially Restorable Wetlands ("PRW") in the county and characterizes these features according to their type/classification and the relative level to which they provide a variety of functions/services.


Limitations: The WRAPP is a county-wide planning effort that provides preliminary information suitable for initial site screening purposes. It does not provide the level of detail required to make definitive statements on the viability of a particular PRW. Whether or not a PRW identified by the WRAPP is viable will depend on site-specific characteristics, landowner interest, agency funding/priorities and other factors.

Disclaimer: The WRAPP-DST is not designed to be prescriptive. It is intended to be a *planning tool* to help users identify and prioritize wetland restoration or preservation efforts based on their specific goals and objectives. The WRAPP does not create any additional regulation or natural resource protections, does not replace the need for site-specific wetland delineations or jurisdictional determinations, and does not recommend any land acquisition or zoning changes. SMC does not warranty or guarantee the accuracy of existing wetland and water body or PRW map units in the DST, due to the county-wide scale at which the mapping was produced as well as changes in land use or landscape modifications since the mapping was completed.





DST Landing Page

 **WRAPP Decision Support Tool *DRAFT***

Search Area of Interest

Tutorial

- 1) To Find your Area of Interest:** Type in desired location in the box and press 'Enter' to search; Use the dropdown arrow and select a more refined criteria from the list; Zoom to desired area on map; Use cursor to draw area on map
- 2) Click on the '2' button to select which wetland dataset you'd like to view.**
- 3) Click on the '3' button to view the 13 Wetland Functional Ratings for the PRW dataset.**
Where applicable: Red = High
Orange = Moderate
Yellow = Low

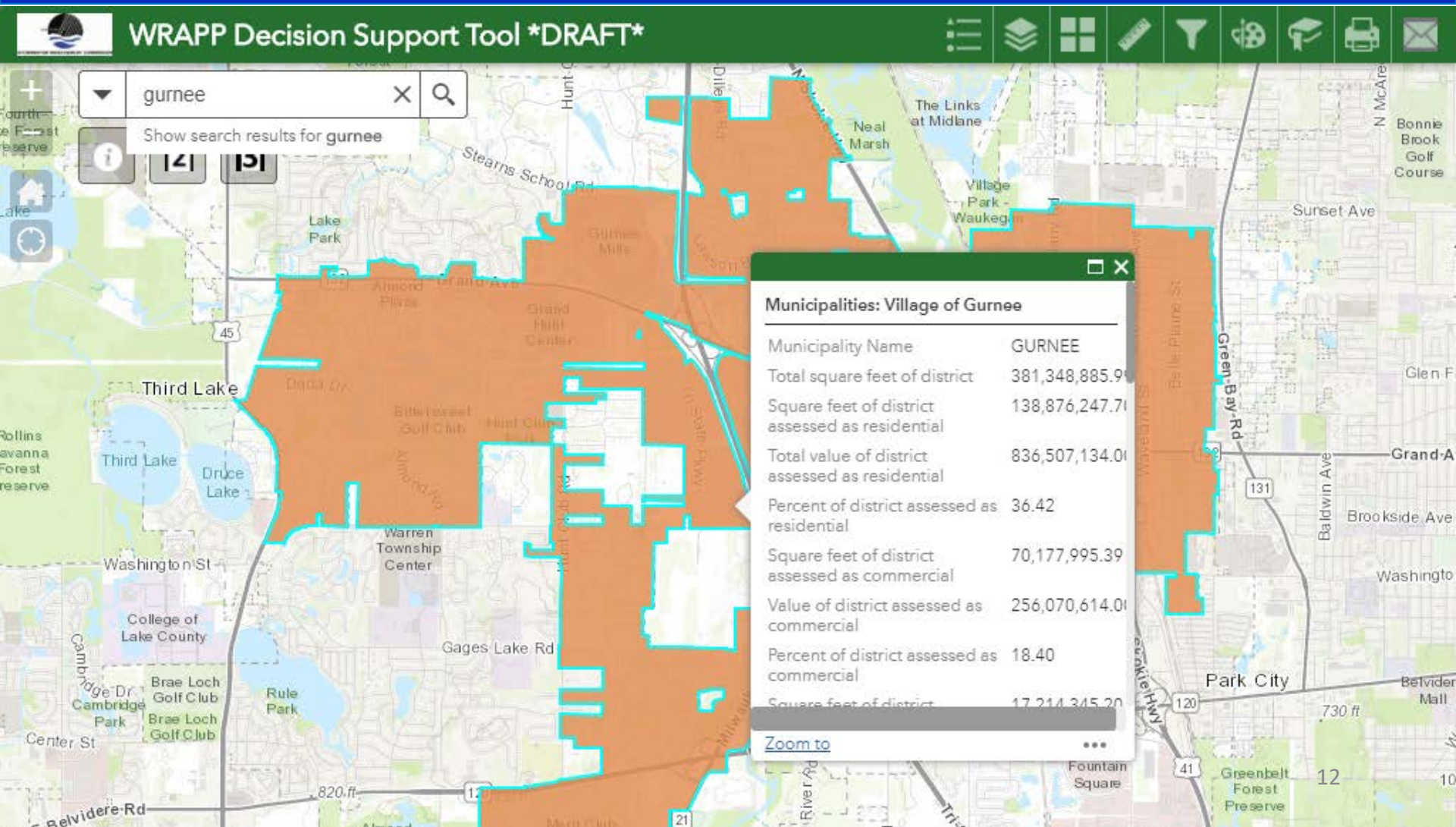
The background of the slide is a screenshot of the WRAPP Decision Support Tool interface. It shows a map of the Chicago area with various locations labeled, including Winthrop Harbor, Zion, Wadsworth, Beach Park, Gurnee, Grand Ave, Park City, Waukegan, North Chicago, Great Lakes, Lake Forest, Vernon Hills, Townline Rd, Mundelein, Libertyville, Adler Park, and Crystal Lake. The map is overlaid with a green header bar containing the tool's name and a search bar. A tutorial window is open on the left side of the map, providing instructions on how to use the tool.



