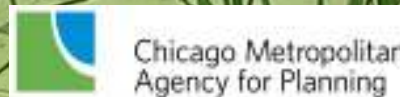


Making Connections: Opportunities for Green Infrastructure

Holly Hudson
Sleepy Hollow & Silver Creek Watershed
Action Planning Meeting
April 13, 2011



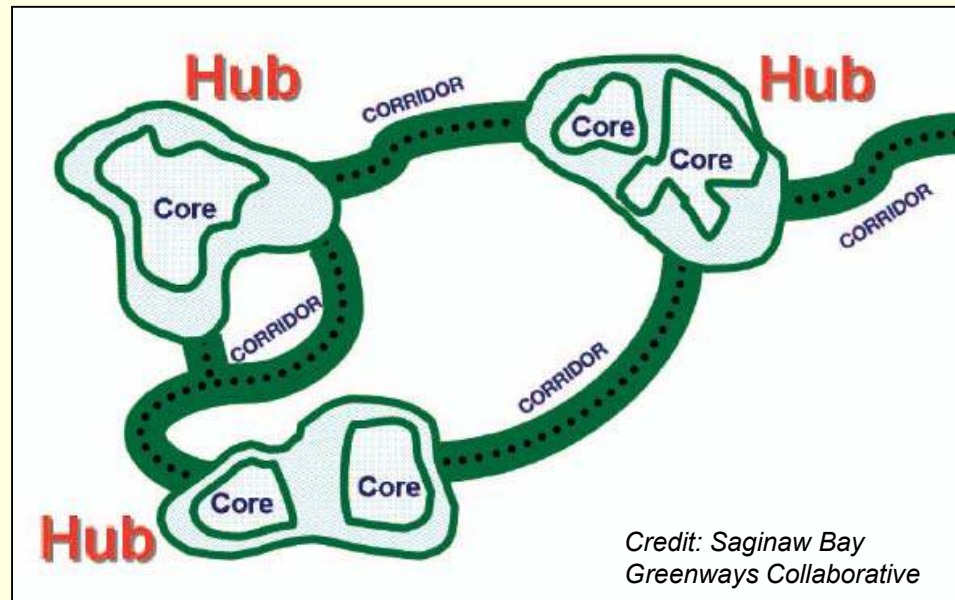
Human Infrastructure



Green Infrastructure

Watershed / Regional context

- Interconnected network of natural lands, working landscapes, and other open spaces
- Conserve ecosystem values and functions (naturally manage stormwater, reduce flooding risk, improve water quality)
- Provide health and quality of life benefits to humans
- Strategically planned and managed



Green Infrastructure

Community / Small Site context

- Network of generally decentralized stormwater management practices
- Captures and infiltrates rain where it falls
- Reduces stormwater runoff
- Improves waterway health



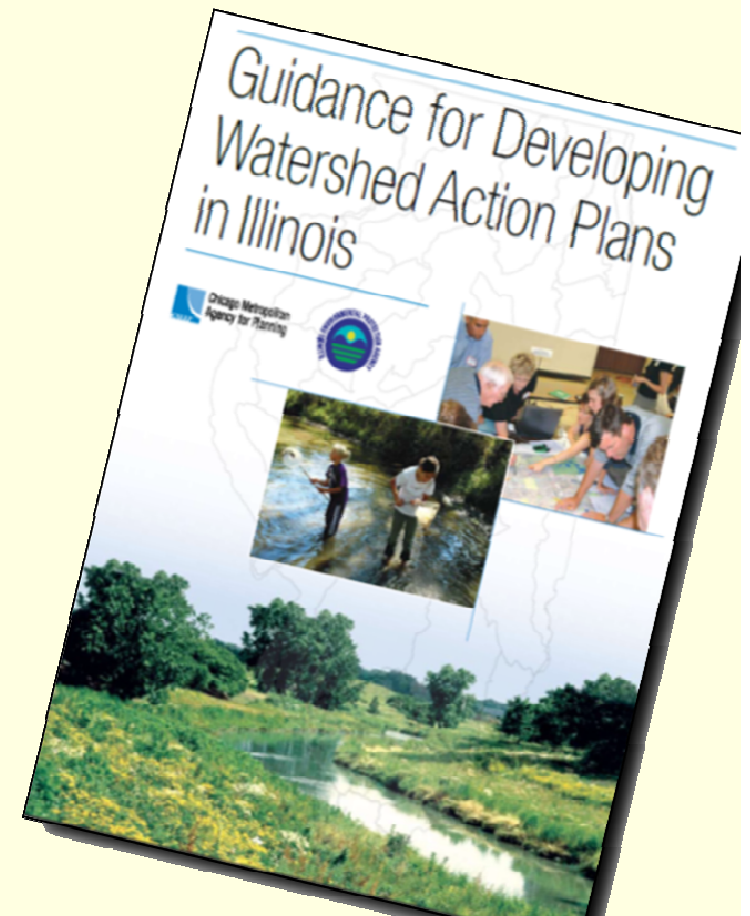
Green Infrastructure & the Watershed Plan

