

Appendix H

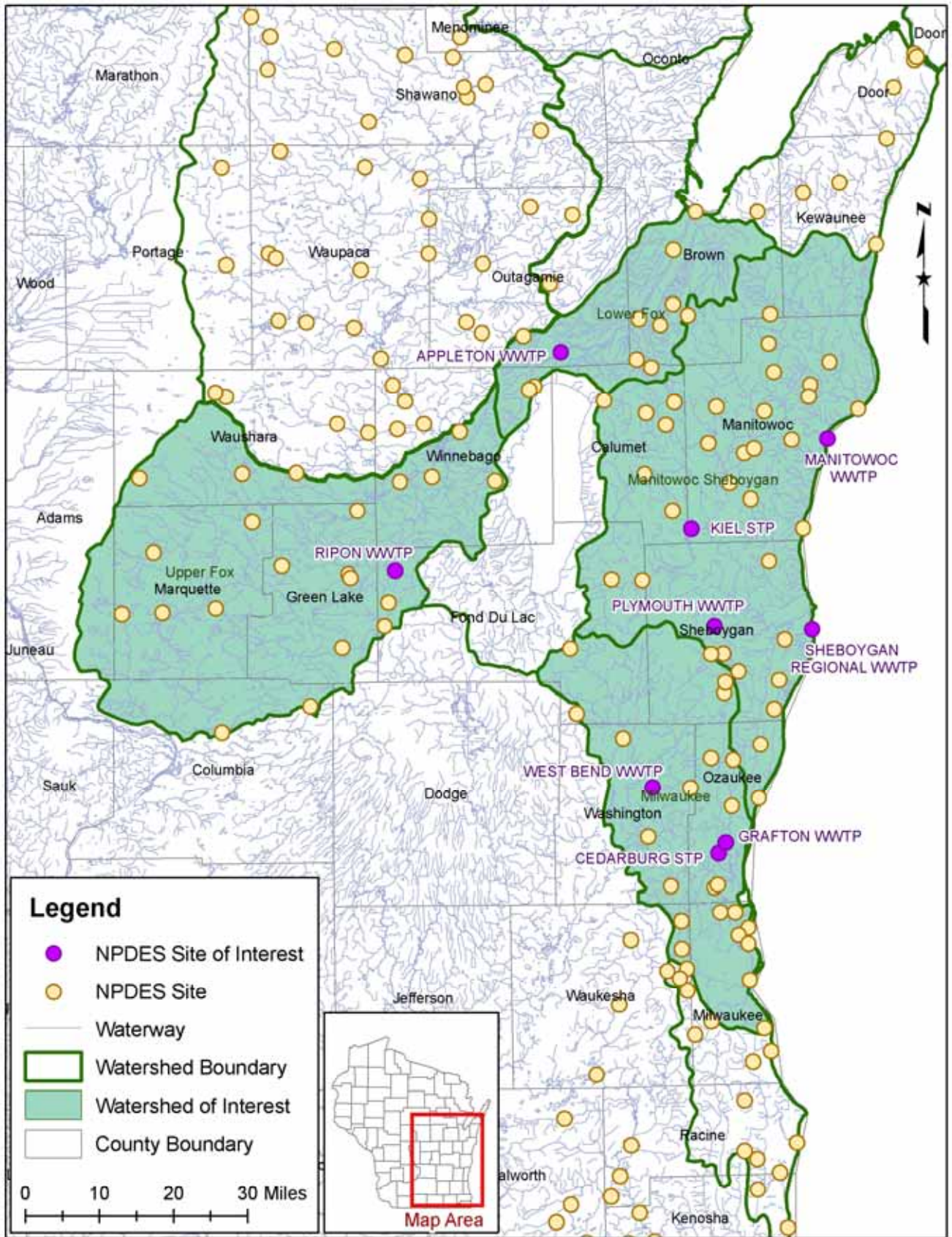
Identification of Nutrient Trading Opportunities in Wisconsin

Point source discharge data was acquired for several watersheds in eastern Wisconsin from the USEPA through the National Pollutant Discharge Elimination System (NPDES) filing required by point source discharge facilities. An initial analysis of the data identified several facilities with relatively high daily discharge and impaired waters. The location of those facilities was mapped using a Geographic Information System (GIS) to better visualize the location of the facilities of interest within the watershed and the relationship of the facilities to others in the watershed and local waterways. This relationship is included as Map 1: NPDES Sites of Interest.

Once the Appleton WWTP expressed interest in discussing water quality trading, a detailed analysis of the nearby downstream subwatersheds within the Lower Fox River Watershed was undertaken. The first step was to identify the existing and prior-converted wetlands in the region of interest. The presence of hydric soil was used as a wetland indicator, and the location of mapped hydric soil within the FEMA 100-year flood zone was identified for the region using the county soil maps from the USDA NRCS. It appeared, however, that the FEMA 100-year flood zone was not very extensive in the rural areas within the lower Fox River watershed, so mapped hydric soil outside of the 100-year flood zone but in close proximity to existing waterways was also included.

The next step was to identify the current land cover on the hydric soil, specifically, to identify row crops on hydric soil that could be restored to wetlands. The Wisconsin land cover map of 1999 was used to identify the current land cover. Several areas with high percentages of row crops on hydric soil exist within the lower Fox River watershed. One of those areas is shown on Map 2: Land Cover on Hydric Soil, Duck Creek Watershed.

