

Chapter 10

Slough Creek Subwatershed Assessment

This section presents a summary of the characteristics of the Slough Creek Subwatershed, as well as specific issues and challenges in this subwatershed that must be addressed in the Nippersink Creek Watershed Management Plan.

10.1 Subwatershed Characteristics

The following section provides an overview of the physical characteristics of the subwatershed.

10.1.1 Subwatershed Location

The Slough Creek Subwatershed has an area of 11,876 acres (18.6 square miles) and is located in the southwestern portion of the Nippersink Creek Watershed, as shown in Figure 10.1. The Slough Creek Subwatershed straddles Hartland and Greenwood Townships, with the northern boundary extending just over the township line into Alden and Hebron townships.

Figure 10.1 Slough Creek Subwatershed Location Map

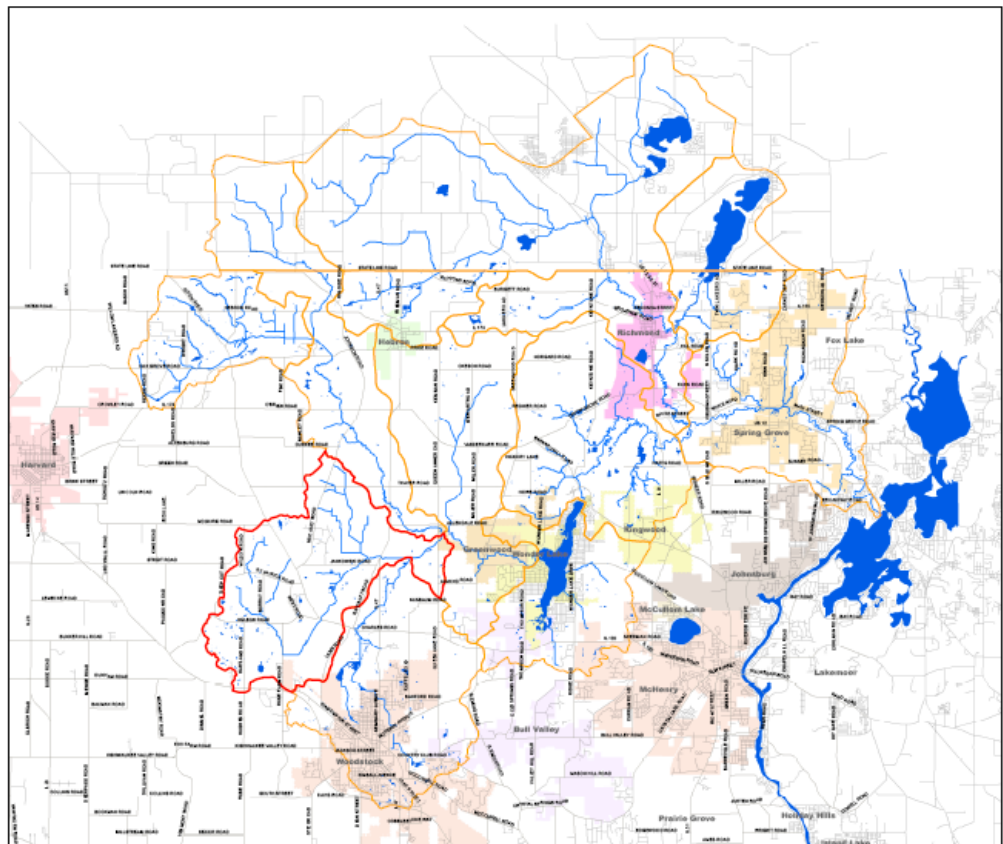
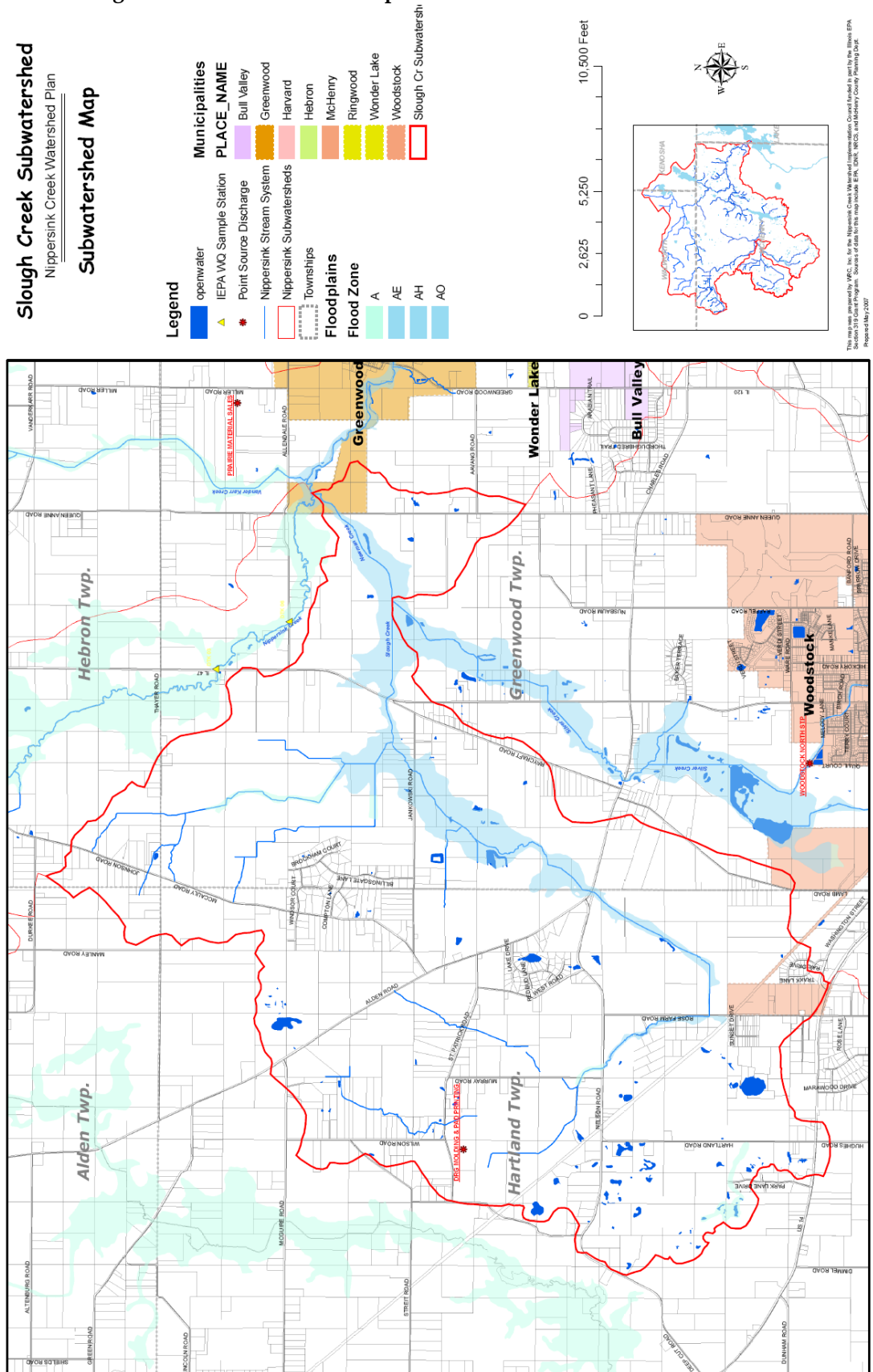


