



Chicago Metropolitan
Agency for Planning

Ferson-Otter Creek Watershed Meeting

January 25, 2011

Overview

- Resource Inventory
- Groundwater Recap
- WaterSense Partnership
- Ordinance Review
- Open Space Discussion

Data we have...

- INAI
 - ADID-open waters and streams
 - Population forecasts
 - Water Supply data
 - IDNR Stream Ratings
 - Green Infrastructure-Campton Hills
 - Biological Survey-1998
 - SSURGO Soils
 - National Wetland Inventory
 - IEPA-303 (d) and 305 (b) report
-

Other data we are looking for...

- Septic Tanks (Kane County Health Dept.)
 - More info on the sampling locations (IDNR)
 - Existing land management practices(munis/Kane)
 - Fish and Wildlife data (IDNR)
 - Flow data-cubic ft./second (USGS/IDNR/OWR)
 - Basin Surveys (IEPA/IDNR)
 - Wellhead protection areas
 - Impervious cover data
 - ???
-

Thoughts and Questions



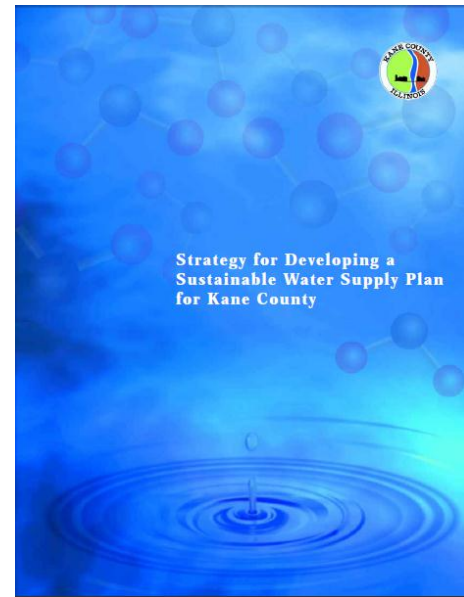
Groundwater Recap

- Speakers
 - Tim Loftus, CMAP
 - Paul Schuch, Kane County
- Take Home Message
 - It is likely there will be some water supply issues in our region and in Kane County
 - Groundwater is especially vulnerable to overuse and quality issues

Water 2050

**Northeastern Illinois
Regional Water
Supply/Demand Plan**

March 2010



Potential Recommendations

- Model Water Conservation Ordinance (CMAAP)
- Wellhead Protection Programs
- Sensible Salting
- Private water softeners
- Conservation Design principles
- WaterSense Partnership

WaterSense Partnership

- Aimed at water utilities and municipalities
- Promote water conservation and efficiency
 - Toilets, showerheads, faucets...
- FREE and EASY!
- Benefits
 - National program and develops unity
 - Public information outreach templates
 - Logos
- Requirements
 - Annual report and that's it!



WaterSense Resources

- Water savings tips
- Press releases
- PSAs
- Bill inserts, magnets, stickers
- Rebate programs
- Games for the kids featuring Flo



Thoughts and Questions



Ordinance Review

- Why?
 - Fulfills a regional criteria
 - A survey current ordinance
 - Ordinances guide growth
 - How?
 - Center for Watershed Protection worksheet
 - Comparative Worksheet
 - Municipal cooperation
 - What?
 - Include the worksheet results in the watershed plan
-

CWP Methodology

- Worksheet: 77 site planning benchmarks
 - Benchmarks posed as questions- Yes/No
 - Answer by referring to relevant code/ordinance
 - Points awarded when development rule agrees with site planning benchmark
 - A score sheet is provided to assist in determining where community score places in respect to model development principles
-

CWP Worksheet Categories and Scoring

- Residential Streets and Parking Lots
 - Width, length, cul-de-sacs, parking codes and ratios, etc.
 - Lot Development
 - Setbacks, sidewalks, driveways, rooftop runoff, etc.
 - Conservation of Natural Areas
 - Buffers, grading, tree conservation, stormwater outfalls, etc.
 - Worksheet Score
 - 100 Possible points
 - 80 and above is where you want to be
-

1. Street Width

What is the minimum pavement width allowed for streets in low density residential developments that have less than 500 daily trips (ADT)?

feet

If your answer is between **18-22 feet**, give yourself **4 points** • •

At higher densities are parking lanes allowed to also serve as traffic lanes (i.e., queuing streets)?

YES

If your answer is **YES**, give yourself **3 points** • •

Notes on Street Width (include source documentation such as name of document, section and page #):

2. Street Length

Do street standards promote the most efficient street layouts that reduce overall street length?

YES

If your answer is **YES**, give yourself **1 point** • •

Notes on Street Length (include source documentation such as name of document, section and page #):

3. Right-of-Way Width

What is the minimum right of way (ROW) width for a residential street?

feet

If your answer is **less than 45 feet**, give yourself **3 points** • •

Does the code allow utilities to be placed under the paved section of the ROW?

YES

If your answer is **YES**, give yourself **1 point** • •

Notes on ROW Width (include source documentation such as name of document, section and page #):

1. Cul-de-Sacs

What is the minimum radius allowed for cul-de-sacs?

feet

If your answer is **less than 35 feet**, give yourself **3 points** • •

If your answer is **36 feet to 45 feet**, give yourself **1 point** • •

Can a landscaped island be created within the cul-de-sac?

YES

If your answer is **YES**, give yourself **1 point** • •

Are alternative turnarounds such as "hammerheads" allowed on short streets in low density residential developments?

YES

If your answer is **YES**, give yourself **1 point** • •

Notes on Cul-de-Sacs (include source documentation such as name of document, section and page #):

22. Stormwater Outfalls

Is stormwater required to be treated for quality before it is discharged?

YES

If your answer is YES, give yourself 2 points • •

[Empty blue box for score]

Are there effective design criteria for stormwater best management practices (BMPs)?

YES

If your answer is YES, give yourself 1 point • •

[Empty blue box for score]

Can stormwater be directly discharges into a jurisdictional wetland without pretreatment?

YES

If your answer is NO, give yourself 1 point • •

[Empty blue box for score]

Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist?

YES

If your answer is YES, give yourself 2 points • •

[Empty blue box for score]

Notes on Stormwater Outfalls (include source documentation such as name of document, section and page #):

[Empty grey box for notes]

Code and Ordinance Worksheet

Subtotal Page 13

0

• • Time to Assess: Principles 17 through 22 addressed the codes and ordinances that promote (or impede) protection of existing natural areas and incorporation of open spaces into new development. There were a total of 24 points available for Principles 17 - 22. What was your total score?

Subtotal Page 11 0 + Subtotal Page 12 0 + Subtotal Page 13 0 = 0

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

[Large empty grey box for response]

To determine final score, add up subtotal from each • Time to Assess

Principles 1 - 10 (Page 8) 0

Principles 11 - 16 (Page 11) 0

Principles 17 - 22 (Page 13) 0

TOTAL 0

Score Sheet

SCORING (A total of 100 points are available):

Your Community's Score	
90- 100	<ul style="list-style-type: none">● Congratulations! Your community is a real leader in protecting streams, lakes, and estuaries. Keep up the good work.
80 - 89	<ul style="list-style-type: none">● Your local development rules are pretty good, but could use some tweaking in some areas.
79 - 70	<ul style="list-style-type: none">● Significant opportunities exist to improve your development rules. Consider creating a site planning roundtable.
60 - 69	<ul style="list-style-type: none">● Development rules are inadequate to protect your local aquatic resources. A site planning roundtable would be very useful.
less than 60	<ul style="list-style-type: none">● Your development rules definitely are not environmentally friendly. Serious reform of the development rules is needed.