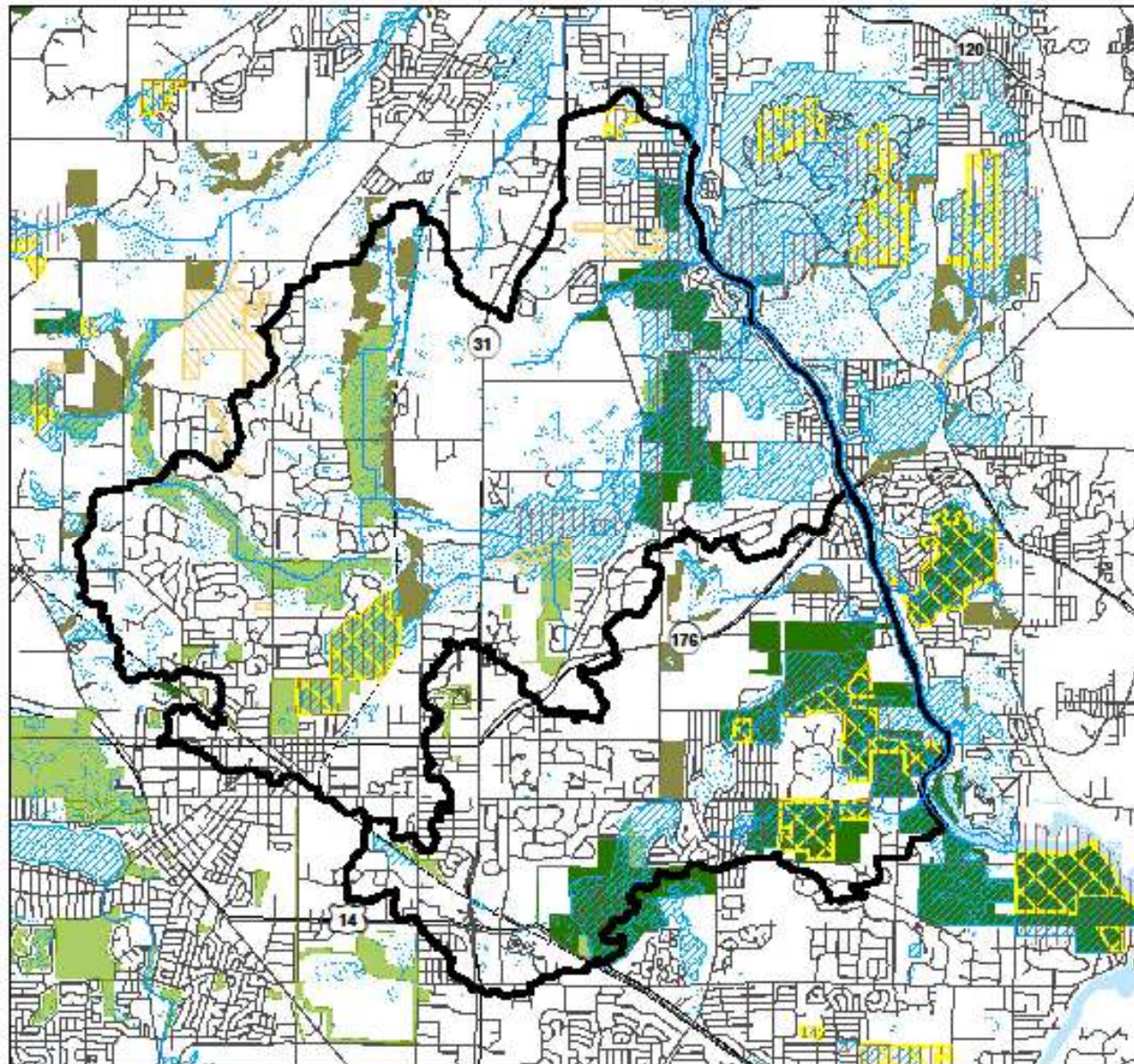
US EPA: 9 minimum elements of a watershed-based plan