Figure 10.2 Slough Creek Subwatershed Map



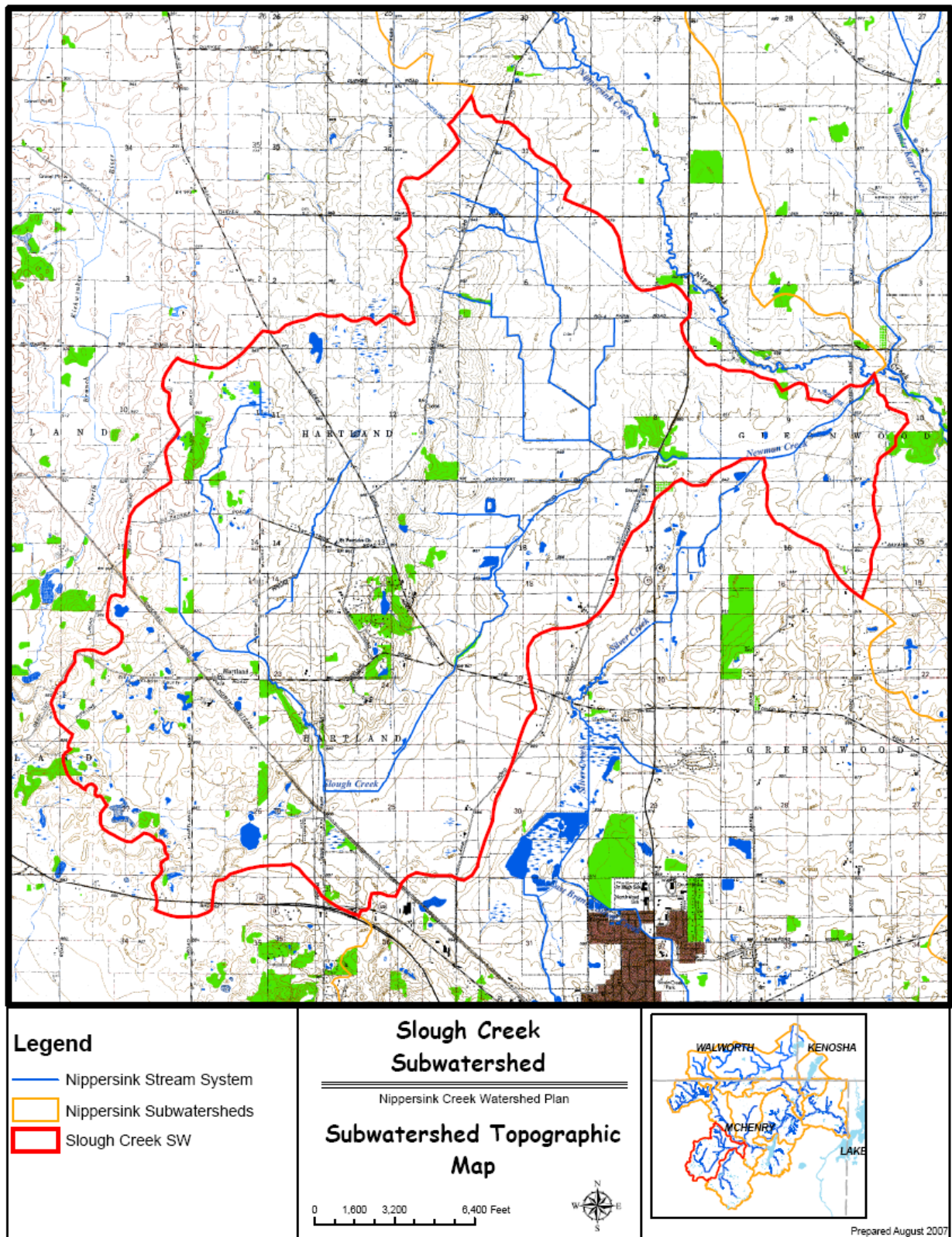
10.1.2 Topography & Geology

The topography of the subwatershed varies greatly. The higher elevations and internal drainage divides have given the drainage features of the subwatershed a “U” shape. There is a large internal drainage divide or ridge line that extends from the northern subwatershed boundary south about 2/3 the length of the subwatershed towards the southern boundary.

This ridgeline is located generally along West Road and McNaully Road. The western half of the subwatershed is higher and has a relatively gentle slope to the south, due to the ridge line that bisects the subwatershed in the middle. This ridge line has a steep slope on the eastern side; dropping in elevation between 80 and 140 feet at slopes ranging from 3 to 5%.

The eastern half of the subwatershed is relatively flat and slopes from the southwest to the northeast towards the confluence of Slough Creek with Silver Creek. The maximum elevation in the subwatershed is 1,006 feet above MSL near the Illinois - Wisconsin state line and the minimum elevation is 836 at the subwatershed outlet just east of Queen Anne Road.

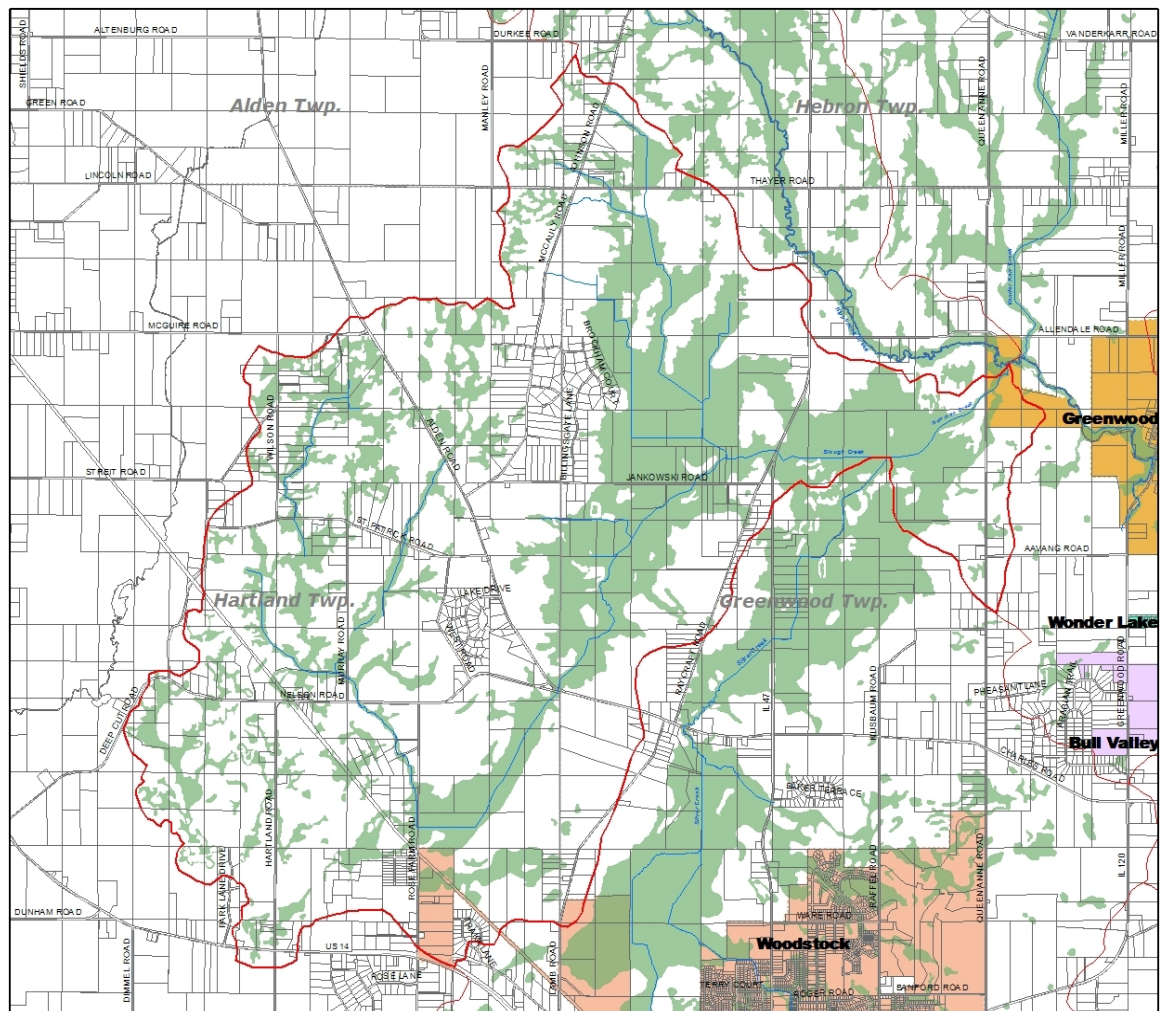
Figure 10.3 USGS Topographic Map for the Slough Creek Subwatershed



