



Central South Branch Kishwaukee Watershed-Based Plan Background Part 2

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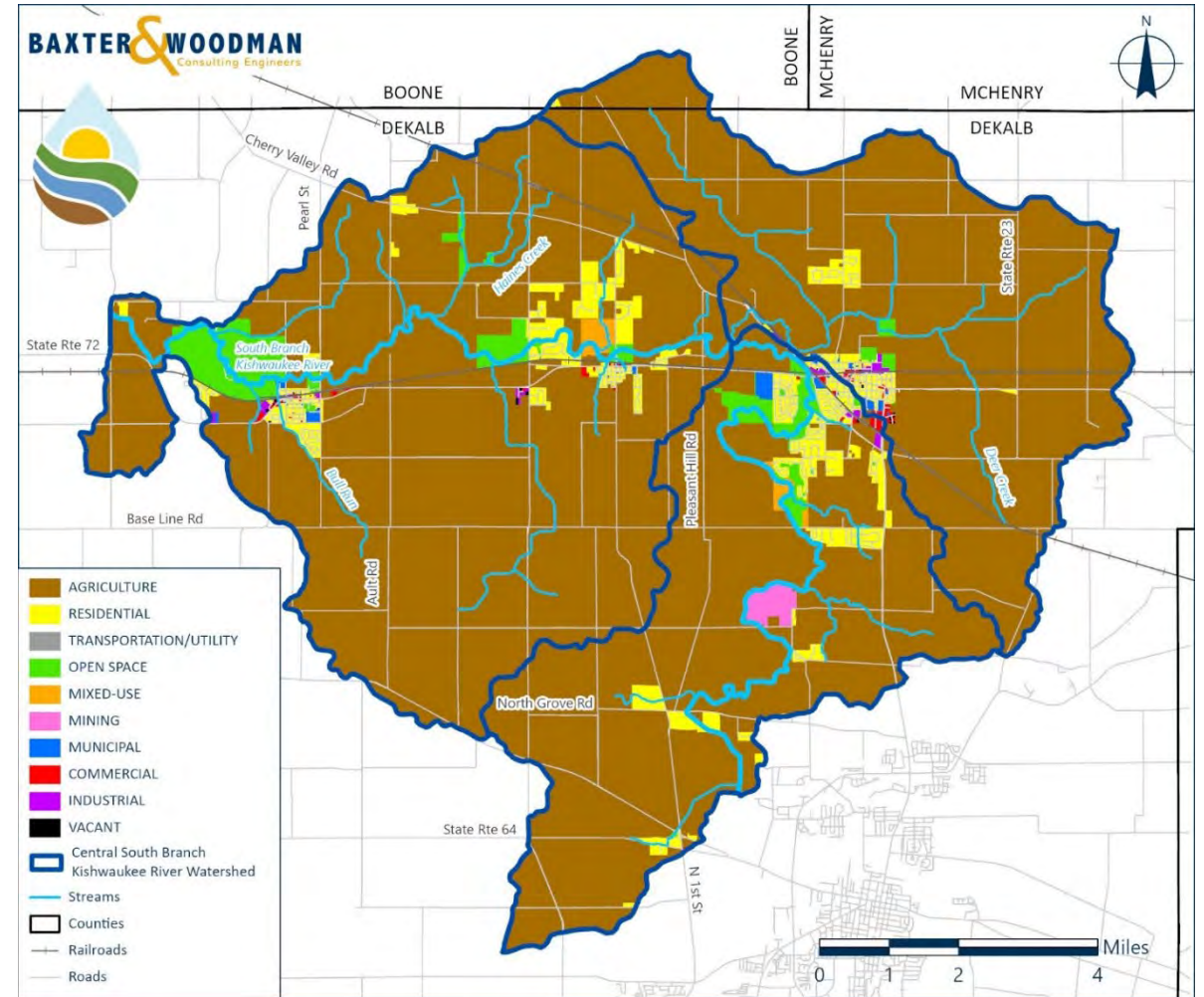
Watershed Characteristics Assessment

- Existing & Future Land Use
- Impervious Cover
- Important Natural Areas
- Open Space Parcel Prioritization
- Green Infrastructure Network
- Cropland and Agriculture
- Groundwater