LAKE COUNTY

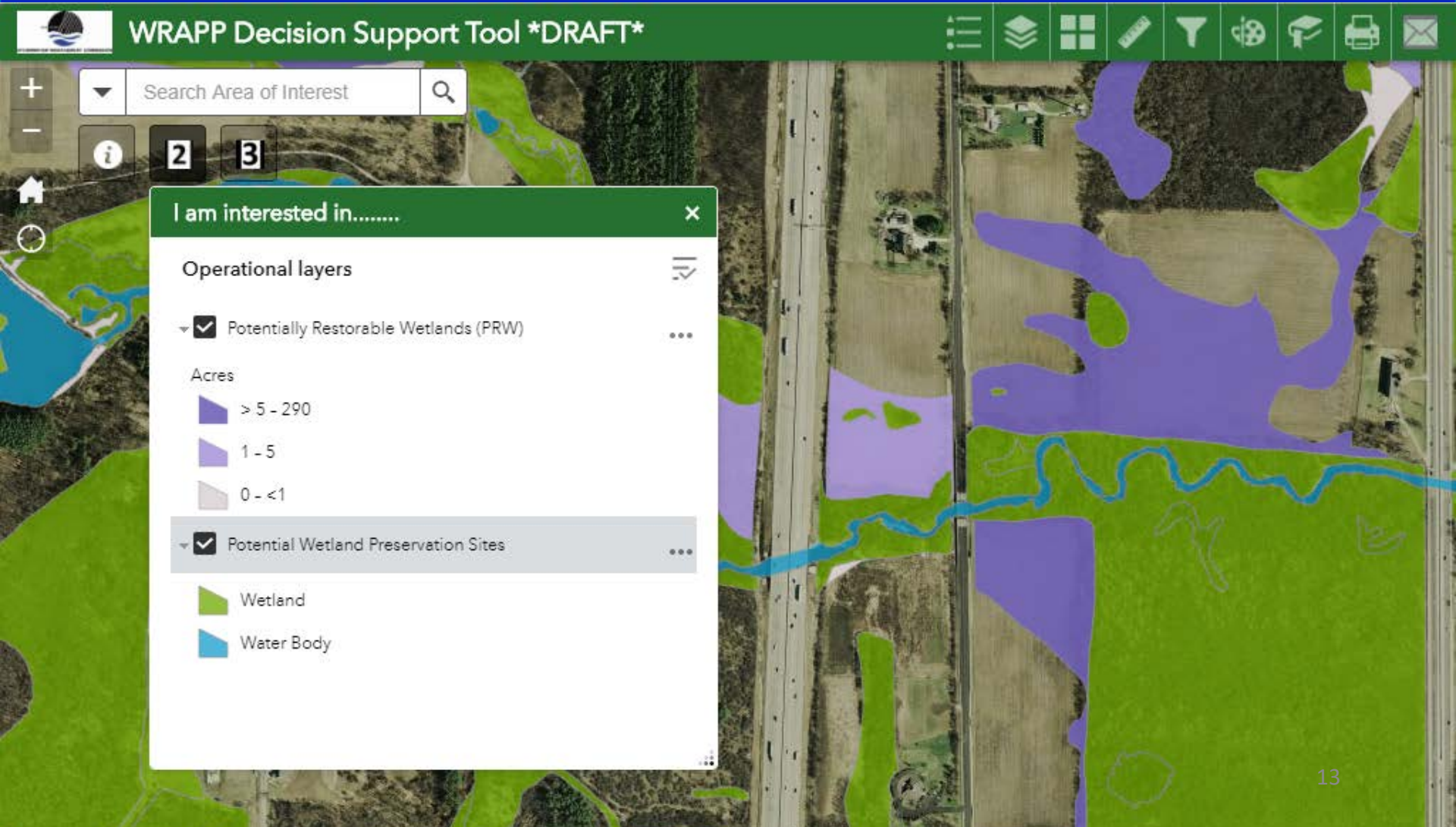
STORMWATER MANAGEMENT COMMISSION

Area of Interest Search