10.1.3 Soil Characteristics

The soils in the subwatershed consist of mostly silty and silty loams soil units on 0% - 2% slopes. The glacial advances across McHenry County resulted in a wide variety of soil associations. Each major grouping of soil associations has potential impact on current and future land uses within the subwatershed. For example, hydric (wetland) soils constitute 4,672 acres, or 39% of the 11,876 acre subwatershed, and indicate those areas that contain functional wetlands, or former / degraded wetland areas that could be restored or enhanced.

Figure 10.4 Hydric Soils Map of the Slough Creek Subwatershed



10.1.4 Pre-settlement Vegetation of the Slough Creek Subwatershed

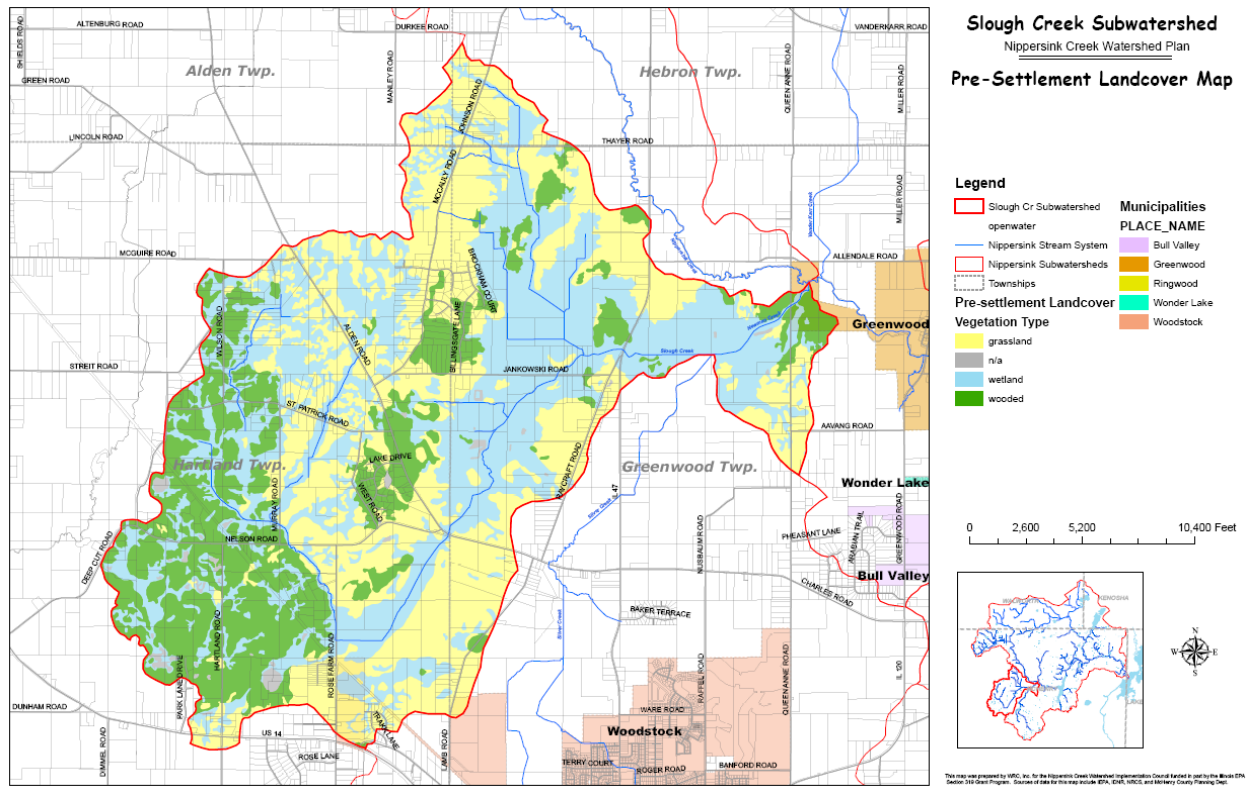
To guide future land management or restoration efforts, it is important to recognize the native plant communities that naturally evolved subsequent to the last glacial advances. Prior to European settlement in the 1830's, the subwatershed was covered by extensive wetland and prairie complexes in the eastern two-thirds and predominantly woodlands in the western one-third, as described in Table 10.1, and depicted in Figure 10.5.

Table 10.1 Pre-Settlement Land Cover Conditions of the Slough Creek Subwatershed

Cover Type	Area	Percent of Subwatershed
Grasslands	4,425 acres	37%
Wooded	2,665 acres	22%
Wetlands	4,698 acres	40%
n/a	88 acres	< 1%

Source: MCCD Soils Analysis using GIS data

Figure 10.5 Pre-settlement Vegetation of the Slough Creek Subwatershed



10.1.5 Subwatershed Drainage Features

Streams

The principal stream in the subwatershed is, of course, Slough Creek. Slough Creek has its origins in northeast Hartland Township, near Wilson Road and Alden Road. The stream travels south from here to Rose Farm Road, where it turns and runs to the northeast towards Jankowski Road, and then to its confluence with Silver Creek about one mile east of Raycraft Road in Greenwood Township. Where Slough Creek and Silver Creek join, the stream has been named Neuman Creek, which continues downstream for about one mile, where the stream merges with Nippersink Creek, east of Queen Anne Road.

There are three tributary streams in the subwatershed, all of which appear to have been excavated during the onset of conversion of the historic wetlands and prairies into fertile agricultural lands. The uppermost reaches of Slough Creek appear to have been channelized, and in some places, buried and converted into a drain tile, as the open channels near St. Patrick Road do not have surface connections to the main stem of Slough Creek north of Nielson Road.

Channelization Analysis of aerial photography indicates that Slough Creek has been subjected to extensive channelization. Of the 20.2 miles of stream channels in the subwatershed, about 92% have been ditched and channelized to better serve the intense agricultural activities that dominate the area. There are only four segments of Slough Creek that have not been channelized, and none of them are more than 2,100 feet in length.

Stream Channel Condition There is no documented information regarding the stream condition of Slough Creek or its tributaries. The streams appear to be unmanaged and are usually confined within a narrow corridor of herbaceous grasses or low quality deciduous trees. Along channelized reaches, the stream corridor ranges in width from about 60 to 100 feet. There are short reaches, however, where the un-maintained stream corridor (i.e. not used for agricultural production) is as wide as 1,200 feet or more. An example of this occurrence can be found at the Slough Creek Wetlands / Standlee Fen MCNAI site between Jankowski Road and Charles Road.

Impoundments There are two on-line impoundments on Slough Creek. One is located just upstream of Rose Farm Road, and appears to be manmade. The second appears to be created by a beaver dam within the Slough Creek Wetland/ Standlee Fen MCNAI site.