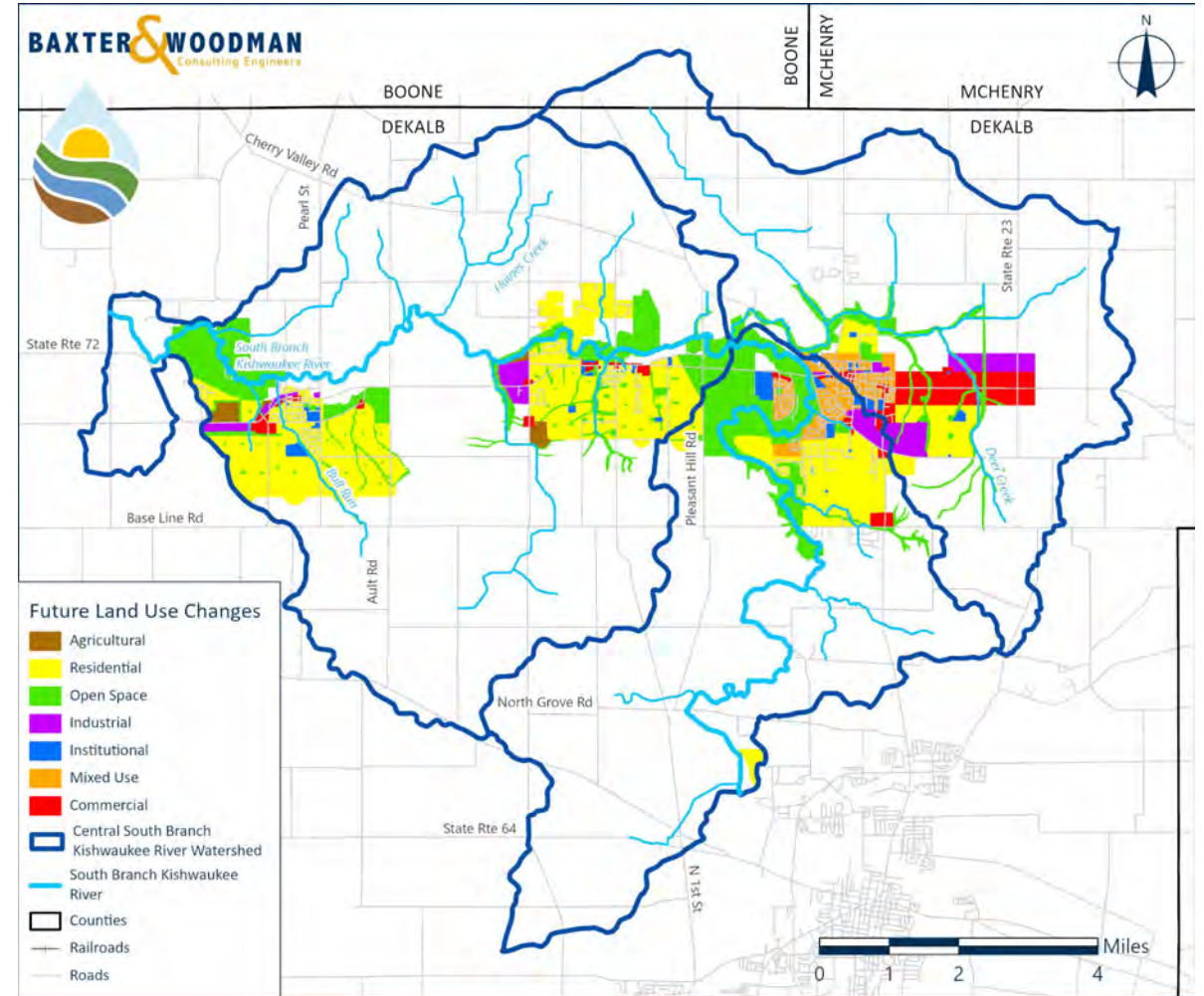
Existing 2023 Land Use/Land Cover

- 89% Agriculture (58,443 ac)
- 4% Residential (2,656 ac)
- 3% Transportation (2,128 ac)
- 3% Open Space (1,960 ac)
- All other land uses less than 1%



Future 2030 Land Use/Land Cover Changes

- White areas = no change
- Colors = expected future land use
- Biggest loss is in agriculture
-12.5% (-8,244 ac)
- Biggest gains split between..
Residential +6% (+3,928 ac)
Open Space +5% (+3,295 ac)



Impervious Cover Impacts on Streams

As impervious cover increases...