Kane County Stormwater Management Ordinance

Kane (1/1/2005)

- Volume Control:
 - Runoff from 0.75” rainfall event to be stored below the primary outlet
 - Water Quality Control
 - Native wetland plantings
 - Release Rates:
 - 100 year: 0.10 cfs/acre
-

Water Quality Measures- Kane Co.

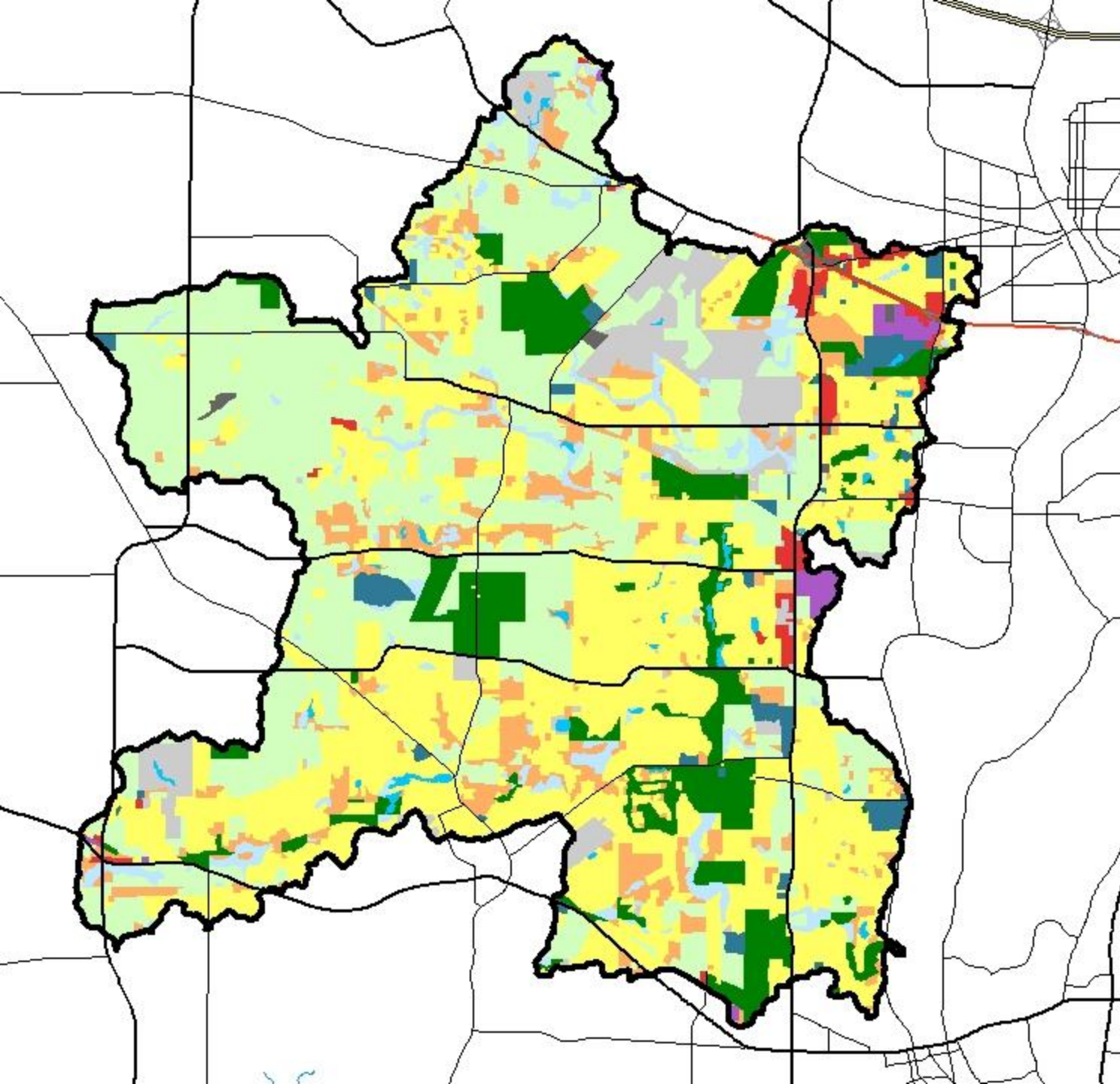
- Credit for various GI practices or for reducing the amount of connected impervious areas in the detention requirement calculations
 - Stormwater BMPs may be implemented in lieu of traditional detention practices for developments which require less than 1 acre-foot of detention
-

Thoughts and Questions



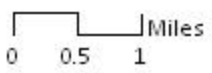
Open Space

- What is open space?
- Why is open space important for our watershed?
- How do we protect open space?
- What recommendations should be in the plan?



Land Use (2005)

- Residential
- Commercial
- Institutional
- Industrial
- Trans./Comm./Util.
- Under Construction
- Agriculture
- Open Space
- Vacant
- Wetland
- Water
- Watershed Planning Area
- Streams



Data Sources: Watershed Boundaries: Illinois Survey; Municipal Boundaries: CMAP; McHenry Conservation District Site Boundaries: MCCD; NAVTEQ & CMAP; Metra Rail Lines: RTA; U.S. Highways Shapefile: ESRI; County Boundary: Natural Resources Geospatial Data Clearinghouse; Features: National Hydrography Dataset and County GIS; Land Use: CMAP Land Use.