There are 114 impoundments within the subwatershed, ranging in size from less than a ¼ acre to more than 14 acres. The majority of them appear to have been manmade ponds or small lakes constructed for landowner's recreation. Many of them may have been isolated wetland pockets that were excavated to create a permanent open water feature.

Manmade Drainage Systems

There are no significant storm sewer systems within the subwatershed. Nearly all of the development in the subwatershed is rural residential or large lot (1 acre +) residential and likely to be drained via overland swales, roadside ditches and culverts installed along road right-of-ways. There is only one stormwater detention basin identified, and that is a dry-bottom style detention basin serving the unincorporated industrial / commercial development in the far southern edge of the subwatershed, at Washington Street east of Rose Farm Road.

Agricultural Tile Systems

Due to the predominantly agricultural nature of the subwatershed, it is likely that there are extensive underground drain tile systems to increase productivity of the area's rich soil. These systems were likely installed more than fifty years ago by private property owners, and therefore there is little documented information about their size and exact location, although their distribution can be generally determined by inspection of a combination of aerial photographs, hydric soils and topography. Based on preliminary observations as part of this subwatershed assessment, it appears that there are several small to medium size agricultural drain tile networks that provide subsurface drainage to many farmed parcels that are adjacent to the tributary streams in the subwatershed.

Identifying agricultural drain tile networks is important in watershed planning because current local flooding and drainage problems can often be linked to damage or age-related failure of drain tile systems. From a watershed preservation / restoration perspective, it is important to identify functional drain tile systems to determine opportunities for their removal or reconfiguration for the purposes of restoring valuable wetland habitat, and water quality benefits. There is little doubt that many of the depressional and low lying areas in the subwatershed that are serviced by drain tiles today for agriculture were once wetland habitats that supported a very diverse ecosystem.

Floodplains

The true floodplain system within the subwatershed has not been mapped to date. Existing FEMA floodplain maps depict the floodplain of Slough Creek as "Zone A", meaning that a floodplain analysis has not been done to accurately determine the elevation or spatial limits of the 100-year floodplain.

10.1.6 Population

Population data in watershed planning is critical because of there is a direct correlation between the number of people residing in a watershed and the degree of impacts to the quality and quantity of the watershed's natural resources.

Using US Census data compiled by the Fox River Study Group for the Nippersink Creek subwatersheds, past population data are available for the combined area of the Vander Karr and Slough Creek subwatersheds. This data indicated that in 1990, about 2,875 people lived in the subwatershed, which equated to 76 persons per square mile. According to the 2000 US Census, the population increased to 3,300 people, or about 88 persons per square mile. While this represents an increase of about 11%, the overall growth in the subwatershed to date is considered slow, as the population only increase by about 425 people over the 37.4 square mile study area (Slough & Vander Karr subwatersheds combined).

10.1.7 Land Cover

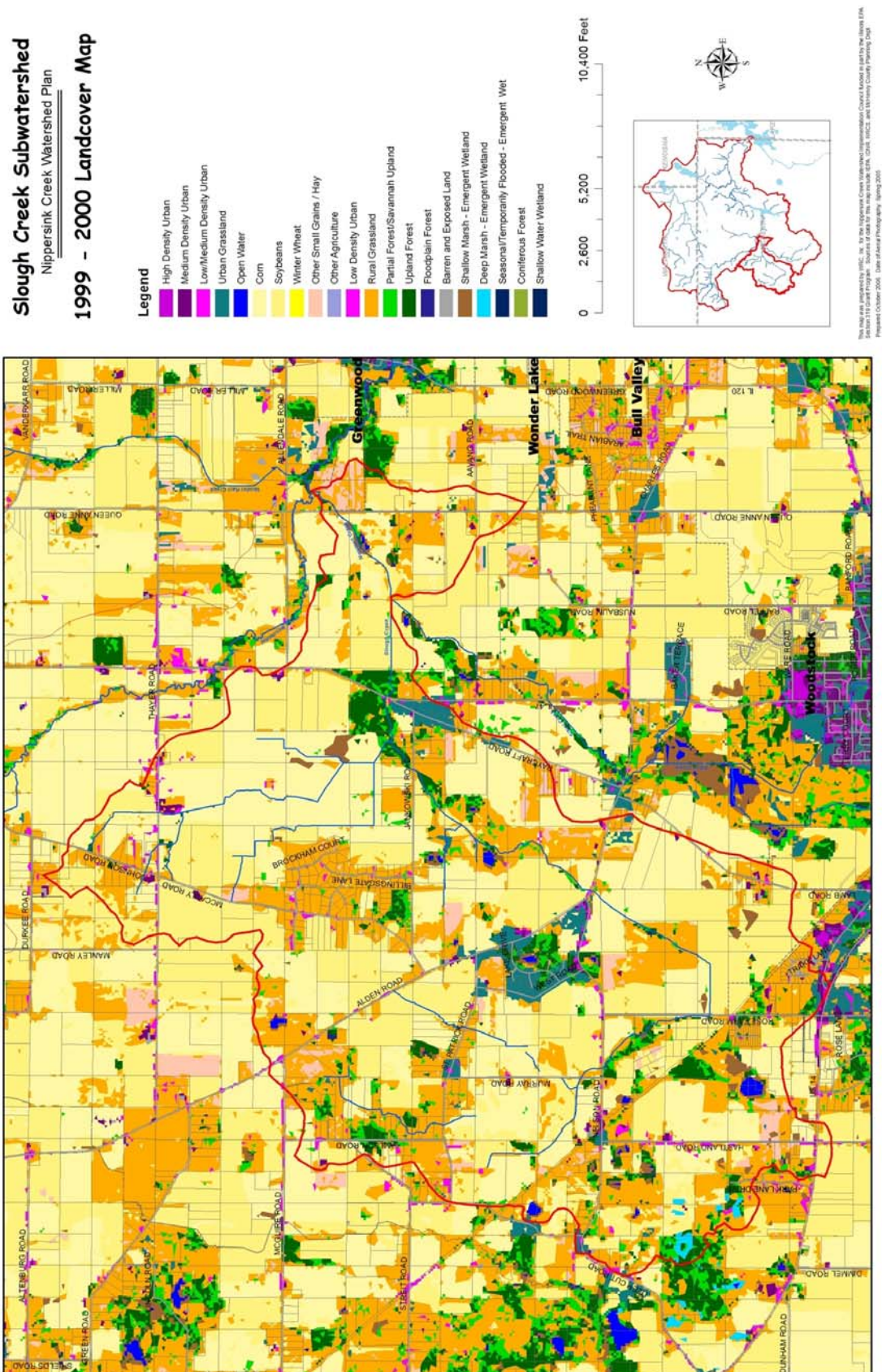
Often, the terms Land Cover and Land Use are used interchangeably. However, there are differences. Land Cover refers to the vegetation, structures, or other features that cover the land. On the other hand, Land Use (as discussed in Section 10.1.8) refers to how land is used by humans.

Land cover data for the subwatershed is available from the Illinois Department of Natural Resources using LANDSAT data collected between 1998 – 1999. The dominant land use according to the 1999-2000 data was row crop agriculture, which accounted for roughly 61% of the subwatershed area. Rural grasslands, including pasture lands and nurseries accounted for another 26% of the subwatershed. These two land cover categories account for 87% of the subwatershed.