Within the boundary of Area 1 of the Duck Creek Watershed, 1,171 acres of hydric soil are currently used for row crops. These areas are within the 100-year flood zone or adjacent to existing waterways and could easily be restored to wetlands. These restored wetlands could be managed for nitrogen and phosphorous removal.

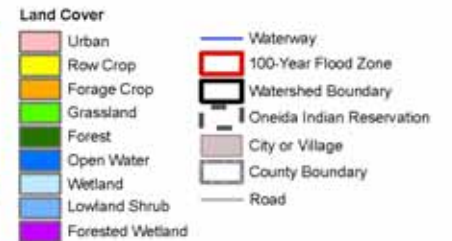
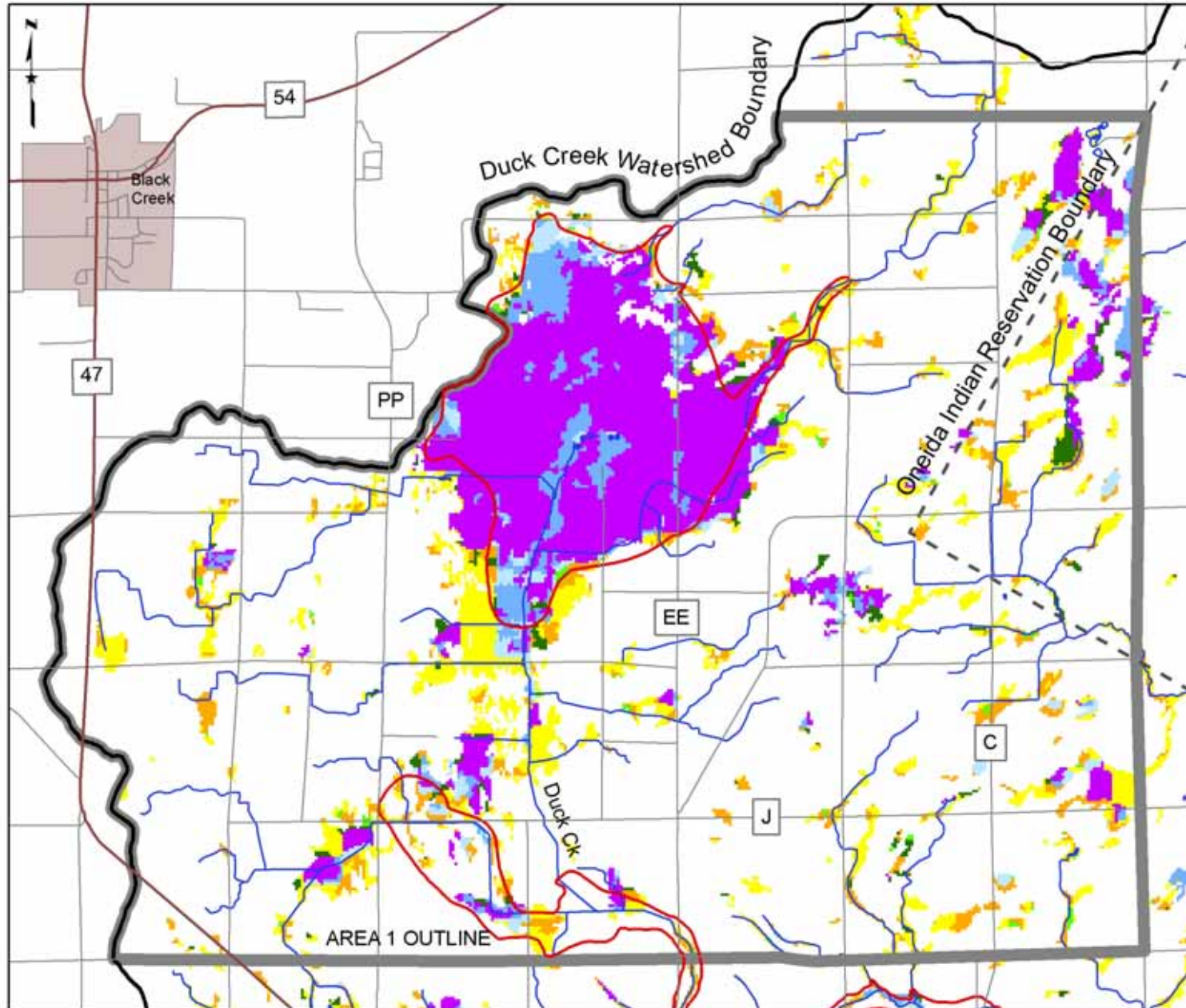


NPDES sites from the US Environmental Protection Agency
Streams, County Boundaries and Watershed Boundaries
from the Wisconsin Department of Natural Resources

THE WETLANDS INITIATIVE

Map 1
NPDES Sites of Interest
Southeastern Wisconsin

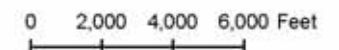
Map 2 Land Cover on Hydric Soils Duck Creek Watershed Outagamie County, Wisconsin



Land Cover on Hydric Soil; Area 1

	acres	percent
Urban	0	0
Row Crops	1,171	24
Forage Crops	580	12
Grass	44	1
Forest	150	3
Open Water	0	0
Wetland	801	16
Wet Forest	2,134	44
Other	1	0
Total	4,882	

AREA 1: 20,892 acres total



Hydric soil from the USDA NRCS Outagamie County Soil Map; Land cover from the WISCLINC land cover map of Wisconsin, 1999; Roads, cities, villages, Oneida Indian Reservation Boundary, waterways and watershed boundaries from the Wisconsin Department of Natural Resources