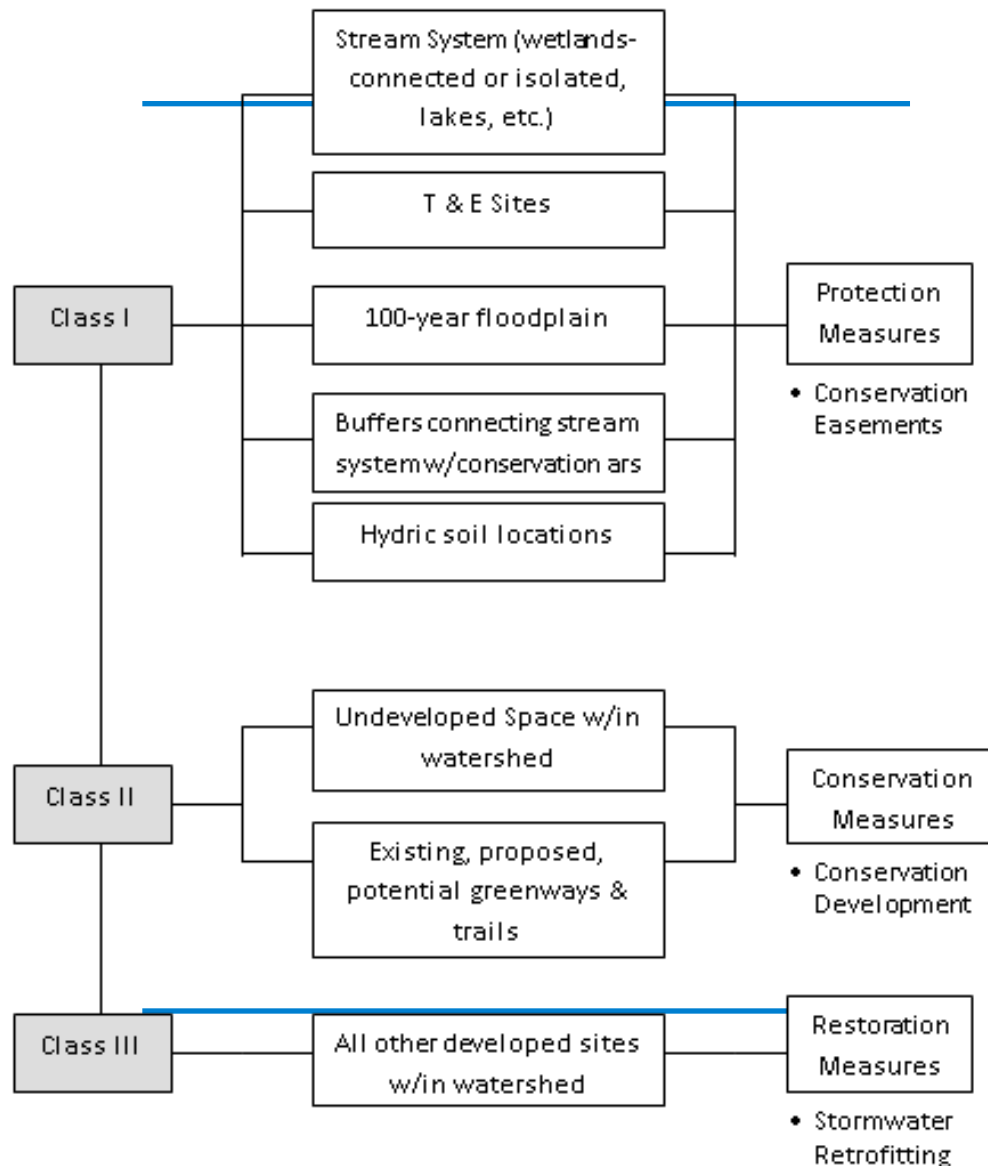
Open Space Reserve

- Landscape features that contain and connect natural areas and other natural resources
 - Network that preserves natural functions while permitting other uses, e.g. ag or urban uses
 - Areas where resource protection efforts should be concentrated
 - Why: positive relationship between natural land cover in watershed and health of aquatic communities- IBI
-

Open Space Reserve-benefits

- Restoration of important natural areas
 - Creation of forested stream buffer where inadequate
 - Legal protection of important natural areas
 - Reconstruction of streamside wetlands
 - Stream restoration and instream habitat improvement
-