Table 10.2 1999 Land Cover for the Slough Creek Subwatershed

Land Cover Description	Total Acres	Percent of Subwatershed
Barren & Exposed Land	8.18	0.1%
Corn, Soybeans, Other Small Grains & Hay (row crop agriculture)	7,263.8	61.2%
Winter Wheat	0.34	0.0%
Rural Grassland	3129	26.4%
Low Density Urban	116.3	1.0%
Medium Density Urban	67.45	0.6%
High Density Urban	4.2	0.0%
Urban Grassland	267.11	2.3%
Shallow Marsh – Emergent Wetland	154.54	1.3%
Partial Forest / Savannah Upland	315.5	2.7%
Upland Forest	468.26	3.9%
Floodplain Forest	9.1	0.1%
Deep Marsh / Emergent Wetland	25.9	0.2%
Open Water	41.1	0.3%
TOTAL	11,870.8	100%

Figure 10.6 1999-2000 Land Cover Map for the Slough Creek Subwatershed



10.1.8 Land Use / Existing Watershed Development

According to the 2005 McHenry County Land Use / Zoning map, 85% of the subwatershed is zoned agriculture, while about 15% is either already developed or zoned for development in the near future.

Table 10.3 McHenry County 2005 Land Use in Slough Creek Subwatershed

Land Use	Total Acres	Percent of subwatershed
Vacant	0	0.0%
Vacant; Zoned Residential	133.5	1.1%
Vacant; Zoned Commercial	0.5	0.0%
Vacant; Zoned Office	0	0.0%
Vacant; Zoned Industrial	56.9	0.5%
Agricultural	10,056.8	84.7%
Single Family Residential	1,156.5	9.7%
Multi-Family Residential	0.9	0.0%
Commercial	2.75	0.0%
Office	0	0.0%
Industrial	42.9	0.4%
Mixed Use	0	0.0%
Mining	0	0.0%
Open Space	53.77	0.5%
Institutional	91	0.8%
Right of Way	280.5	2.4%
TOTAL	11,876	100.0%

**Source: 2005 McHenry County Land Use Zoning
Data for Slough Creek Subwatershed**

Developed land accounted for about 7.7% of the subwatershed, consisting almost entirely of unincorporated, large lot rural residential development. To date, municipal expansion into the subwatershed has been almost non-existent, as nearly 99% of the subwatershed was classified as unincorporated in 2005.

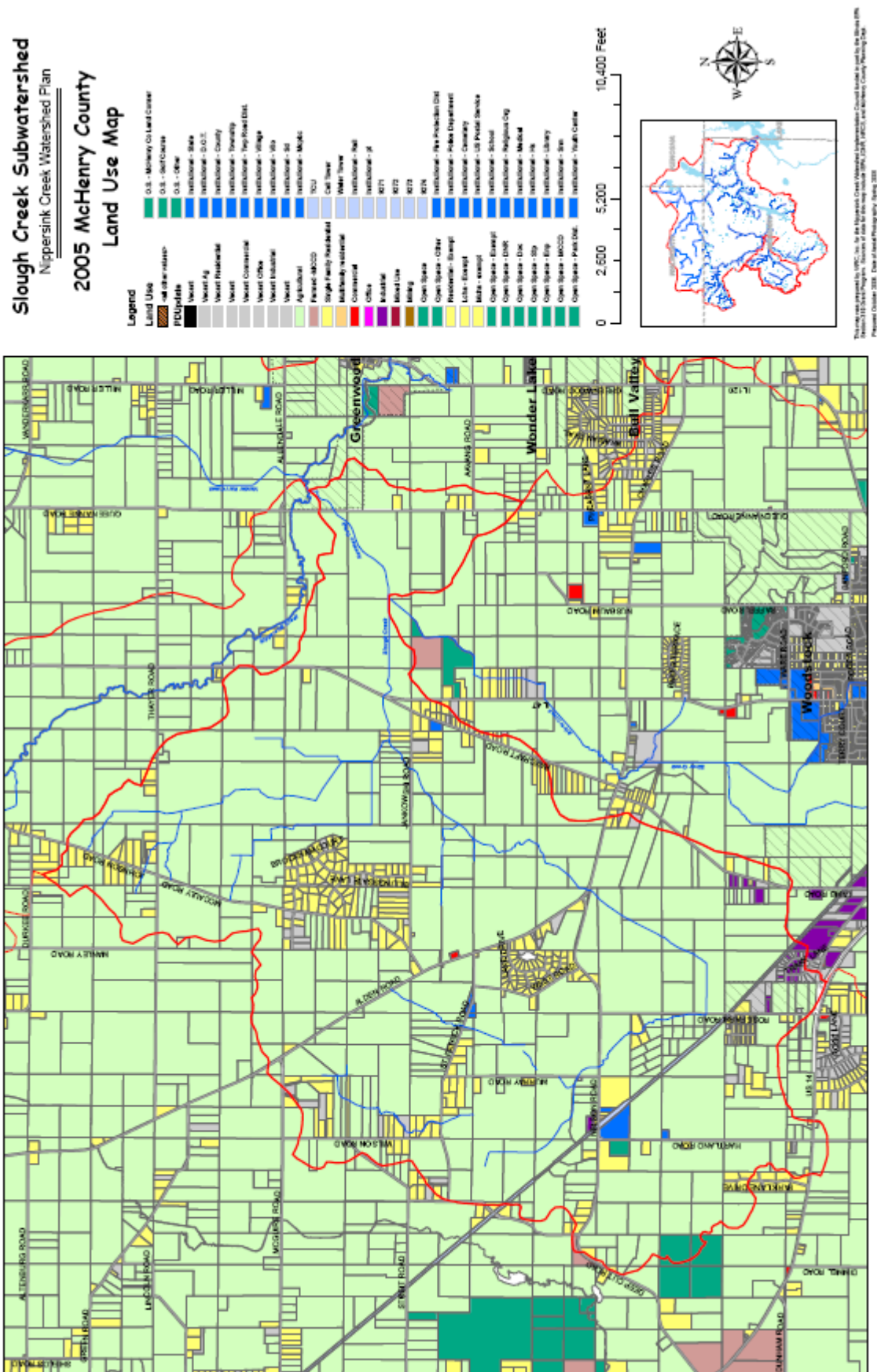
Table 10.4 Municipal Areas in the Slough Creek Subwatershed

Municipality	Area (acres)	Percent of Subwatershed
Village of Greenwood	67	0.6%
Village of Woodstock	134	1.1%
Unincorporated	11,675	98.3%

Permit Point Source Discharges There are no verified permitted point source discharges in the subwatershed. According to the Illinois IEPA NPDES database, Prairie Material Sales, Yard 23, maintains a NPDES permit for stormwater discharge near Miller Road and Allendale Road (permit # IL0071731), however, a review of 2005 aerial photography does not indicate the presence of land disturbance activities indicative of a point source discharge.

Road Network An analysis of GIS roadway data indicates that there are 33.2 miles of roads in the subwatershed. This is approximately 112 acres of pavement.

Figure 10.7 McHenry County 2005 Land Use in Slough Creek Subwatershed



10.1.9 Natural Resources

McHenry County Conservation District Property

The McHenry County Conservation District (MCCD) does not own any parcels within the Slough Creek Subwatershed, although two adjacent MCCD properties extend slightly into the subwatershed. These properties account for less than 0.1% of the subwatershed area.

Table 10.5 **MCCD Properties in Slough Creek Subwatershed**

Name	Area (acres)
Brookdale	3.28
Bystricky Prairie	1.94
Total	5.22

McHenry County Natural Areas Inventory

There are six McHenry County Natural Area Inventory (MCNAI) Sites within the subwatershed, representing about 5% of the subwatershed area.

Table 10.6 **McHenry County Natural Areas Inventory Sites in Slough Creek Subwatershed**

MCNAI Site ID #	Name	Area (acres)
GRE09	Slough Creek Wetlands / Standlee Fen	379
HAR08	Lakota Wetlands	115.9
GRE08	Slough Creek Meadow	48.4
HAR02	Alden Road Wetland	19.8
HAR01	Rose Farm Prairie	5.8
GRE01	Aavang-Lind Woods	4.4
	Total	573.3

These MCNAI sites contain several significant natural features, including a graminoid fen, sedge meadows, a streamside marsh, wet silt loam prairies, mesic silt loam prairie, dry mesic silt loam woodland, and mesic silt loam woodland.