Element #3:

Description of the best management practices (nonpoint source pollution management measures) expected to be implemented to achieve the load reductions (as well as to achieve other watershed goals identified in the watershed-based plan),

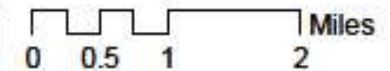
and an identification (using a map or a description) of the critical areas (by pollutant or sector) in which those measures will be implemented.





Existing Open Space & Natural Area Inventories in the Sleepy Hollow & Silver Creek Watershed Planning Area

- Watershed Ping Area_SH
- Watershed Ping Area_SC
- Illinois Natural Areas Inventory
- Illinois Nature Preserves
- Land Conservancy McHenry Co
- McHenry Co Natural Areas Inventory
- McHenry County ADID
- McHenry County Conservation District
- Nunda Township Land Use**
- Protected Open Space (current)
- Crystal Lake Land Use**
- Parks & Open Space (current)

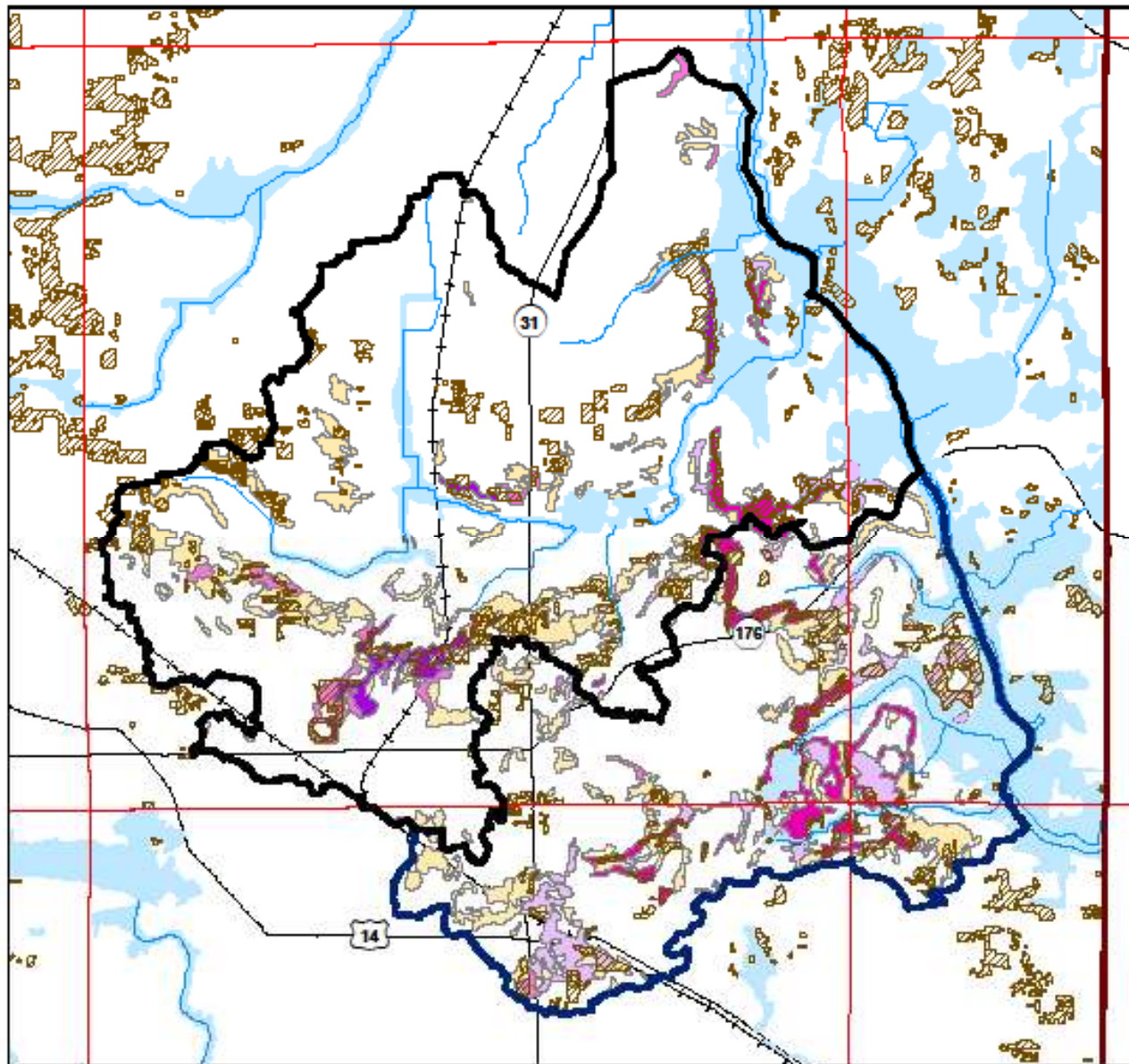


Data Sources: | Illinois Natural Areas Inventory - IDNR 2010; Illinois Nature Preserves - IDNR INHD 2005; Land Conservancy of McHenry Co. sites - LCMC 2011; McHenry Co. Natural Areas Inventory - MCCD; McHenry Co. ADID - NPC & McHenry Co. 2005; McHenry Co. Conservation Dist. sites - MCCD 2010; Nunda Twp. Comprehensive Plan, 2009-2013 - Nunda Twp.; Crystal Lake Land Use, 2020 Comprehensive Plan - City of Crystal Lk; Watershed Planning Areas (draft) - CMAP & ISWS.

Map Date: Feb. 8, 2011 - ME; rev. Mar. 14, 2011 - HH



Chicago Metropolitan
Agency for Planning



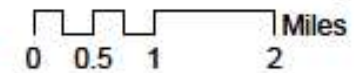
Floodplains, 9%+ Soil Slopes, & Oak Stands in the Sleepy Hollow & Silver Creek Watershed Planning Area

Legend

- Watershed Ping Area_GH
- Watershed Ping Area_BC
- County Boundary
- Twp Boundary
- ADID Streams
- Oak stands, 2005
- FEMA Floodplain

Soil Slope (%)