- Streams and habitat degrade
- Pollutants, temperatures, and flow increase

Sensitive <10% Impervious



Impacted 10-25% Impervious



Non-Supporting >25% Impervious



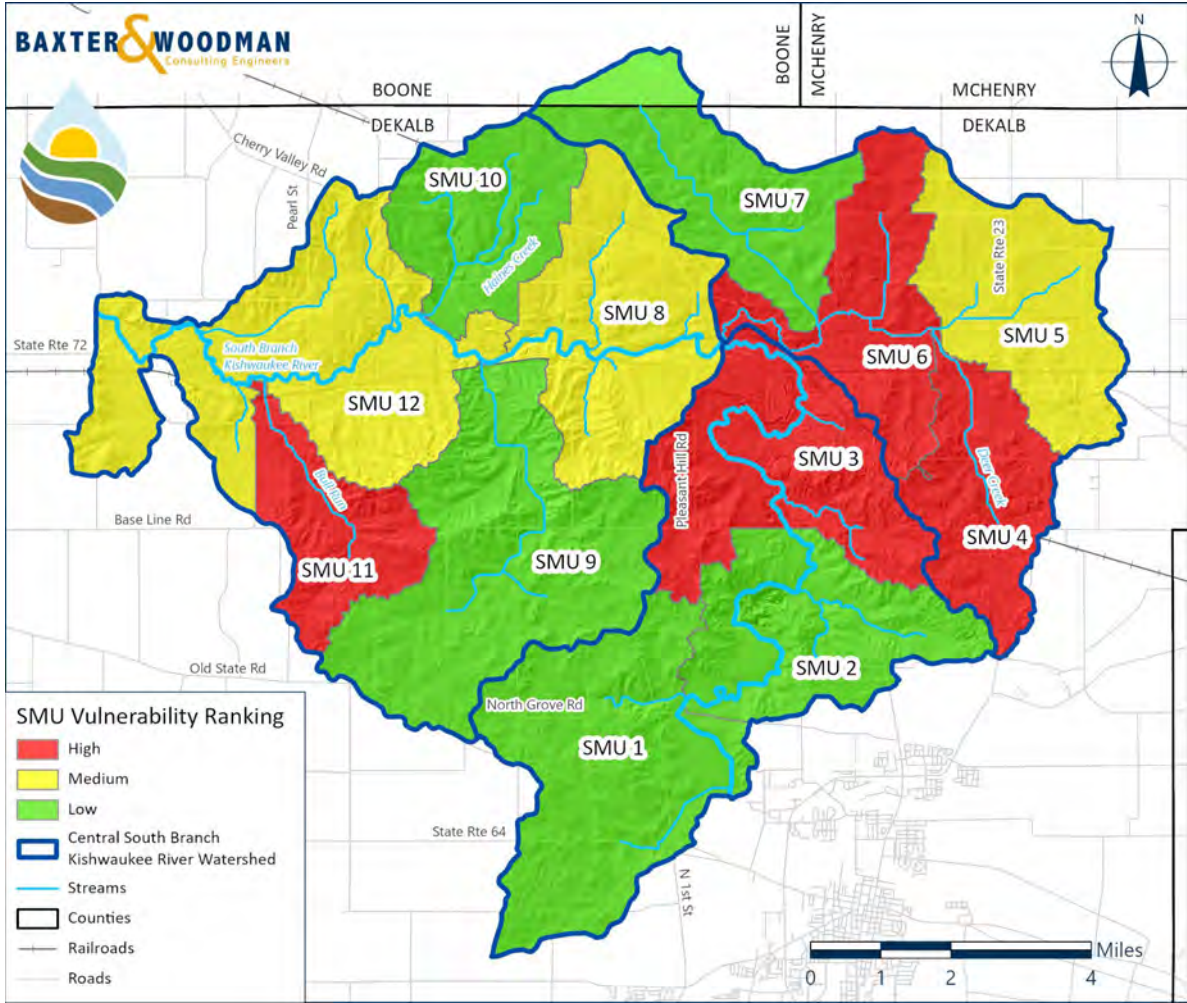
Impervious Cover Analysis

- **Low = <2% change in impervious cover**
- **Medium = 2-5% change in impervious cover**
- **High = classification change or >5% change in impervious cover**

SMU #	Acres	Existing Imperv. %	Existing (2023) Impervious Classification	Predicted Imperv. %	Predicted (2030) Impervious Classification	Percent Change	Vulnerability Ranking
1	7,479.3	5.7%	Sensitive	6.1%	Sensitive	0.4%	Low
2	4,992.3	5.6%	Sensitive	5.6%	Sensitive	0.0%	Low
3	5,826.1	10.3%	Impacted	17.8%	Impacted	7.5%	High
4	3,736.4	5.7%	Sensitive	14.6	Impacted	8.9%	High
5	4,894.7	5.4%	Sensitive	8.1%	Sensitive	2.7%	Medium
6	4,292.6	9.0%	Sensitive	19.6%	Impacted	10.5%	High
7	4,797.1	5.2%	Sensitive	5.2%	Sensitive	0.0%	Low
8	5,830.0	10.3%	Impacted	13.4%	Impacted	3.1%	Medium
9	8,506.2	5.2%	Sensitive	6.8%	Sensitive	1.6%	Low
10	3,687.9	5.8%	Sensitive	5.8%	Sensitive	0.0%	Low
11	3,067.8	6.2%	Sensitive	11.5%	Impacted	5.2%	High
12	8,930.1	6.4%	Sensitive	9.2%	Sensitive	2.8%	Medium