Wetlands

McHenry County completed an Advanced Identification (ADID) Wetland Study in 1998. This study identified a total of 1,058 acres of wetlands, or 9% of the subwatershed. Of these wetlands, 785.1 acres (74%) were determined to be of High Quality or High Functional Value, rating an ADID classification.

Table 10.7 Mapped Wetlands in the Slough Creek Subwatershed

ADID Code	Wetland Type	# of Wetlands	Total Acres
FW	Farmed Wetlands	43	99.0
HFVW	High Functional Value Wetlands	18	336.7
HQL	High Quality Lakes	0	0
HQW	High Quality Wetlands	7	448.4
L	Lakes	0	0
W	Other Wetlands (lower quality)	79	174.0
	TOTAL	147	1,058.1

The most significant wetland in the subwatershed is the 308 acre high quality wetland found within the Slough Creek Wetland / Standlee Fen MCNAI site. Currently considered a high-quality wetland complex, this wetland is threatened by invasive species intrusion (Reed Canary Grass), and drainage modifications (ditching / channelization). This wetland complex also lies within parcels that are planned for future development, which may encroach into the wetland boundary or alter the wetland's hydrology and water quality.

Threatened & Endangered Species

The McHenry County Natural Area Inventory database has identified several threatened or endangered species of plants and animals that inhabit the remaining natural areas of the subwatershed. They are listed below:

Table 10.8 Threatened and Endangered Species in the Slough Creek Subwatershed

Common Name	Scientific Name	Type	Status	MCNAI Site
Eastern Prairie Fringed Orchid	Platanthera leucophaea	Plant	St Endangered & Fed Threatened	GRE09
Black Tern	Chlidonias niger	Bird	St Endangered	HAR08
Yellow-Headed Blackbird	Xanthocephalus xanthocephalus	Bird	St Endangered	HAR08
Blanding's Turtle	Emydoidea blandingii	Reptile	St Threatened	HAR08

Existing Greenways

There are no formal greenways established in the subwatershed. The stream corridor in most places has been severely encroached upon by adjacent agriculture, with exceptions at locations of larger wetland complexes that probably proved too wet to accommodate farming or grazing. None of the 20+ miles of stream channel are protected, as there are no MCCD properties or private conservation easements along slough Creek or any of its tributaries.

10.2 Analysis of Subwatershed Data and Problem Identification

10.2.1 Water Quality Data & Identified Problems

The Illinois Environmental Protection Agency (IEPA) is the lead agency in Illinois that monitors and regulates water quality in our rivers, lakes, and streams.

The IEPA has determined that the designated uses for Nippersink Creek are to support:

- Aquatic Life
- Fish Consumption
- Primary Contact
- Secondary Contact
- Aesthetic Quality

The IEPA periodically produces a [303\(d\) list](#), which identifies waterways that are not achieving certain designated uses. In the 2006 IEPA 303(d) list, Nippersink Creek is identified as being in Full Support of its Aquatic Life Designated Use, which is notable for a stream in northeastern Illinois.

Unfortunately, Slough Creek and its tributaries were not assessed in this IEPA report, probably due to the fact that Slough Creek is a small tributary to the Nippersink, and the IEPA has very limited funds for their state-wide water quality monitoring program.

The Illinois Environmental Protection Agency does not maintain any water quality sampling stations on Slough Creek. Likewise, the Fox River Watershed Monitoring Network, administered by the not-for-profit Friends of the Fox River, also has not established any volunteer stream monitoring sites on Slough Creek, as of 2006.

10.2.2 Flooding Problems

There are no known flooding problems in the subwatershed. The existing FEMA 100-year Floodplain Map suggests that there are no dwellings in the 100-year floodplain. The floodplain and floodway for Slough Creek have been studied and mapped from the confluence upstream to Nelson Road; about 80% of the length of Slough Creek.

10.2.3 Projected Development & Growth

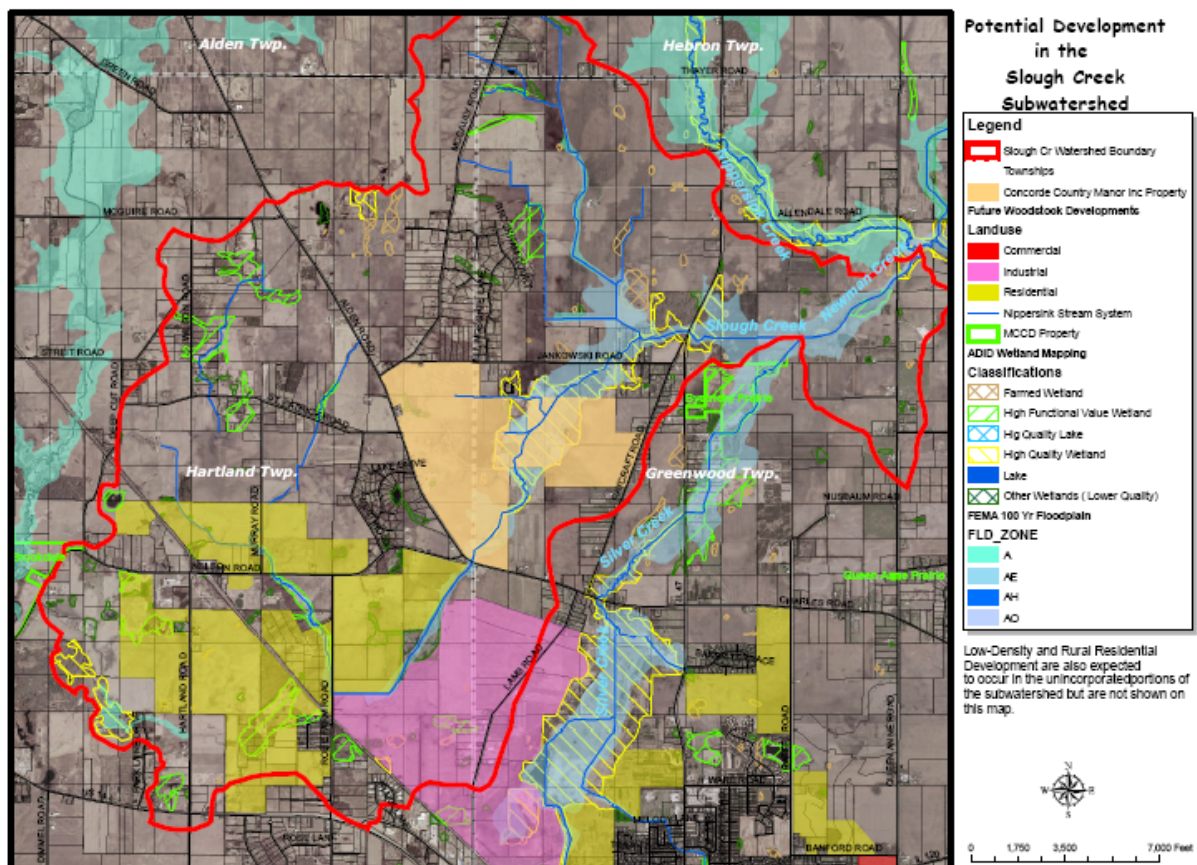
Future development and land use change in the subwatershed is likely to be dominated by the conversion of agricultural land to large lot (1+ acre), rural residential type of development. This development will likely continue in the subwatershed at a moderate pace.