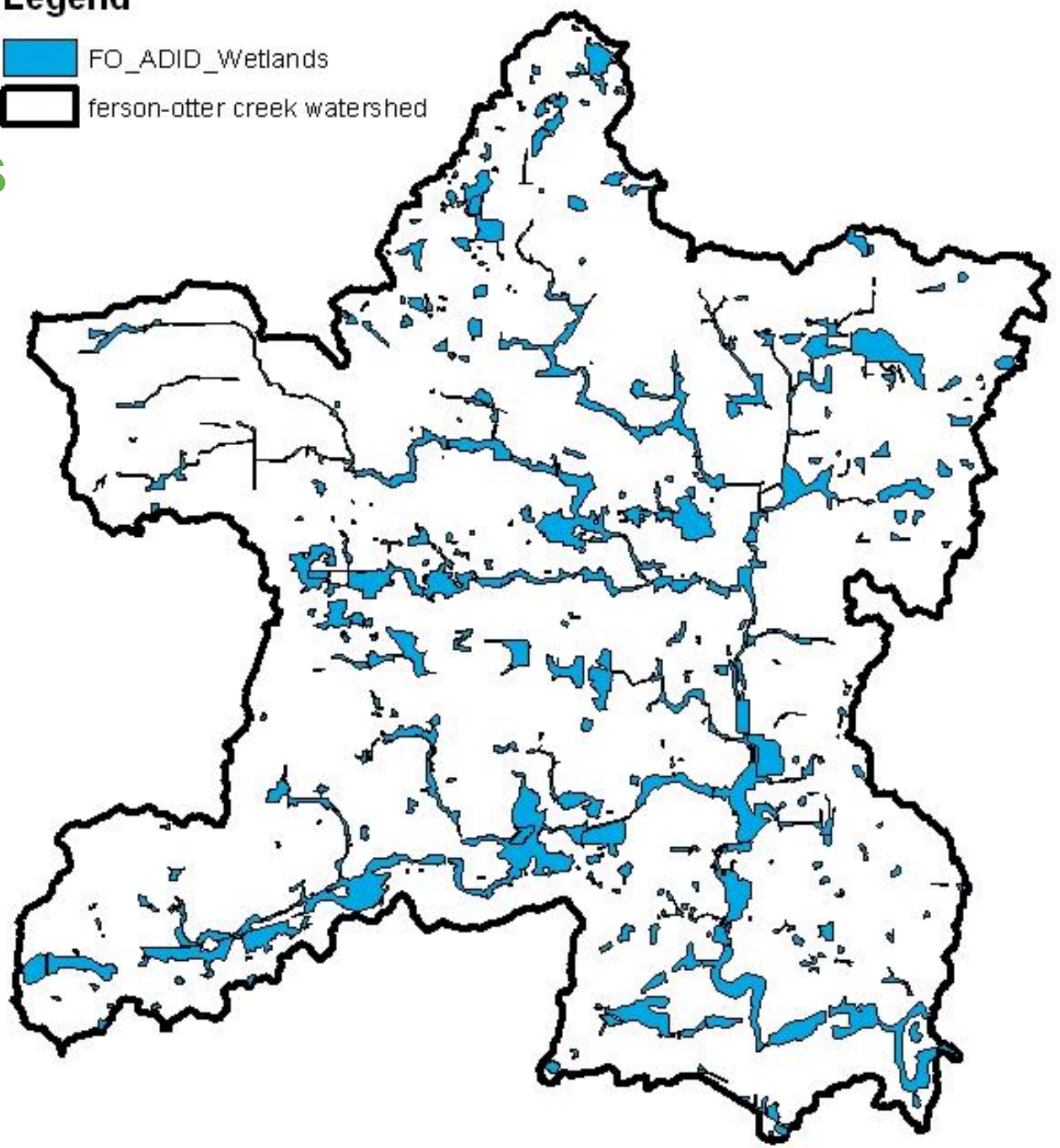
Open Space Reserve



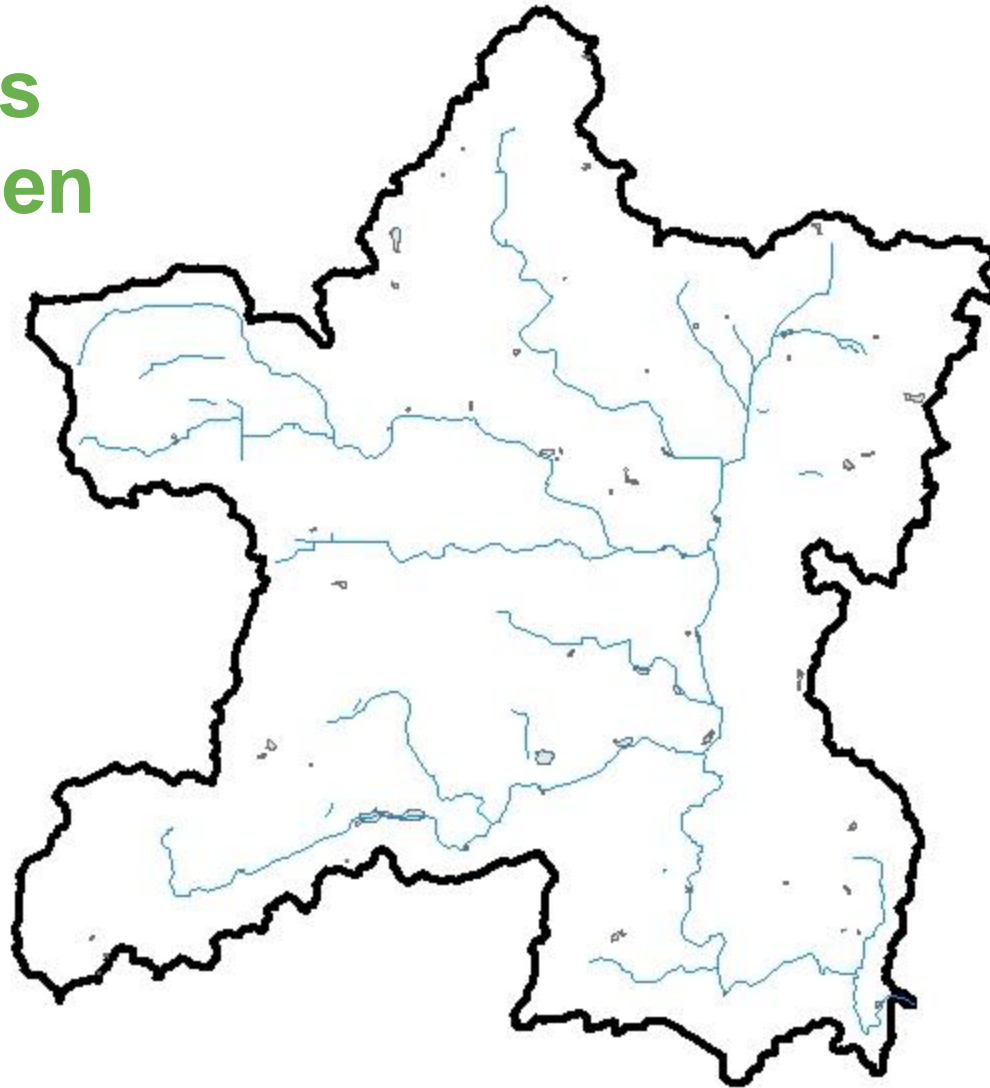
ADID- Wetlands

Legend

- FO_ADID_Wetlands
- fernon-otter creek watershed



ADID Streams and Open waters



Legend

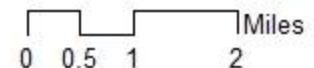
- FO_ADID_Streams
- FO_ADID_OpenWater

**100 ft buffer
on streams**

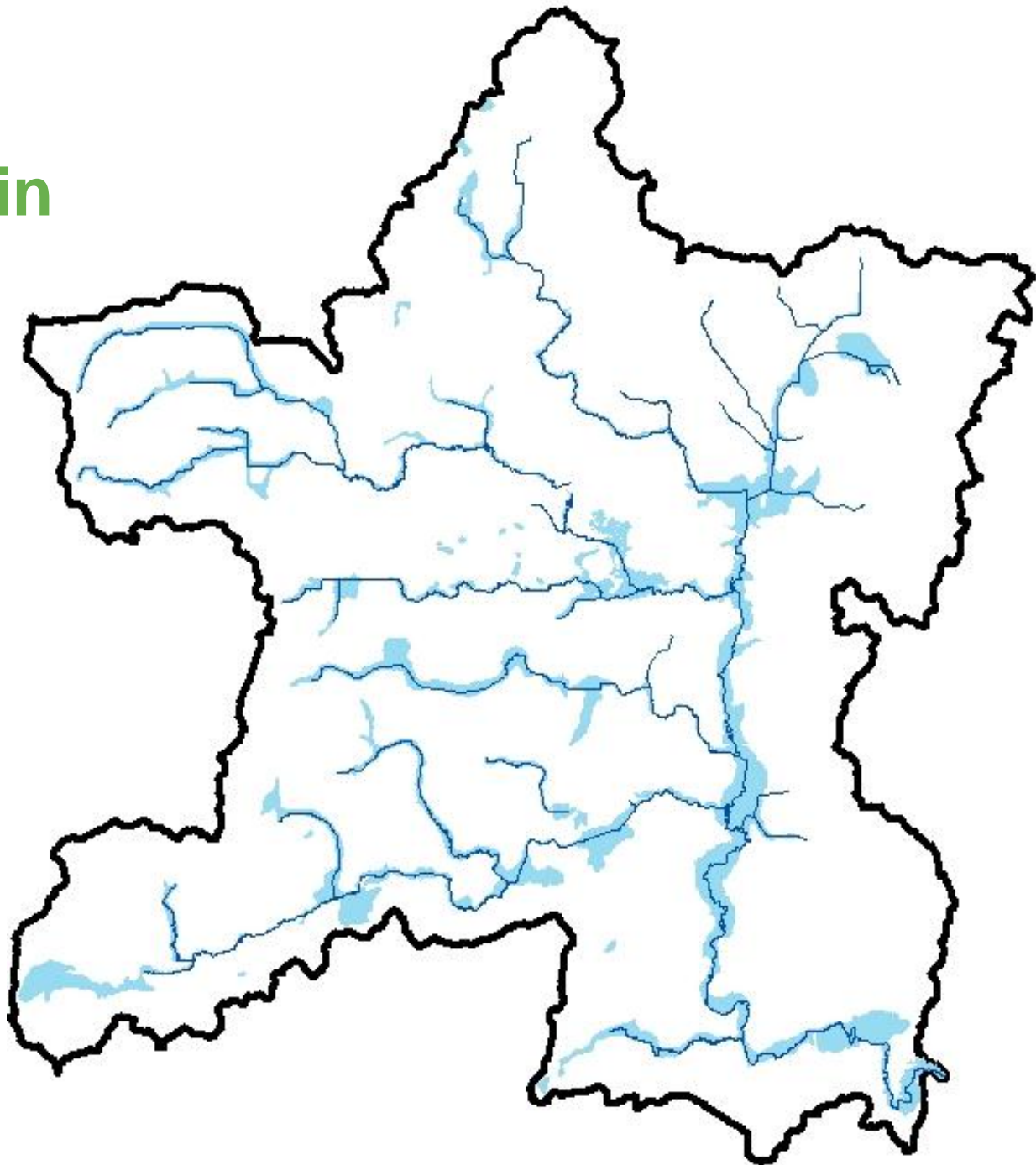