- 9
- 10
- 15
- 19
- 21
- 25

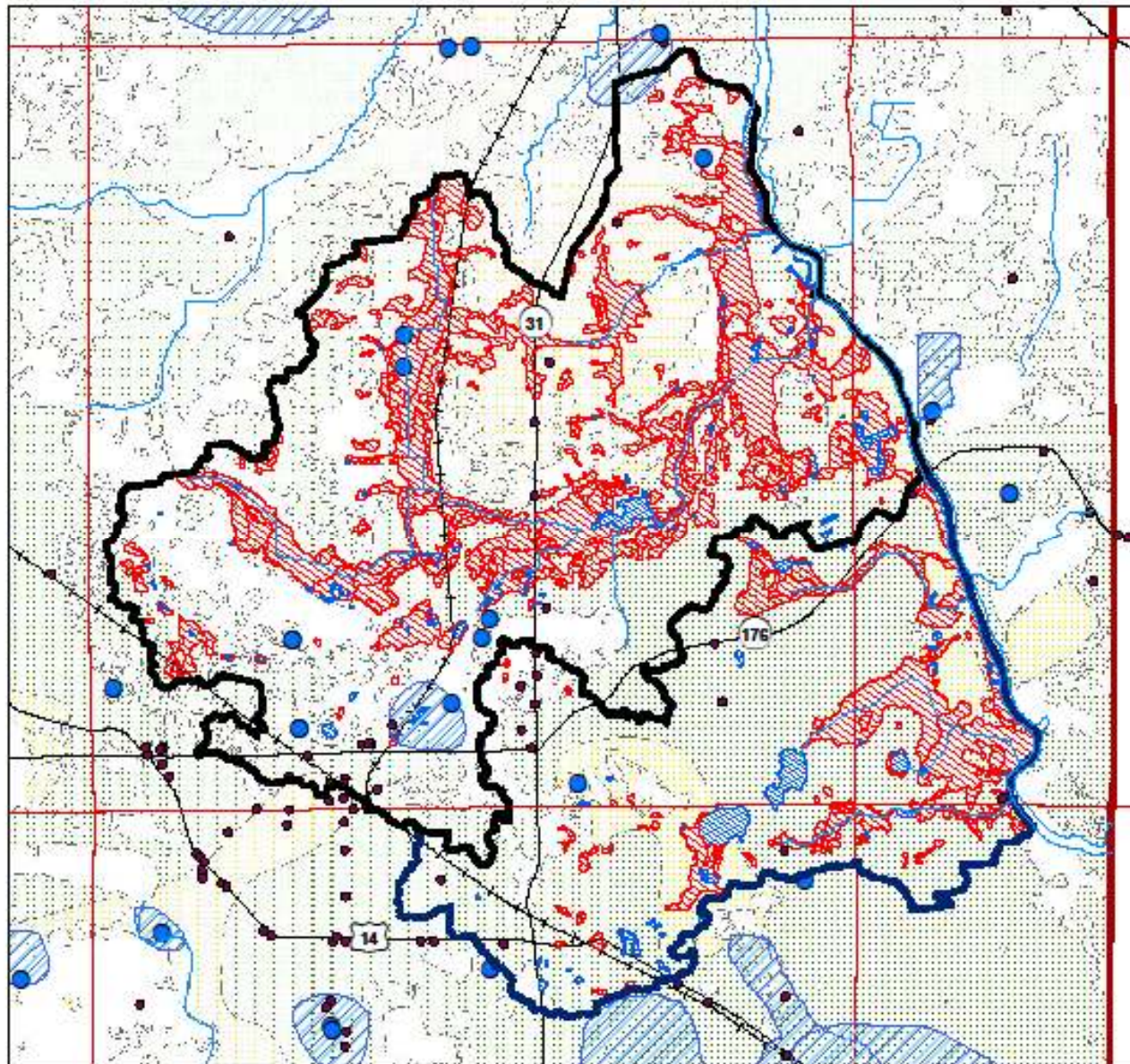


Data Sources: ADID streams - NIPC 1995; Floodplains - FEMA 1996; Soil slopes - USDA NRCS; Watershed Planning Areas (draft) - CMAP & ISWS

Map Date: rev. Mar. 16, 2011 - HH



Chicago Metropolitan
Agency for Planning



Sensitive Aquifer Recharge Areas, Shallow CWS Wells, & Hydric Soils in the Sleepy Hollow & Silver Creek Watershed Planning Area

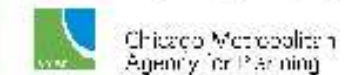
- Watershed Ping Area_SH
- Watershed Ping Area_SC
- County Boundary
- Twp Boundary
- ADID Streams
- Shallow Wells
- LUST sites
- Ph 2 Wellhead Protection Areas, 2010
- Hydric Soils**
 - Hydric
 - unknown
- Sensitive Aquifer Recharge Areas**
 - High Potential for aquifer contamination
 - Mod. High Potential for aquifer contam.