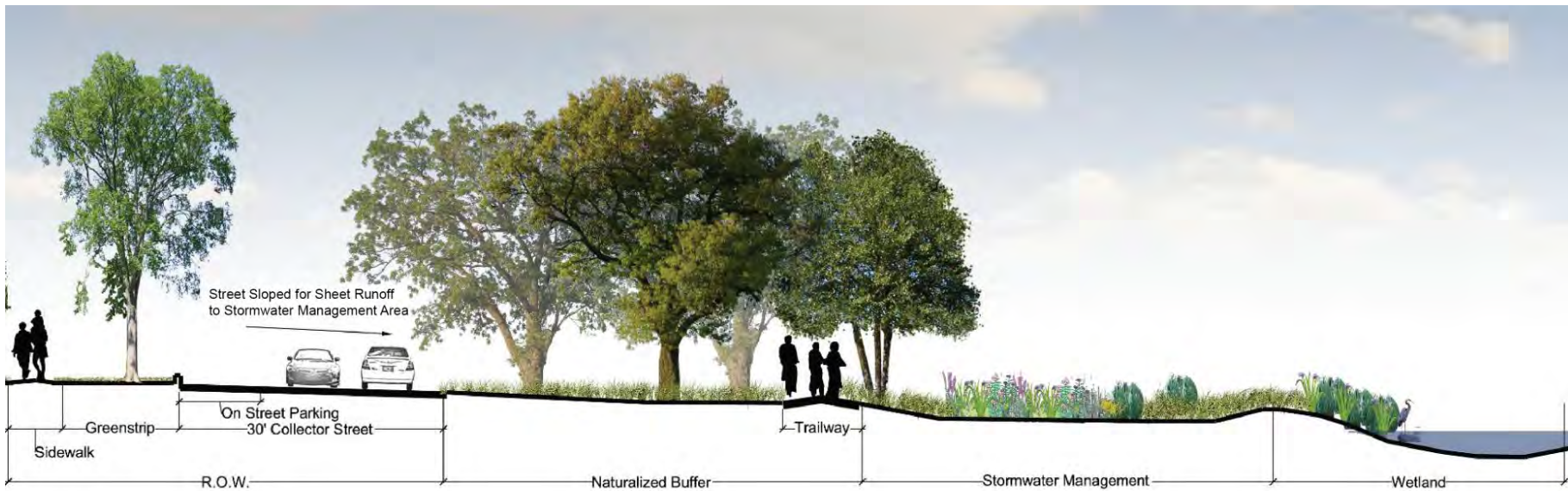
SMU Vulnerability Ranking

- 4 High
- 3 Medium
- 5 Low



Conservation Design or Low Impact Development

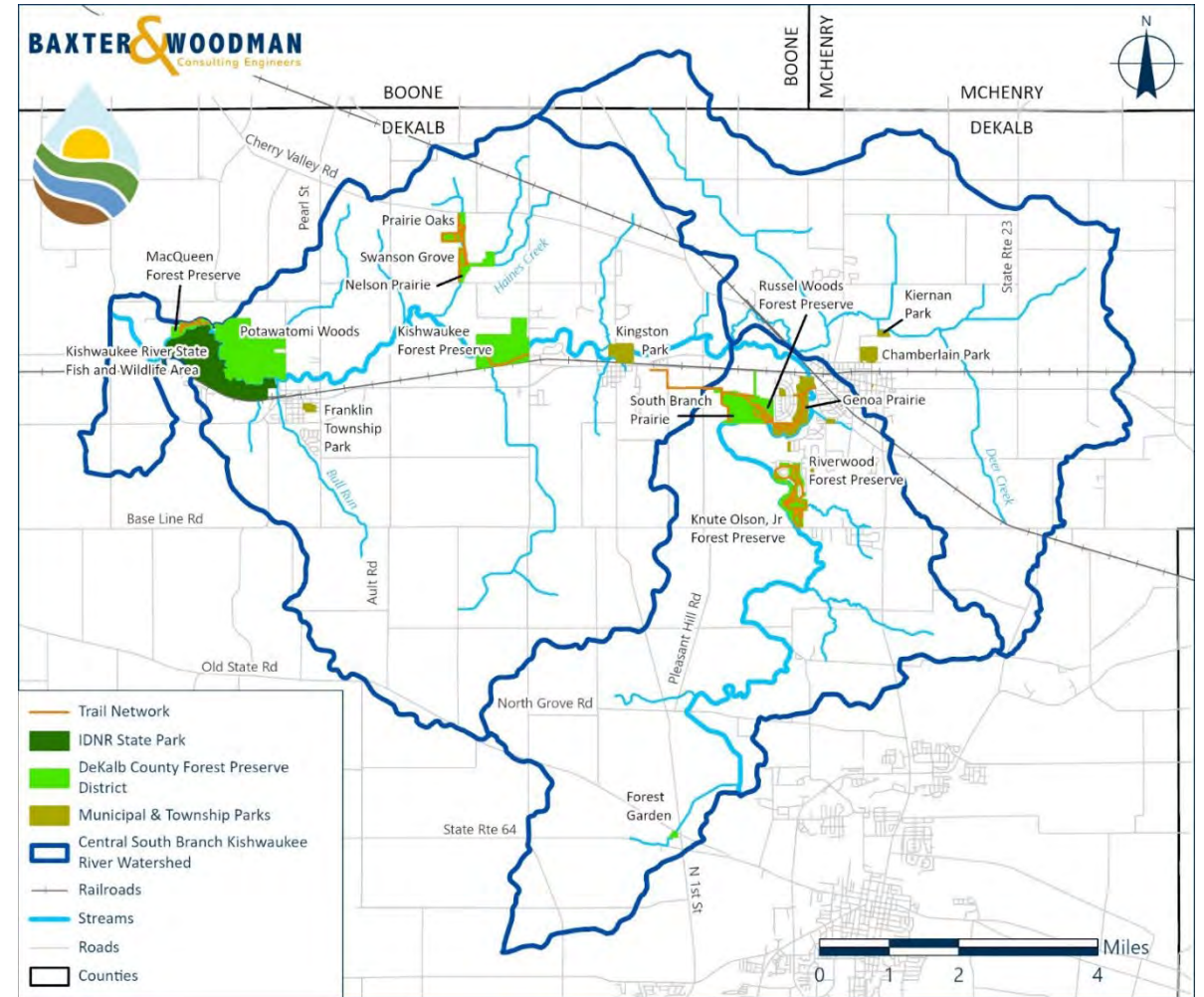
- Also known as cluster or open space design
- Preserves natural areas
- Maintains density by allowing smaller lots clustered around open space



Important Natural Areas & Trail Network

25 Natural Areas; Total of 1,738 ac

- Kishwaukee River State Fish & Wildlife Area
- Potawatomi Woods
- Kishwaukee Forest Preserve
- Russell Woods Forest Preserve
- Riverwood Forest Preserve
- Genoa Prairie
- Haines Ck Conservation Corridor



Kishwaukee River State Fish & Wildlife Area

- **584 acres (420 of which in CSBKR)**
- **Unique mix of grass-covered meadows, upland mesic and bottom woodlands, a native fen, and a man-made lake**
- **Hardwood forest with grassy open areas, wetlands, and agricultural acreage along SB Kishwaukee**



Potawatomi Woods

- 416 acres, owned by DeKalb County Forest Preserve District
- Silver maple, elm, and ash within the floodplains and white, red, and burr oaks, interspersed with poplar, maple, butternut, black-walnut and hickory further upland
- Continually reshaped by meandering of SB Kishwaukee River



Kishwaukee Forest Preserve

- 234 acres, owned by DCFPD
- Prairie, wetland, and woodland restorations
- Hiking trails, canoe, kayak and fishing access

KISHWAUKEE FOREST PRESERVE



Russell Woods Forest Preserve

- **126 acres, owned by DCFPD**
- **Upland forest and low wet woodlands**
- **River here is designated as a “unique aquatic resource” – IDNR**
- **Rich in aquatic species and native freshwater mussels**



Riverwood Forest Preserve

- 103 acres, owned by DCFPD
- Restoration of former Oak Club golf course
- Native prairie, pollinator meadow, and oak savanna