Future suburban development in the subwatershed is expected to be extensive, particularly in the southern half of the subwatershed. The most intensive land use changes are expected to occur as part of annexation and expansion northward by the City of Woodstock. Analysis of their current Comprehensive Land Use Plan (5/7/2002) indicates that an additional 2,360+ acres of new development is expected in the subwatershed alone. 1,560 acres of this proposed development plan is expected to be residential; 60 acres is planned for Commercial / Industrial / Office Mixed Use; and 740 acres is planned to become industrial.

There may also be additional residential development outside of Woodstock's current plan boundary, as there are nearly 800 acres of land north and east of Charles and Alden Roads that are owned by a development company. This area is of special significance because the parcels owned by the developer contain more than 150 acres of ADID High Quality Habitat wetland; part of the Slough Creek Wetlands / Standlee Fen NAI site.

Therefore, if current plans hold true, the City of Woodstock will have jurisdiction over at 2,900+ acres of the subwatershed (24% of total). While the current stormwater ordinances will likely prevent significant encroachment into sensitive natural areas, the current land development practices and stormwater management methods will probably create a significant increase in total stormwater runoff and a decrease in water quality in the streams.

Figure 10.8 Future Development in the Slough Creek Subwatershed



10.2.4 Natural Area Protection / Preservation Issues

McHenry County Natural Area Inventory Sites

The Slough Creek Wetlands / Standlee Fen site (MCNAI GRE09), has been identified by the MCCD as being impacted by stream bank erosion, channelization, siltation, water table alteration, brush encroachment, Reed Canary Grass, and development (future development). The Lakota Wetlands (MCNAI HAR08), located on the watershed divide between the Nippersink Watershed and the Kishwaukee Watershed, has also been identified by the MCCD as being impacted by artificial pond construction, water table alteration, and invasive species such as various non-native brush, Cattails, and Reed Canary Grass. Neither of these high quality natural areas are protected, other than the protections afforded to them through the McHenry County Stormwater Ordinance or Conservation Design Ordinance, if future development occurs.

Wetlands

In the subwatershed, only 1,058 acres of wetland remain, compared to an estimated 4,673 acres that existed before settlement. That means that 77% of the wetlands have already been lost and can no longer provide the valuable functions described above. Therefore, it is critical that the remaining wetland resources in the subwatershed be protected and managed so that stakeholders can gain from the benefits these wetlands provide.

There are seven High Habitat Quality wetland complexes in the Slough Creek Subwatershed, ranging in size from three acres to more than 300 acres. Many of these wetlands need either protection and/or restoration to maintain the high quality characteristics that make the wetlands so valuable to the watershed.

Uplands

Most of the upland forest areas and oak savannah remnants in the subwatershed are located on private property and have no form of permanent protection and no active management program to control invasive species.

10.3 Subwatershed-Specific Recommendations to Protect Water Resources

The following section discusses the Best Management Practices (BMP's) identified for this subwatershed that should be implemented to address existing or potential water quality impairments. The location of each recommended BMP project is presented in Figure 10.9.

Pollutant Loading Modeling, as discussed in Chapter 3, identified current and future pollutant loadings, based upon land use, soils, slopes, etc., and quantified these loadings. The results of this Pollutant Loading modeling were then used to identify the types of BMP's that should be implemented to create a loading reduction of those pollutants. Table 10.9 presents a summary of the recommended BMP projects, as well as the expected pollutant loading reductions expected if the BMP's are implemented, and function as intended.

Table 10.10 presents detailed cost and logistical information on each of the recommended BMP projects. Below is a summary list of recommendations for the subwatershed to help stakeholders and decision makers meet the Goals and Objectives set forth for Nippersink Creek. Background information regarding how each type of recommendation addresses watershed concerns and/or impairments (existing or future) can be found in Chapter 4.

Type:	Education / Outreach; Regulatory; Site Restoration; Monitoring; Permanent Habitat Protection, Water Quality
Target Goals:	Which watershed plan goals the recommendation is intended to address.
Initial Implementation Cost:	The initial cost, in 2007 dollars to initiate the recommended action, if applicable.
Initial Outreach Cost:	The initial cost, in 2007 dollars to initiate the recommended action, if applicable.
Annual Cost:	The long term expected annual cost (in 2007 dollars) to successfully implementation of the recommendation
Responsible Party:	Identifies the LEAD agency, entity, or landowner who will ultimately have to execute the recommendation. SUPPORTING parties, such as government agencies, grant sources, etc. may also be identified here.
Priority:	A ranking of the BMP recommendations, based upon the nature / urgency of the existing / potential impairment; the availability of willing landowners)/ partners; short-term vs. long-term development pressure; and whether the project is a new effort, or a retrofit of an existing practice.

The project cost estimates contained in this report should be considered preliminary, and are only presented to identify the potential magnitude of cost, from a watershed scale perspective. No site-specific investigation, analysis, or design of any recommended project, from which accurate cost information could be obtained, was completed as part of the preparation of the 2008 Nippersink Creek Watershed Plan.

If a watershed stakeholder decides to apply for grant funding assistance to implement any of the recommended projects presented in this report, they should first undertake any additional studies / research needed to determine an updated / accurate project cost. They should not solely rely on the cost estimates presented in the NCWP report as the basis for their grant request.

Note: The following acronyms for responsible parties identified in Table 10.12 are presented below:

NCWPC	Nippersink Creek Watershed Planning Committee
NRCS	Natural Resource Conservation Service
SWCD	McHenry County Soil and Water Conservation District
MCCD	McHenry County Water Conservation District
TLC	The Land Conservancy of McHenry County
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
MCDOT	McHenry County Department of Transportation
MCDEF	McHenry County Defenders