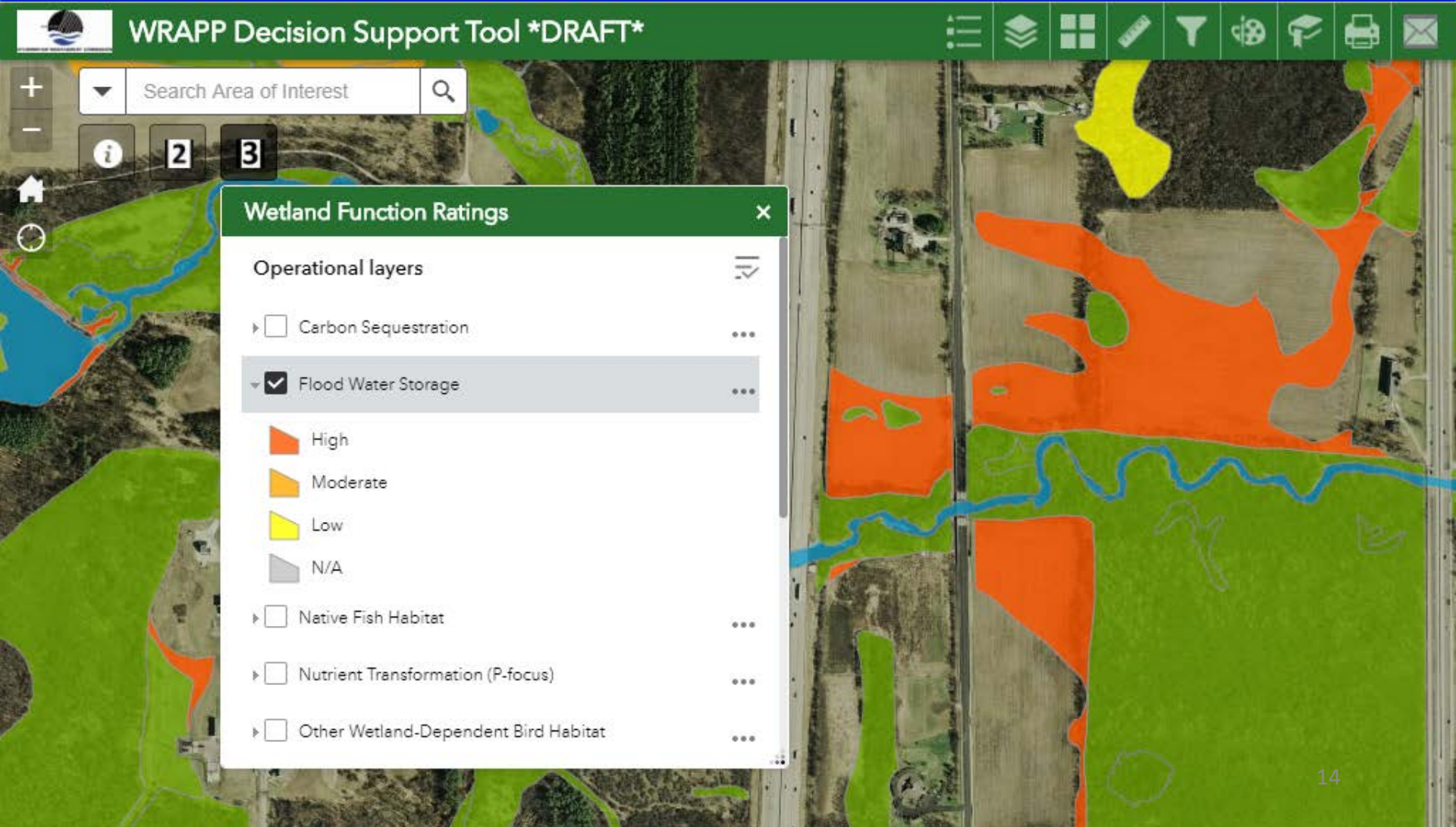
Potential Restoration & Preservation Sites





STORMWATER MANAGEMENT COMMISSION

Functional Significance (PRWs)