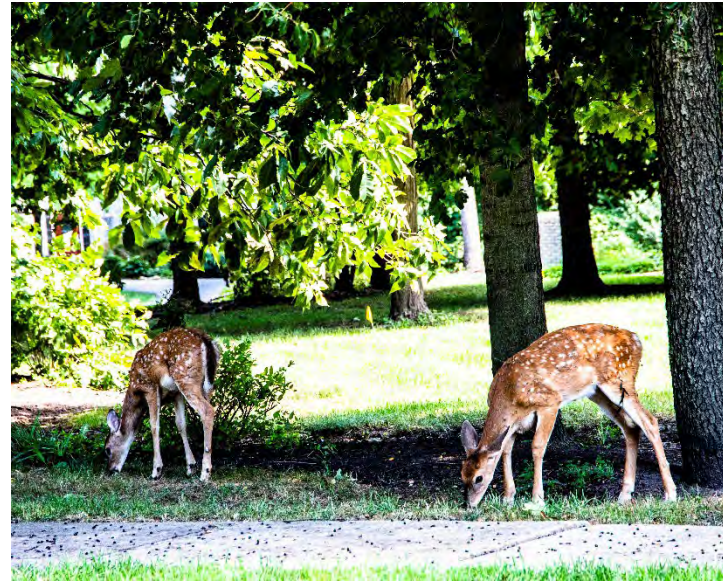
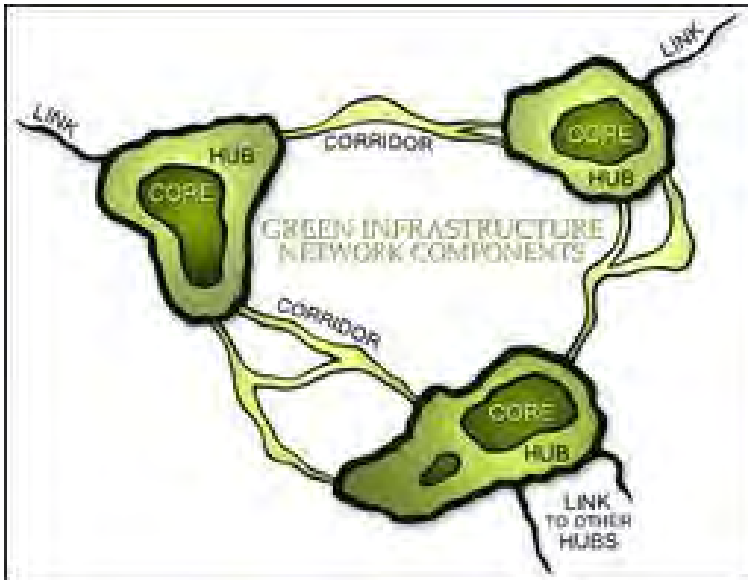
Haines Creek Conservation Corridor

- Almost 100 acres, owned by DCFPD
- Prairie Oaks + Swanson Grove + Nelson Prairie (+ Haines Prairie in 2026)
- restored savanna, woodland, prairie, wetland, marsh, and rare fen



Importance of Green Infrastructure

- Green Infrastructure is an interconnected network open space
- Made up of Hubs and Corridors
- Preserves ecological function, cleans water, benefits species