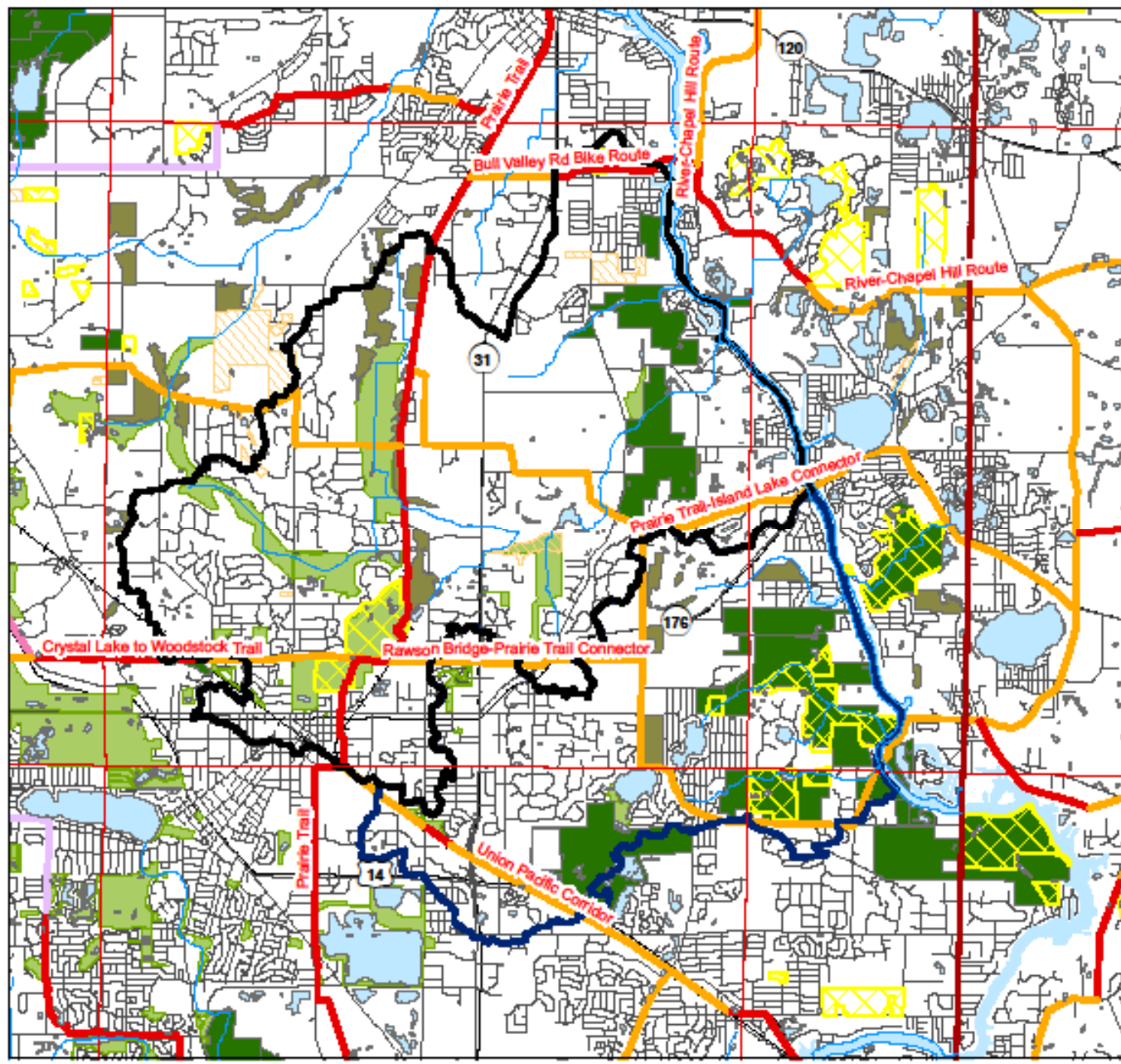
0 0.5 1 2 Miles

Data Sources: Sensitive Aquifer Rechg Areas - McHenry Co. Div. Water Resources; Wells (active in 2005) - ISWS; Ph 2 WHPAs - IEPA; LUST sites - IEPA; Hydric soils (clipped) - NRCS; ADID Streams - NIPC 1999; Watershed Planning Areas (draft) - CMAP & ISWS

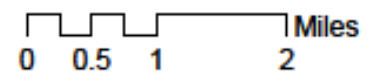
Map Date: Feb. 8, 2011 - ME; rev. Mar. 16, 2011 - HH



Existing & Planned Regional Bikeways in the Sleepy Hollow & Silver Creek Watershed Planning Area

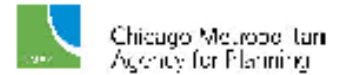


- Watershed Ping Area_SH
- Watershed Ping Area_SC
- County Boundary
- Twp Boundary
- ADID Streams, 1999
- Regional Trails, 2009**
 - Existing
 - Programmed (funded &/or under construction)
 - Planned (part of an adopted plan)
 - Future (corridor considered in ping exercises)
- Illinois Nature Preserves
- Land Conservancy McHenry Co
- McHenry County Conservation District
- Nunda Township Land Use**
 - Protected Open Space (current)
- Crystal Lake Land Use**
 - Parks & Open Space (current)



Data Sources: Regional bikeways - CMAP 2009; Illinois Nature Preserves - IDNR INHD 2005; Land Conservancy of McHenry Co. sites - LCMC 2011; McHenry Co. Cons. Dist. sites - MCOCD 2010; Nunda Twp. Comprehensive Plan, 2009-2013 - NundaTwp.; Crystal Lake Land Use, 2020 Comprehensive Plan - City of Crystal Lk; Watershed Planning Areas (draft) - CMAP & ISWS; ADID streams - NIPC 1999.