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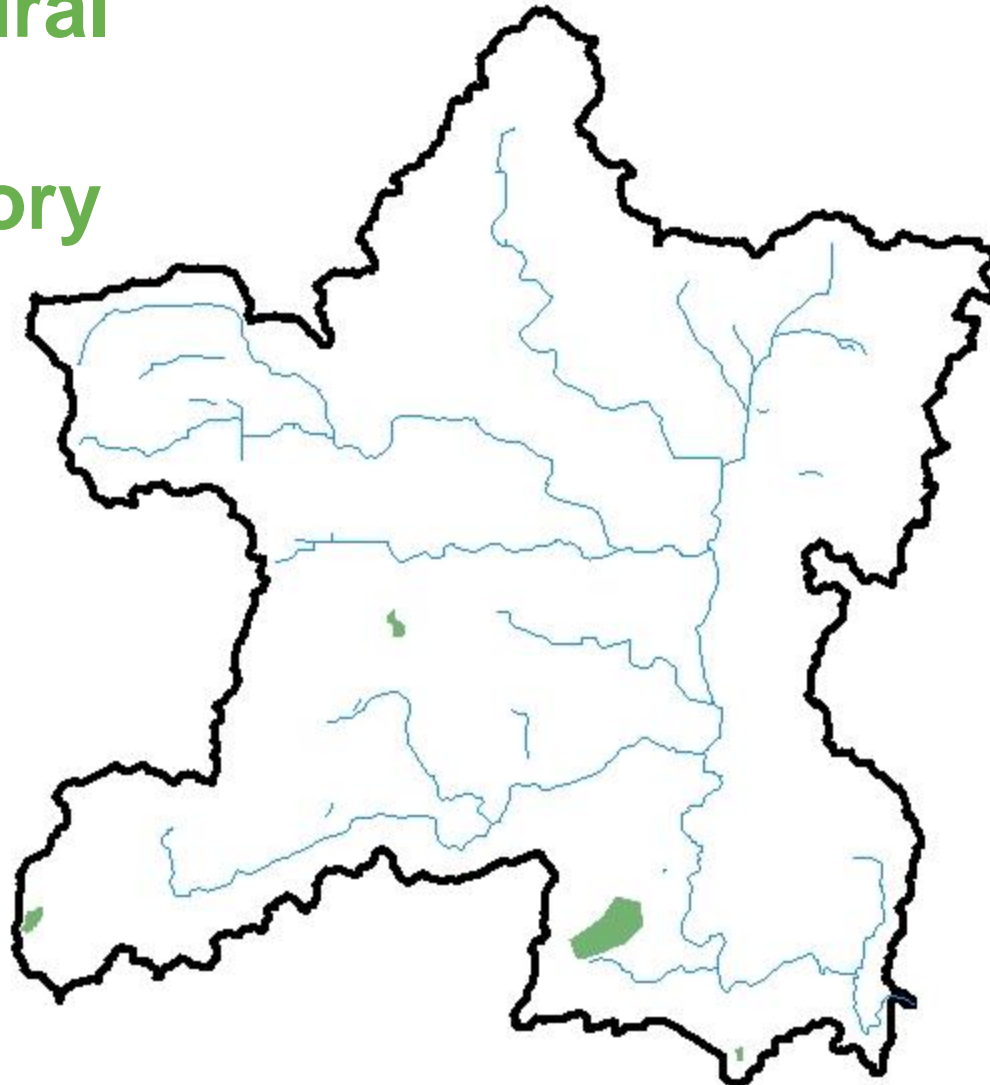
Sources: Data Type, Data Source (Year); Next .



FEMA- Floodplain



IL Natural Areas Inventory



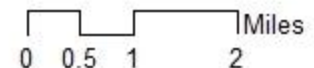
Legend

- FO_ADID_Streams
- FO_INAI

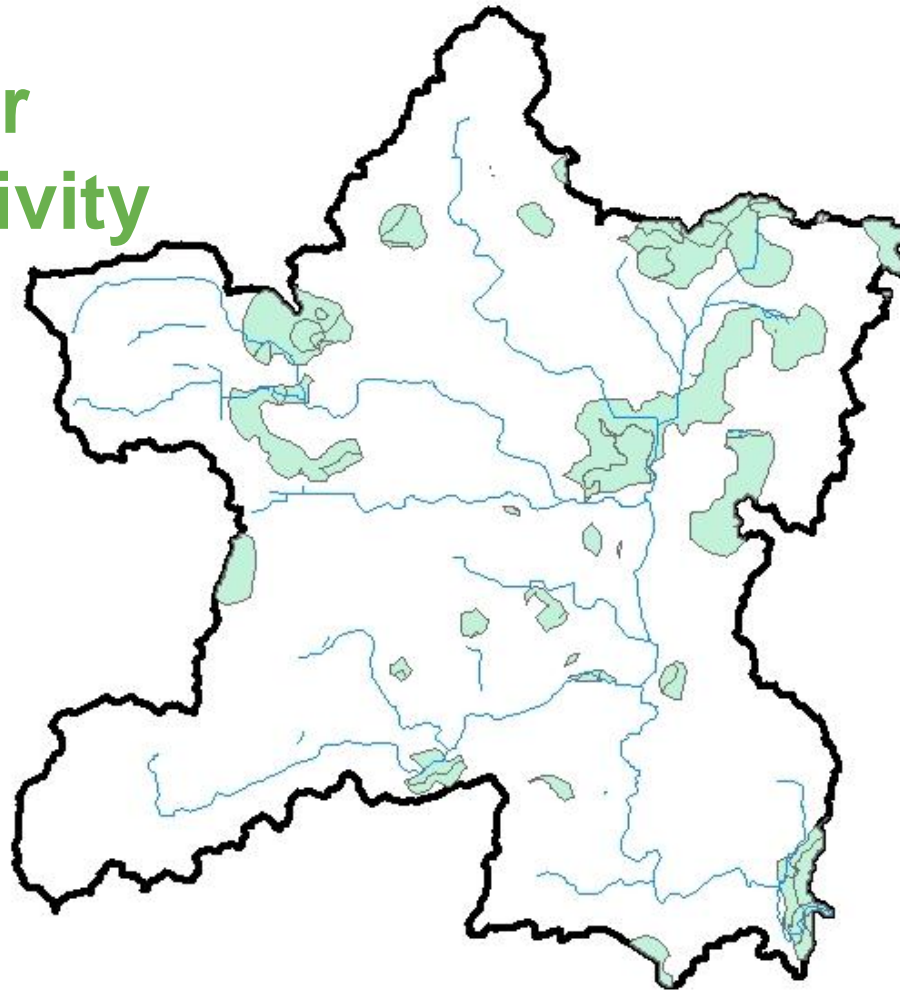


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Sources: Data Type, Data Source (Year); Next .