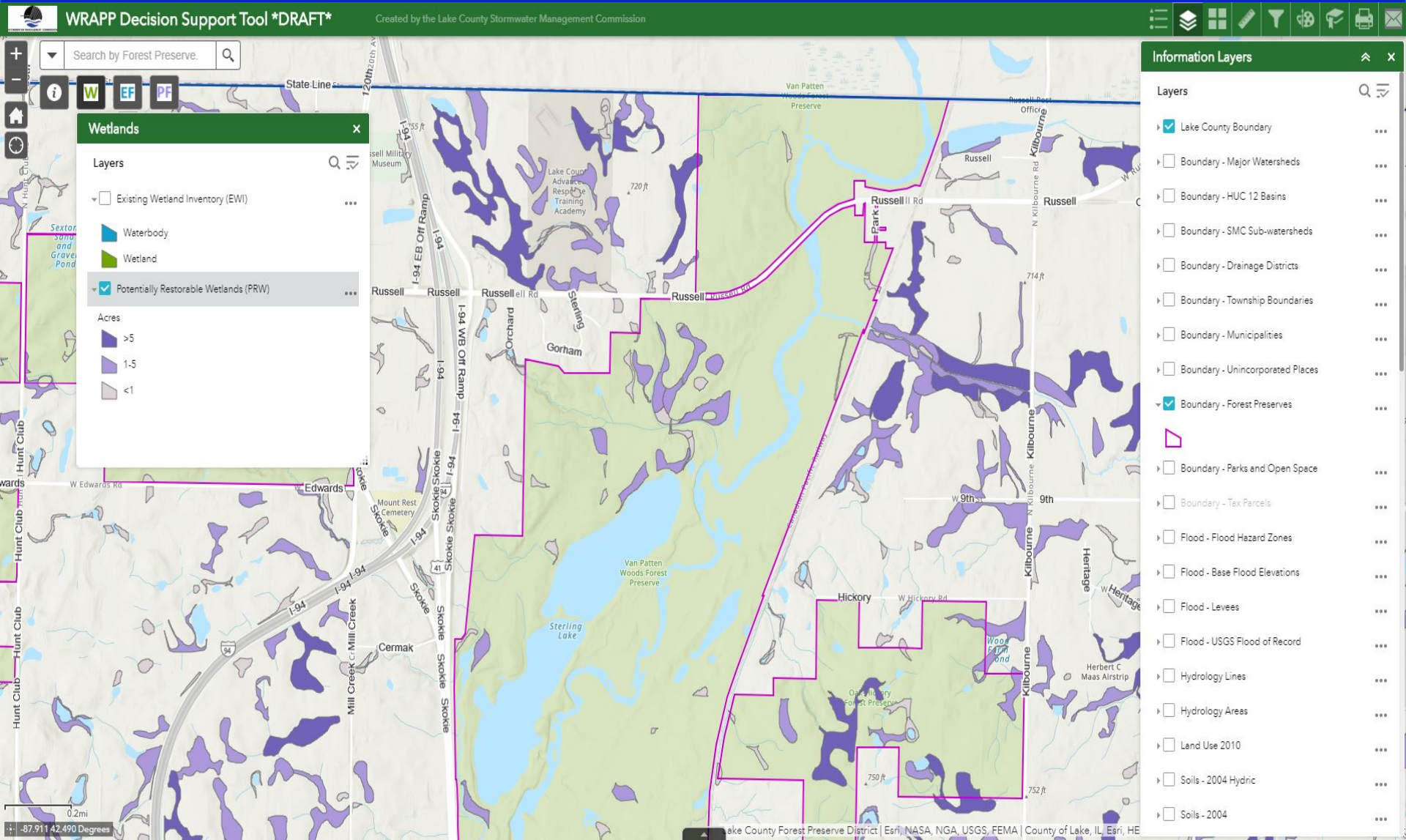




STORMWATER MANAGEMENT COMMISSION

Using the WRAPP-DST

Example – LCFP Hydrologic Restoration





STORMWATER MANAGEMENT COMMISSION

Using the WRAPP-DST

Example – LCFP Hydrologic Restoration

WRAPP Decision Support Tool *DRAFT*

Created by the Lake County Stormwater Management Commission

Search by Forest Preserve.

Wetlands

Layers

- ☐ Existing Wetland Inventory (EWI)
- ☒ Potentially Restorable Wetlands (PRW)

Waterbody

Wetland

Acres

- >5
- 1-5
- <1

Transparency

Disable pop-up

Move up

Basemap Gallery

2007 DSM Hillshade	2007 DTM and 2007 Aerial	2007 DTM Colorized
2007 DTM Hillshade	2007 Solar Potential	2008 Color Aerial
2009 Color Aerial	2009 Color Infrared Aerial	2010 Color Aerial
2010 Color Infrared Aerial	2011 Color Aerial	2012 Aerial
2012 Color Infrared Aerial	2014 Color Aerial	2014 Color Infrared Aerial
2015 Color Aerial	2015 Color Infrared Aerial	2017 Aerial
2017 Color Infrared Aerial	Colored Pencil Map	Dark Gray Canvas
Light Gray Canvas	Mid-Century Map	Modern Antique Map
Navigation	Newspaper Map	Streets