Map Date: Feb. 6, 2011 - ME; rev. Mar. 16, 2011 - HH



Community Input

Integrate:

- Floodplains
- Hydric soils
- Riparian corridors
- Buffers
- Fragmented natural areas, isolated wetlands
- Illinois Nature Preserves
- McHenry Co. Natural Area Inventory sites
- Trail connections

Also consider:

- Organic soils
- Soils with excessive permeability

Community Input

Protect / Preserve:

- Already-protected natural areas
- Recharge areas for groundwater-dependent Nature Preserves (fens)
- Steep slopes
- Oak stands
- Isolated wetlands
- Stream headwaters
- Threatened & endangered species

Community Input

3 Basic Principles:

- Connect open space down to the Fox River
- Make islands bigger
- Create/maintain buffers

Utilize:

- Acquisition by public entities
- Conservation easements on private land
- Agriculture conservation programs
- Conservation site planning & site design for new development (low impact development)
- Retrofitting in existing development
- Trail connections

Possible Green Infrastructure Framework

Class III groundwater protection zones

Existing oak stands

Class I – Open Space Reserves

Class II – Developable Land

Class III – Developed Land

Stream Network (wetlands - connected or isolated, lakes, headwaters)

T & E Sites / INAI & McNAI Sites

100-year floodplain / 100 ft. buffers

Corridors connecting stream system w/existing public & private conservation areas