Kane Aquifer Sensitivity



Legend

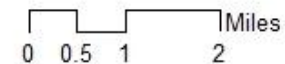
— FO_ADID_Streams

■ kane_aquifersensitivity_clip

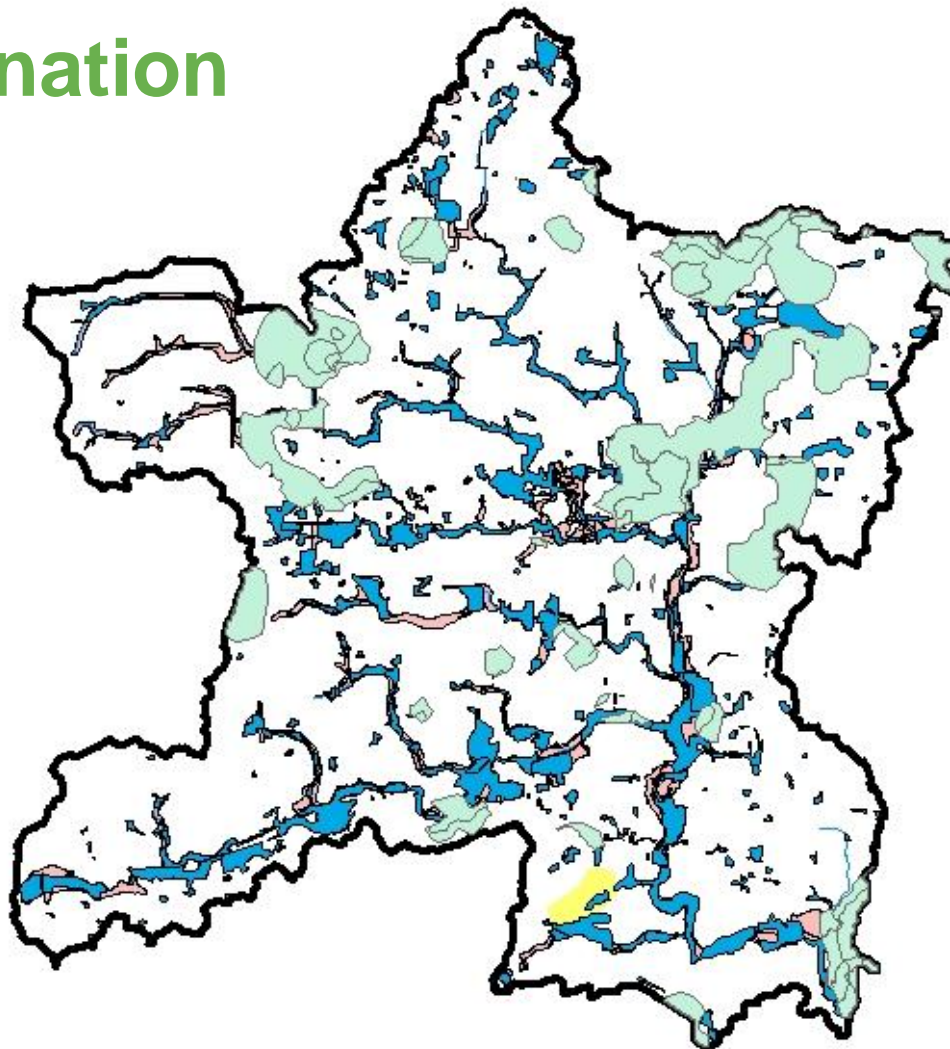


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Sources: Data Type, Data Source (Year); Next .



Combination Map



Legend

 kane_aquifersensitivity_clip

 FO_ADID_Wetlands

 FO_ADID_OpenWater


 FO_ADID_Streams

 FO_INAI

FO_Floodplain

<all other values>

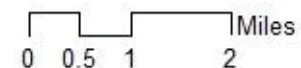
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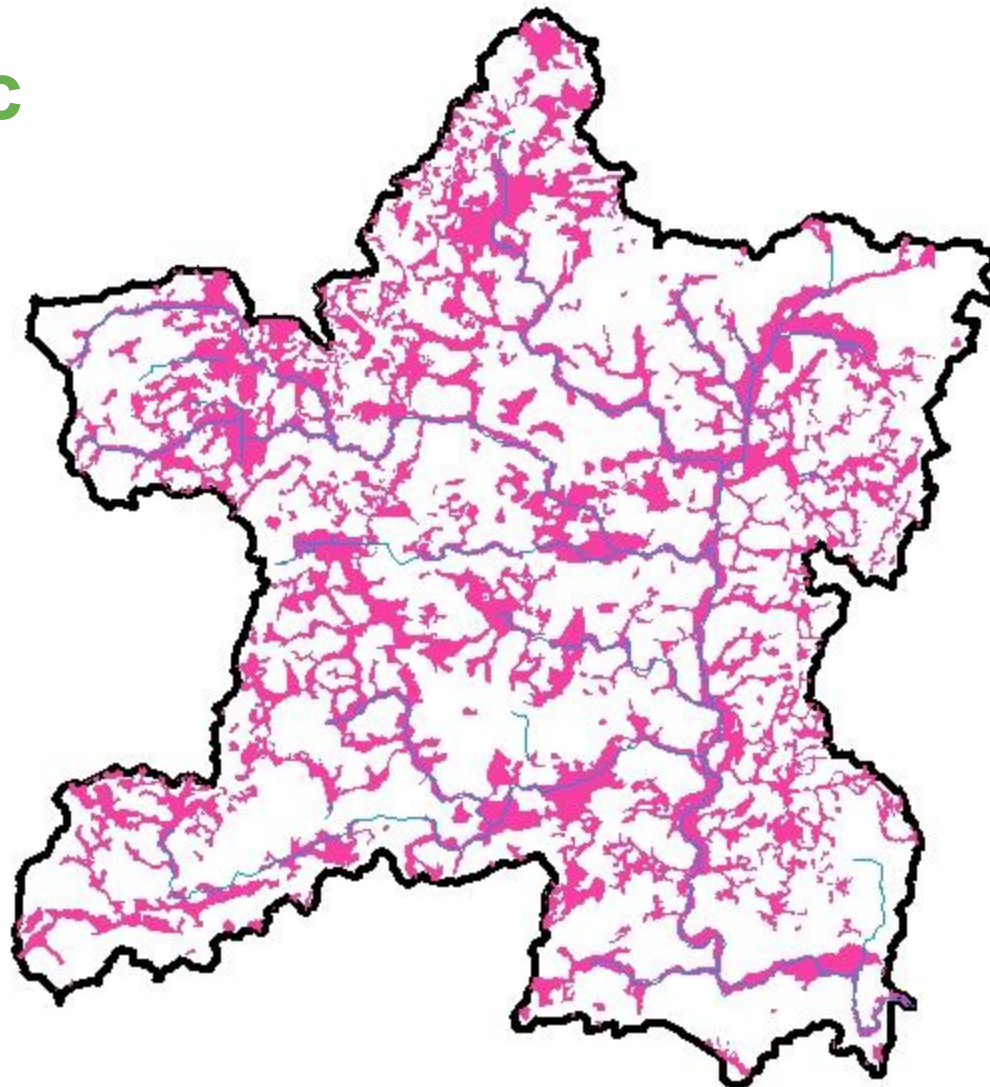


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Sources: Data Type, Data Source (Year); Next .