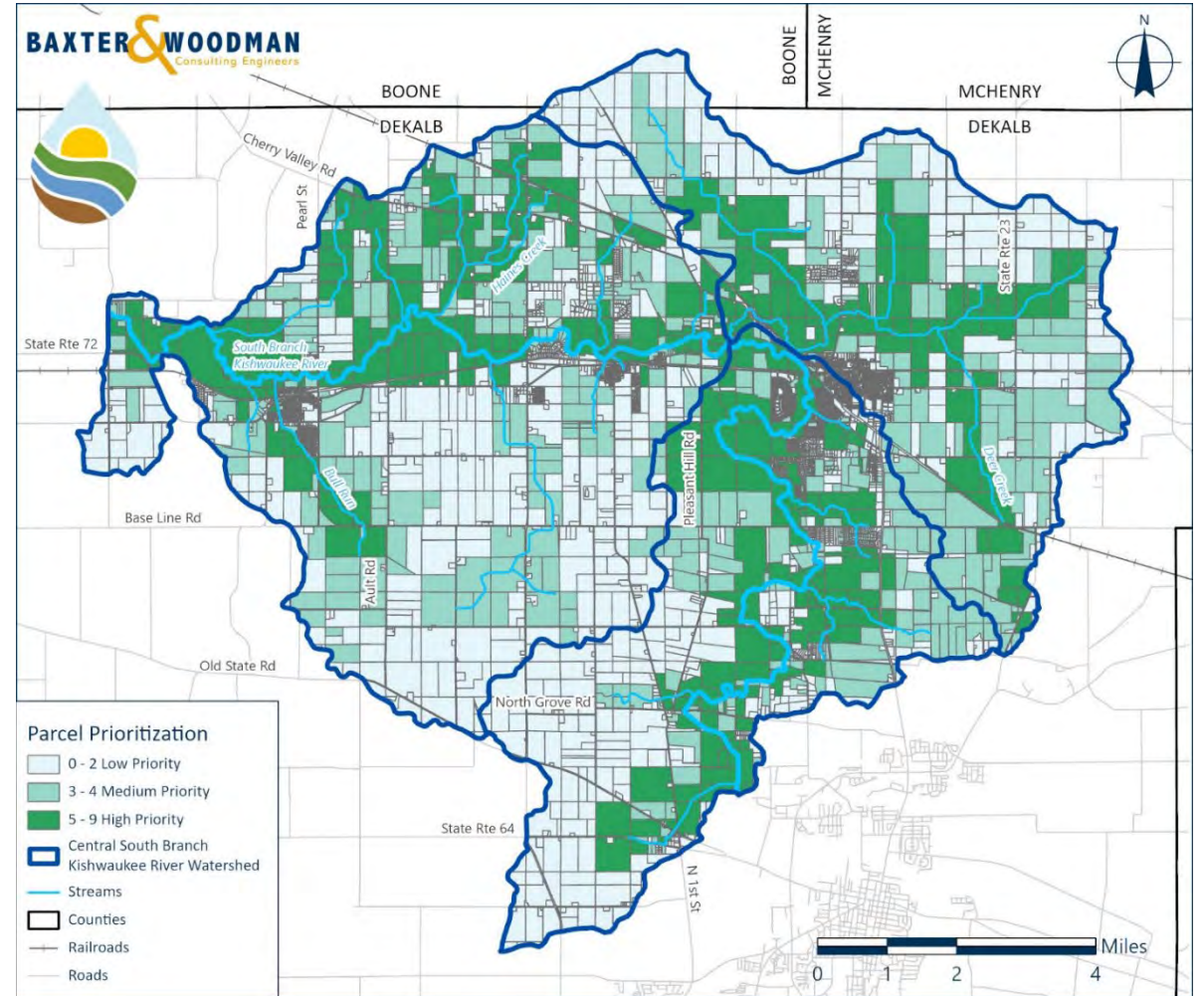


Parcel Prioritization Criteria

- 1. Open or partially open parcels that intersect FEMA Floodway or 100-year floodplain**
- 2. Open or partially open parcels that are within 100 feet of a stream or significant open water**
- 3. Open or partially open parcels within 0.25-miles of any headwater stream**
- 4. Open or partially open parcels that intersect a wetland**
- 5. Open or partially open parcels that include a potentially restorable wetland**
- 6. Open or partially open parcels equal to or greater than 20 acres**
- 7. Open or partially open parcels in a “Highly Vulnerable” Land Use/Land Cover SMU**
- 8. Open or partially open parcels that intersect an Important Natural Area property**
- 9. Open or partially open parcels adjacent to protected open space**
- 10. Open or partially open parcels that intersect existing trails**
- 11. Open or partially open parcels that intersect the historic Bottomlands and Forest**

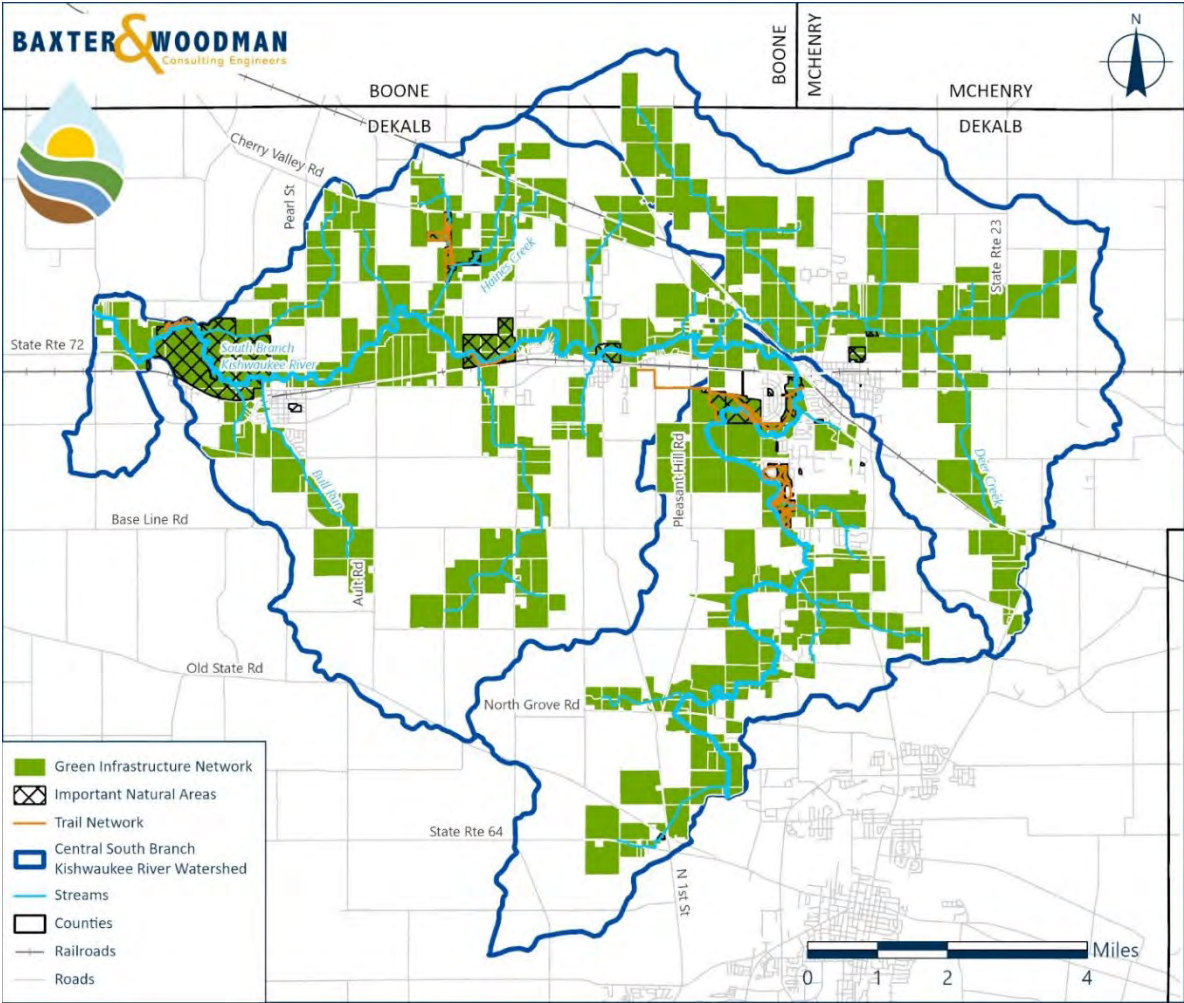
Parcel Prioritization Results

- High Priority: 5-9 Points
- Medium Priority: 3-4 Points
- Low Priority: 0-2 Points