Hydric, organic, & excessive permeability soils

Sensitive Aquifer Recharge Areas

Undeveloped Space w/in watershed

Existing, proposed, & potential open space, greenways & trails

Other developed sites w/in watershed

Protection Measures

- Acquisition
- Conservation Easements

Conservation Measures

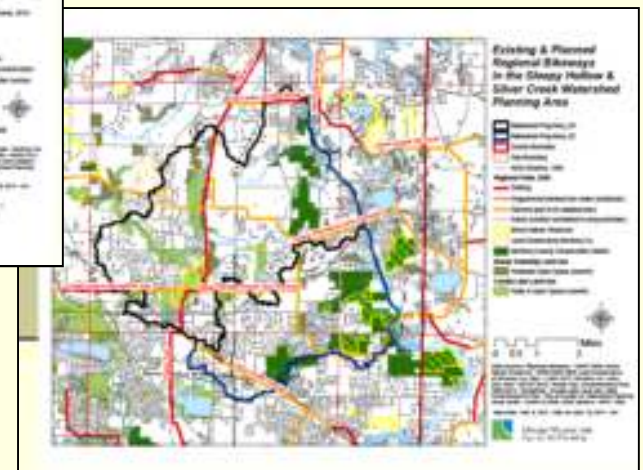
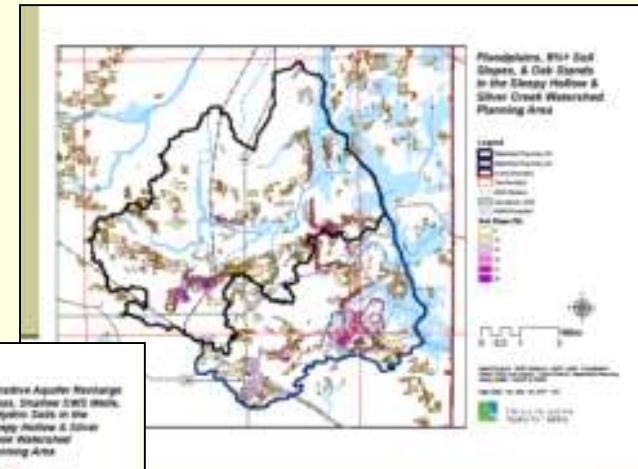
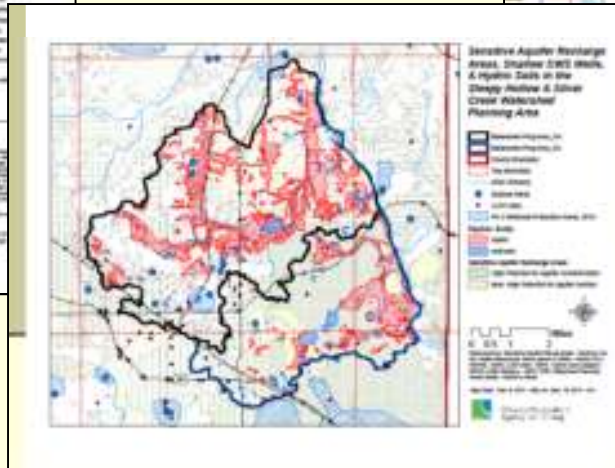
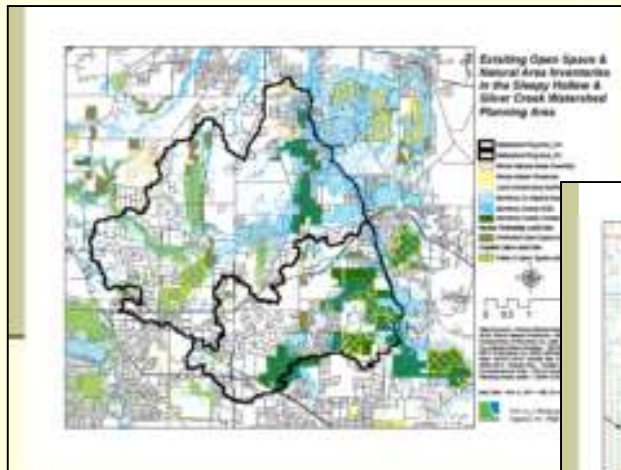
- Low Impact Development
- Advanced BMPs

Retrofit Measures

- Stormwater BMPs

Green Infrastructure in Our Watershed Plan

.... Let's go to some of the big maps...



Questions & Comments

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