Hydric Soils



Legend


— FO_ADID_Streams

SSURGO Soils


<all other values>

hydclprs

 All hydric

 Not hydric

 Partially hydric

 Unknown



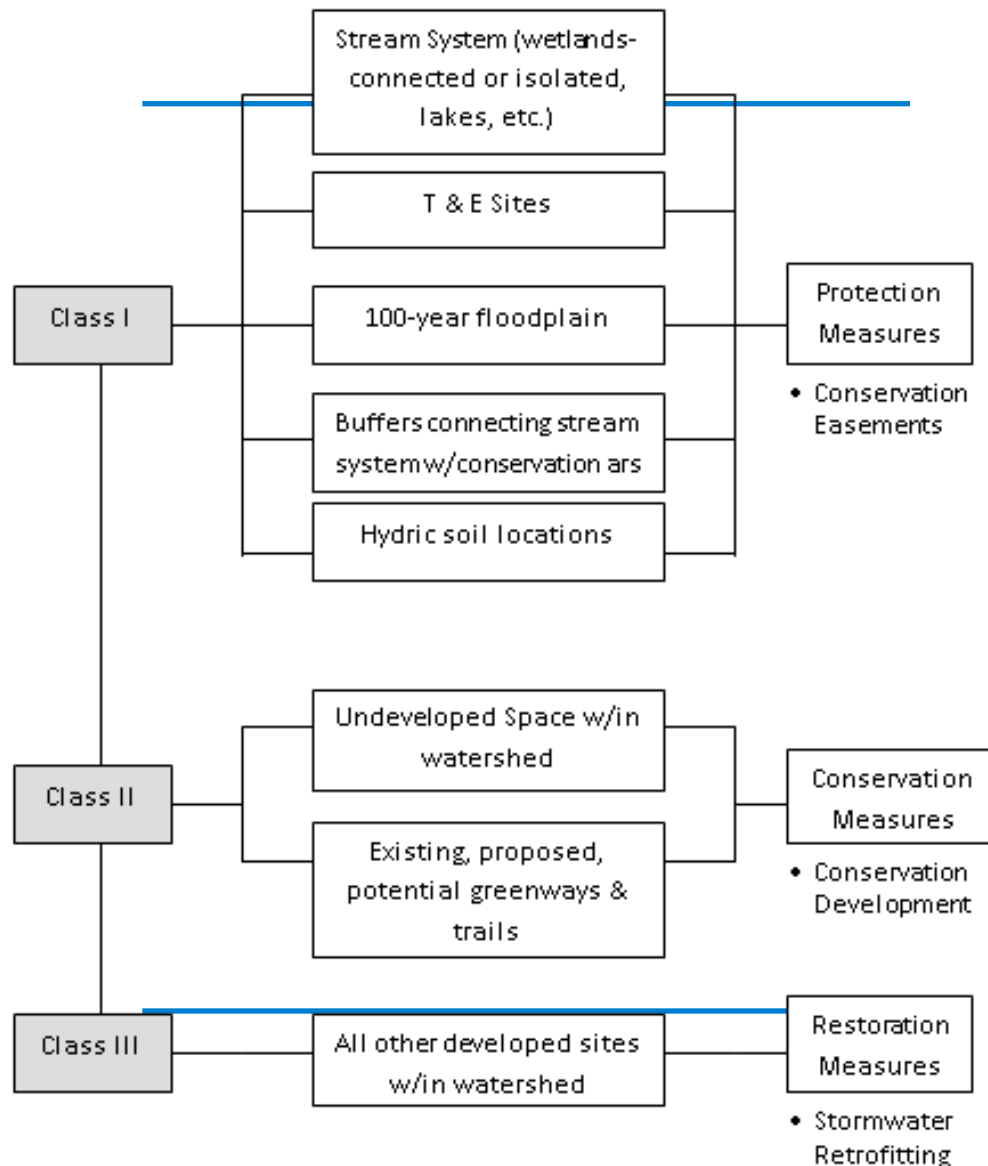
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