Green Infrastructure Network

- 23,335 acres
- 583 parcels
- Includes all Important Natural Areas



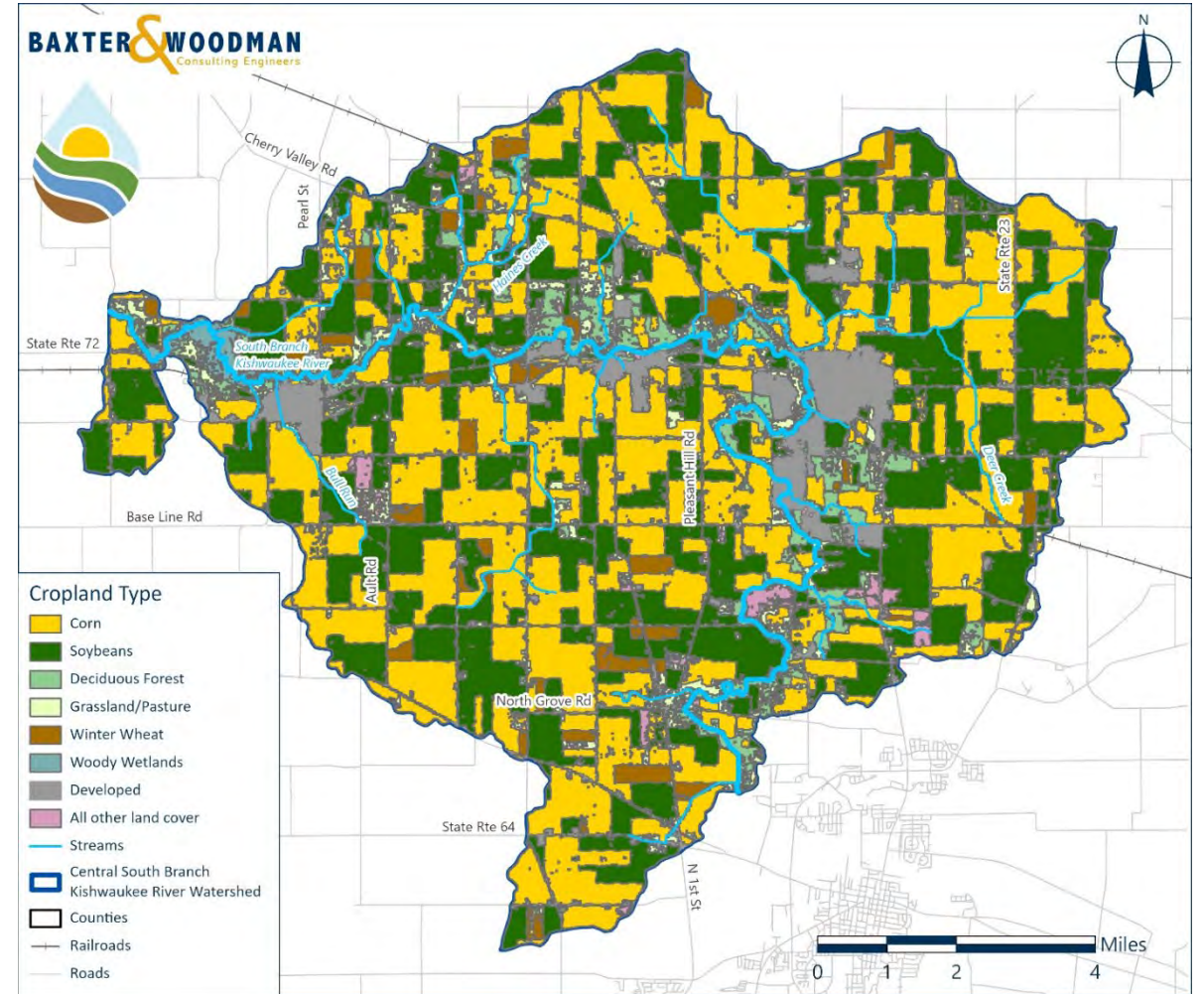
Green Infrastructure Planning



- **Protect parcels through acquisition, ordinance changes, and/or incentives**
- **Incorporate conservation design or low impact development**
- **Limit future subdivision of parcels**
- **Implement long term management**

USDA 2022 Cropland Data

- 42% Corn
- 34% Soybeans
- 6% Deciduous Forest
- 5% Grassland/Prairie
- 5% Developed
- All others less than 3% each



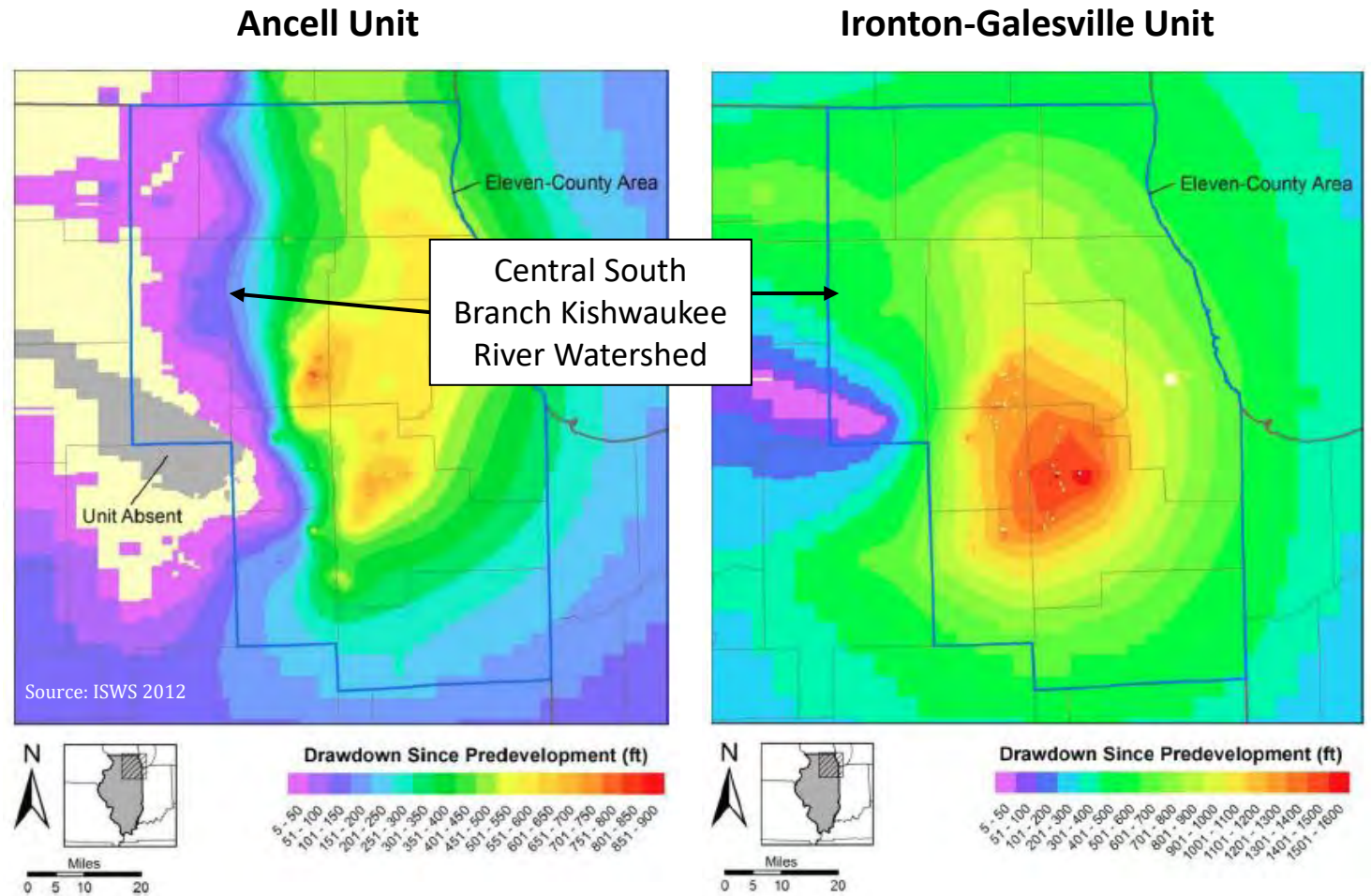
2018 IL Soil Conservation Transect Survey