300ft

-87.928 42.487 Degrees

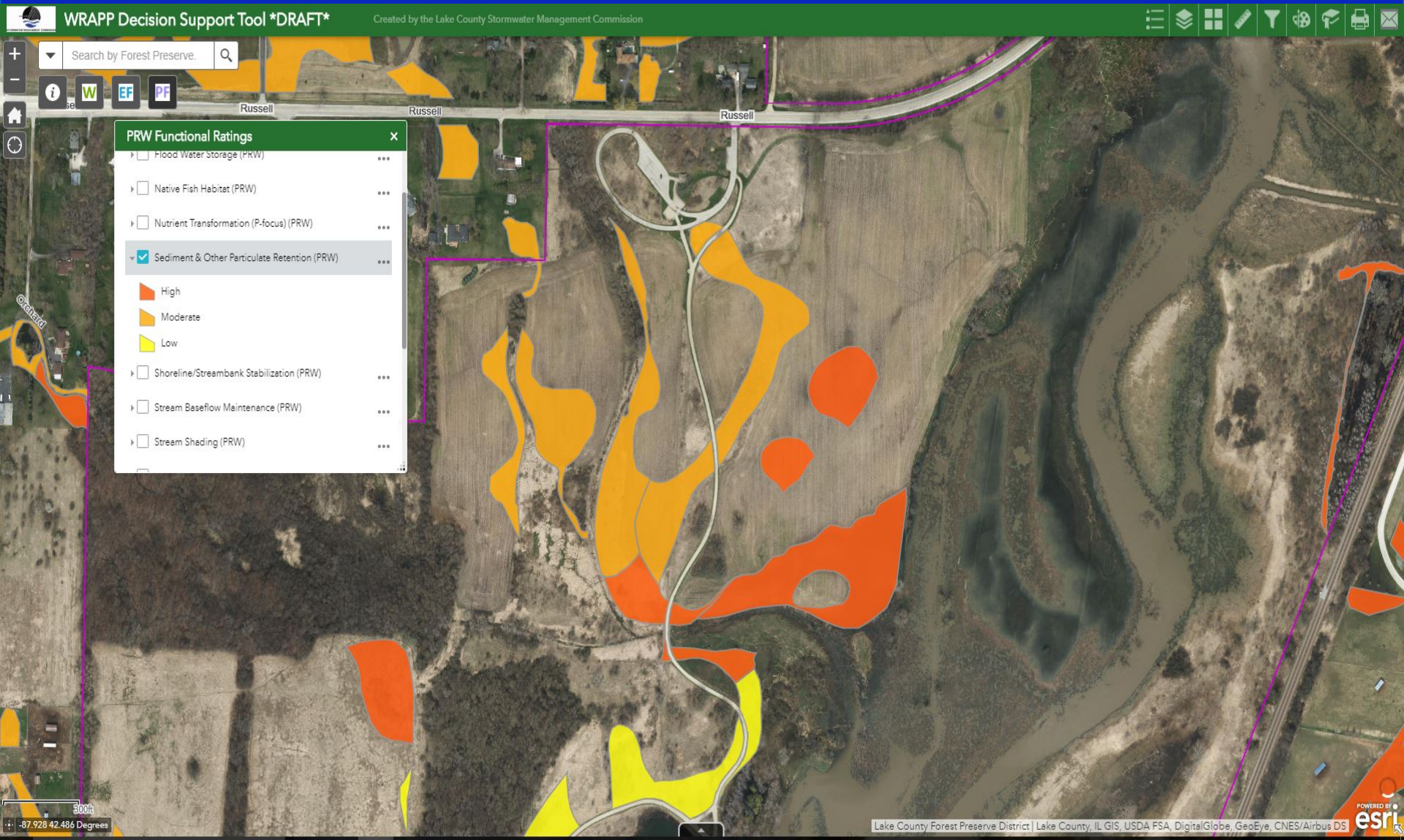
Lake County Forest Preserve District | Lake County, IL GIS, US



STORMWATER MANAGEMENT COMMISSION

Using the WRAPP-DST

Example – LCFP Hydrologic Restoration





STORMWATER MANAGEMENT COMMISSION

Thank You for Attending!

QUESTIONS?

❖ WRAPP Web Site:

❖ <https://www.lakecountyl.gov/2531/Wetland-Restoration-Preservation-Plan>

❖ Decision Support Tool (Mapping Application):

❖ <https://lakecountyl.maps.arcgis.com/apps/webappviewer/index.html?id=be7438dc569f492dacfc957ab5f86bc0>