0 0.5 1 2 Miles



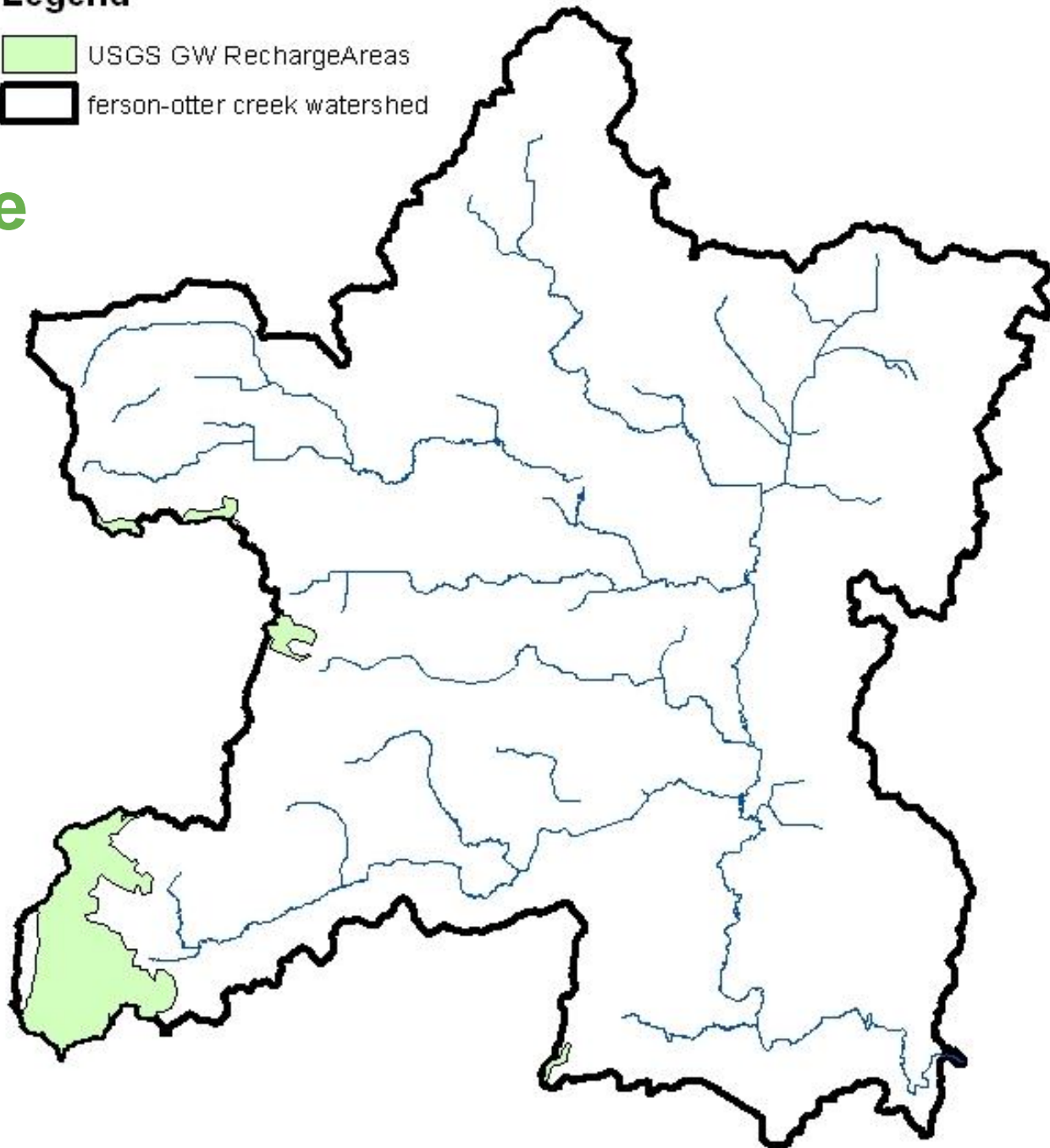
Open Space Reserve



Legend

-  USGS GW RechargeAreas
-  ferson-otter creek watershed

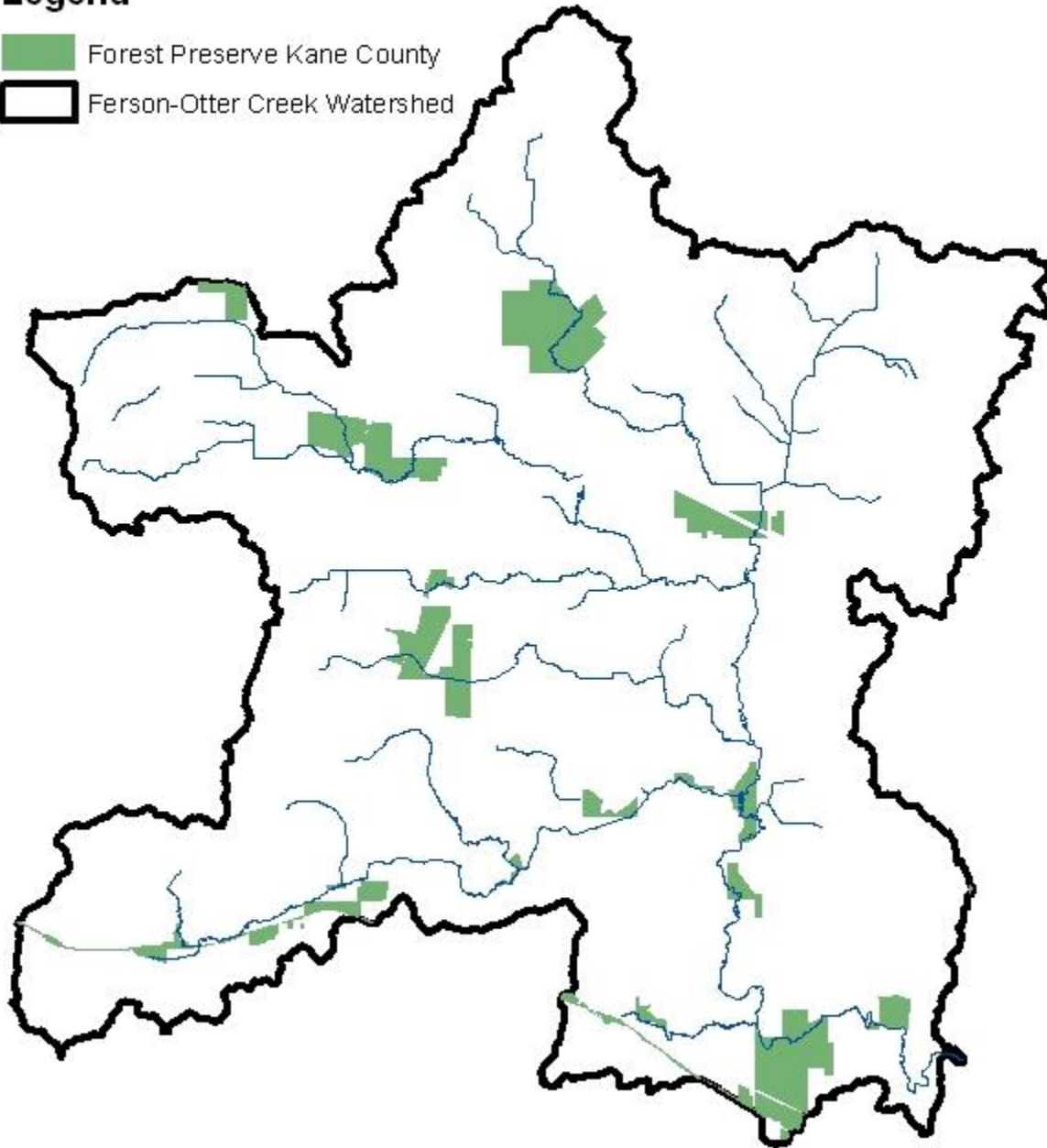
Recharge Areas



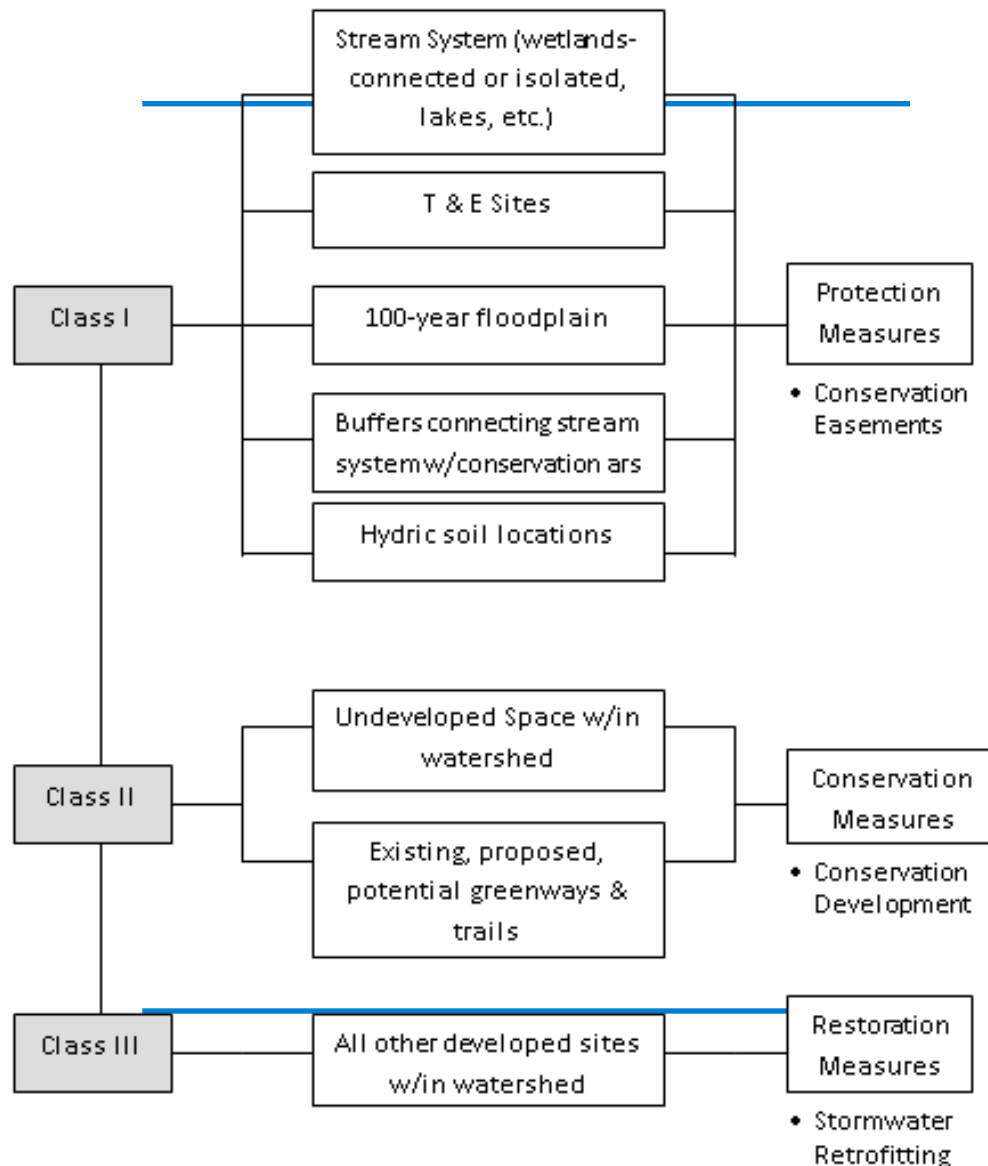
Kane County Forest Preserve

Legend

- Forest Preserve Kane County
- Ferson-Otter Creek Watershed



Open Space Reserve



What do we want to recommend for the plan?

- Similar structure- 3 Tier?
- Recommendations for each tier
 - 1st tier-conservation easement, very limited impact
 - 2nd tier-conservation design
 - 3rd tier-stormwater retrofitting

Thoughts and Questions



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