- **34% Conventional Tillage**
- **24% Mulch Tillage**
- **22% Reduced Tillage**
- **13% No-Till**



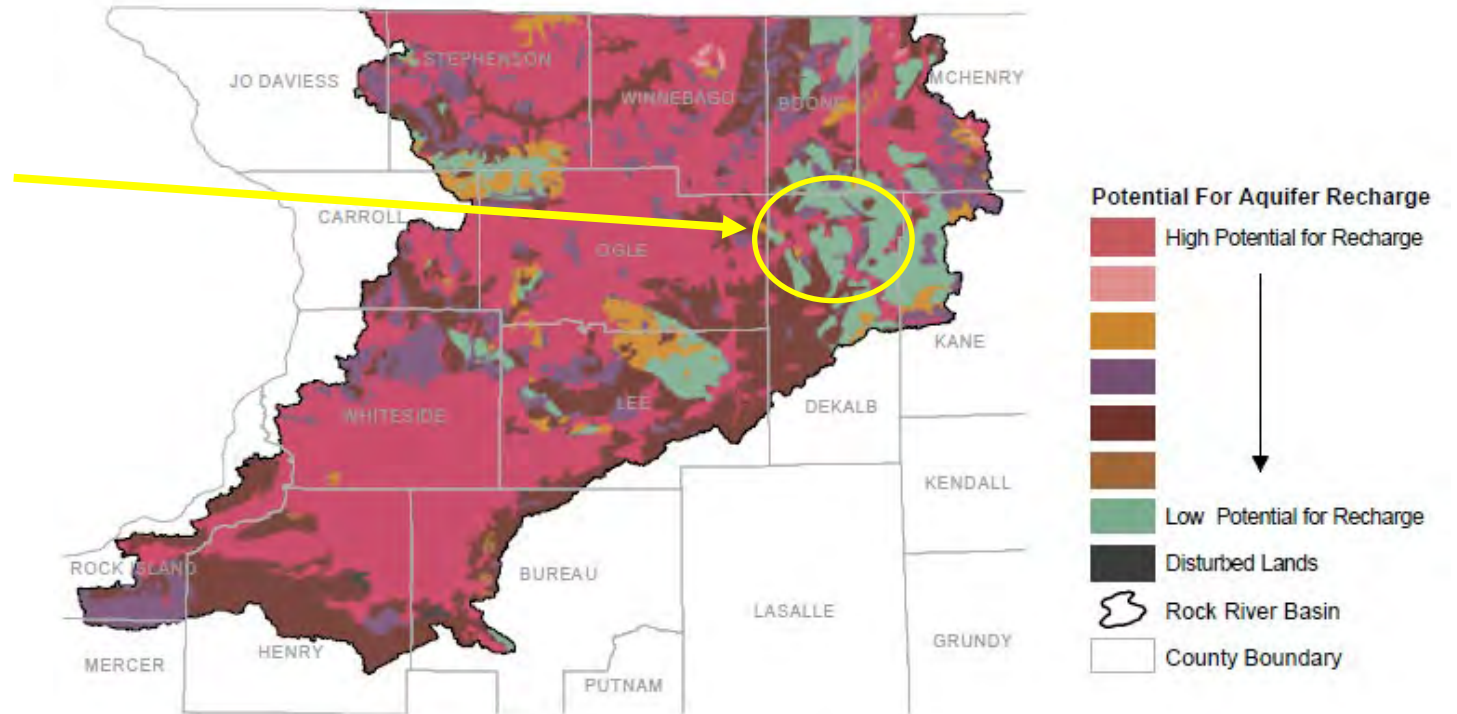
Groundwater (ISWS)

- Modest increases expected in groundwater withdrawals by 2050
- 150 ft in Ancell Unit
- 700 ft in Galesville Unit
- Drawdown expected to remain relatively stable



Groundwater Recharge

- According to 2006 IEPA study, areas has moderate potential for groundwater recharge
- Highest recharge potential along South Branch Kishwaukee River



Ordinance Review

Checking in...

- **Genoa (completed)**
- **Kirkland**
- **Kingston**
- **DeKalb County (completed)**



Watershed Planning Schedule

Upcoming Meetings:

- **March '24 – Water Quality, Initial Modeling Results**
- **April '24 – Watershed Goals Workshop**
- **June '24 – Bus Tour**
- **August '24 – Critical Areas and Action Plan**
- **October '24 – Implementation and Outreach Plan**

Questions?