Figure 10.9 Slough Creek Subwatershed Site Recommendations Map

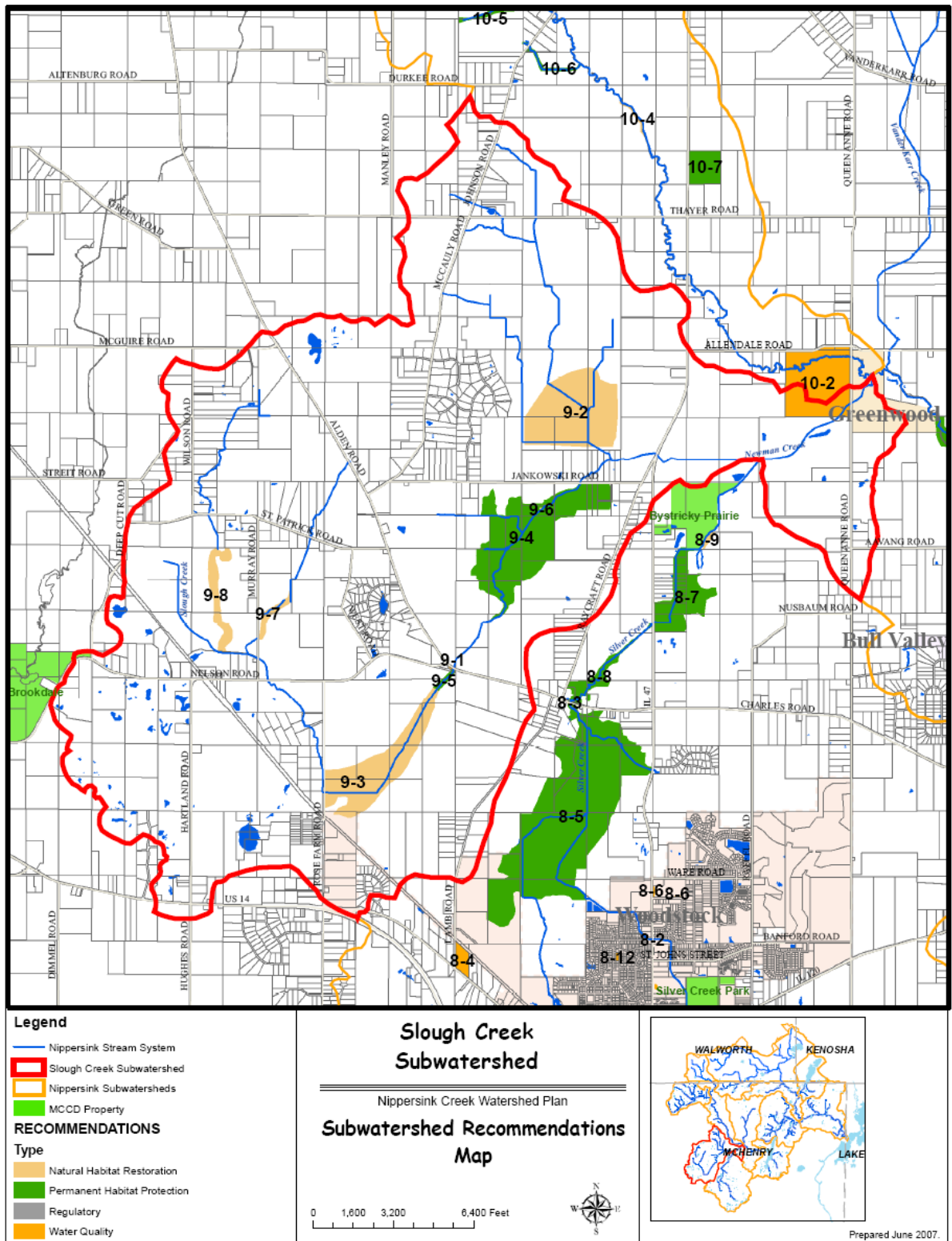


Table 10.9 BMP Selection & Associated Pollutant Load Reduction for the Slough Creek Subwatershed

BMP	Type of BMP	Project Locations**	BMP		Removal Efficiency***			(lbs/year)****			Percentage Reduction		
			Size	Unit	TN	TP	TSS	TN	TP	TSS	TN	TP	TSS
Natural Habitat Protection	Site-specific	9-2, 9-3, 9-6, 9-7	13	acres	30%	35%	60%	77	6	7	0.2	0.2	0.3
Conservation Development Practices	Site-specific	9-3, 9-4, 9-8	38	acres	52%	58%	64%	389	31	22	0.8	0.9	1
Dam Removal / Modification	Site-specific	9-6	1	lump sum	0%	0%	0%	0	0	0	0	0	0
Regulatory*	Watershed-Specific	Subwatershed	1	Water-shed	5%	5%	5%	2,338	169	109	5	5	5
Nutrient Management	Watershed-specific	Subwatershed wide	1,187.00	acres	70%	28%	-	16,367	472	-	35	14	-
Wetland Restoration	Site-specific	9-2, 9-3	163	acres	53%	51%	88%	1,702	118	132	3.6	3.5	6
Stream Corridor Restoration	Site-specific	9-1, 9-5, 9-7, 9-8	286	acres	53%	51%	88%	2,986	207	232	6.4	6.1	10.6
Total								23,860	1,003	502	51	29.8	23

* Regulatory programs are assumed to have nominal pollutant reduction rates of 5%.

** Project locations and details are described in the corresponding chapter.

*** TN = total Nitrogen; TP = total Phosphate; TSS = total suspended solids or Sediment.

**** The unit of "TSS" is "Tons/year".

***** The cost indicates the review/investigation fee only.

Table 10.10 Recommended Projects in the Slough Creek Subwatershed

SUB WATERSHED	RECOMMENDATION #	TARGET GOAL	DESCRIPTION	RESPONSIBLE PARTY	ACRES	UNIT COST	INITIAL IMPLEMENTATION COST	INITIAL OUTREACH COST	ANNUAL MAINTENANCE COST	PRIORITY	
Slough Creek	9-1	Water Quality	Government Outreach to install BMP's to treat roadway runoff prior to discharge into Slough Creek at Charles Road	NCWPC / MCHENRY DOT				\$25,000	\$500	\$1,250	E
Slough Creek	9-2	Natural Habitat Restoration	Landowner / Government Outreach to determine feasibility Potential for 200+ acre wetland restoration on unnamed tributary to Slough Creek north of Jankowski Road / west of Raycraft Road	NCWPC / NRCS	215.4	\$2,500	\$538,560	\$1,500	\$21,542		D
Slough Creek	9-3	Natural Habitat Restoration	Landowner / Government Outreach to determine feasibility of 150+ acre wetland restoration on Slough Creek between Charles Road and Rose Farm Road; Conservation Design on parcels planned for development	NCWPC / CITY OF WOODSTOCK / NRCS	162.8	\$2,500	\$406,893	\$1,500	\$16,276		D
Slough Creek	9-4	Permanent Habitat Protection	Landowner Outreach to establish Conservation Easement on MCNAI GRE09 and actively manage the natural areas; parcels are likely to be developed	NCWPC / TLC / CITY OF WOODSTOCK / MCHENRY COUNTY	280.7	\$1,500	\$421,041	\$1,500	\$28,069		C
Slough Creek	9-5	Permanent Habitat Protection	Landowner Outreach / Government Outreach to establish Conservation Easement along Slough Creek south of Charles Road and create expanding natural stream corridor buffer; Conservation Design on parcels likely to be developed	NCWPC / TLC / CITY OF WOODSTOCK / MCHENRY COUNTY	5.1	\$1,500	\$7,575	\$500	\$505		C
Slough Creek	9-6	Natural Habitat Restoration	Landowner Outreach to investigate possible on-line dam on Slough Creek and retrofit for fish passage if necessary	NCWPC / NRCS / TLC				\$20,000	\$500	\$1,000	E

Table 10.10 Recommended Projects in the Slough Creek Subwatershed

SUB WATERSHED	RECOMMENDATION #	TARGET GOAL	DESCRIPTION	RESPONSIBLE PARTY	ACRES	UNIT COST	INITIAL IMPLEMENTATION COST	INITIAL OUTREACH COST	ANNUAL MAINTENANCE COST	PRIORITY
Slough Creek	9-7	Natural Habitat Restoration	Landowner / Government Outreach to determine feasibility of wetland / stream restoration on unnamed tributary to Slough Creek east side of Murray Road; Conservation Design on parcels likely to be developed	NCWPC / TLC / CITY OF WOODSTOCK / MCHENRY COUNTY	12.6	\$500		\$6,294	\$500	\$315 B
Slough Creek	9-8	Natural Habitat Restoration	Landowner / Government Outreach to include restoration of stream corridor as part of any future land development scenarios on unnamed Slough Creek tributary just west of Murray Road	NCWPC / TLC / CITY OF WOODSTOCK / MCHENRY COUNTY	38.1	\$500		\$19,053	\$1,000	\$953 B
				SW TOTALS	714.6			\$1,444,415	\$7,500	\$69,910

- PRIORITY**
- A** Projects that have cooperating partners, can move to implementation quickly. Implementation Timeframe 1 to 3 years
 - B** Projects subject to imminent development pressure, Implementation Timeframe 1 to 2 years
 - C** Projects needed to protect sensitive areas. Timeframe 1 to 2 years
 - D** Restoration projects, Timeframe 1 to 5 years
 - E** Retrofit Projects, Timeframe 1 to 5 years
 - F** Existing Pollution Potential, Timeframe 1 to 2 years
 - G** Policy / Opportunity Review Project, Timeframe 1 to 3 years