Together, the operators of livestock operations own enough suitable land (5,180 acres) to safely spread animal wastes. However, a combination of factors including climate, soil conditions, malfunctioning equipment and other unpredictable situations result in spreading on unsuitable (critical) areas. Critical areas are steeply sloped or are in floodplains. In addition, while the total amount of suitable land available is adequate on a watershed basis, individually many landowners may not have enough suitable area.

Livestock manure is spread on 1,900 "critical" acres from which runoff has a high potential to convey pollutants to surface and groundwater. The greatest pollution potential from winter spread manure occurs in the North Branch, Wallace Creek, Silver Creek, Beechwood Lake, and Stony Creek subwatersheds. Together, these areas contain 1,200 acres, or 63 percent, of the critical acres in the North Branch Watershed.

Table 8
Urban Nonpoint Source Pollutant Loading in the
North Branch Milwaukee River Watershed

Village of Adell		Village of Cascade		Village of Random Lake		Total	
Tons Sediment	Lbs. Lead	Tons Sediment	Lbs. Lead	Tons Sediment	Lbs. Lead	Tons Sediment	Lbs. Lead
9	42	5	24	769	187	783	153

(1) A significant portion is related to the newly developed industrial park east of Random Lake.

Source: Wisconsin Department of Natural Resources.

Urban Nonpoint Sources

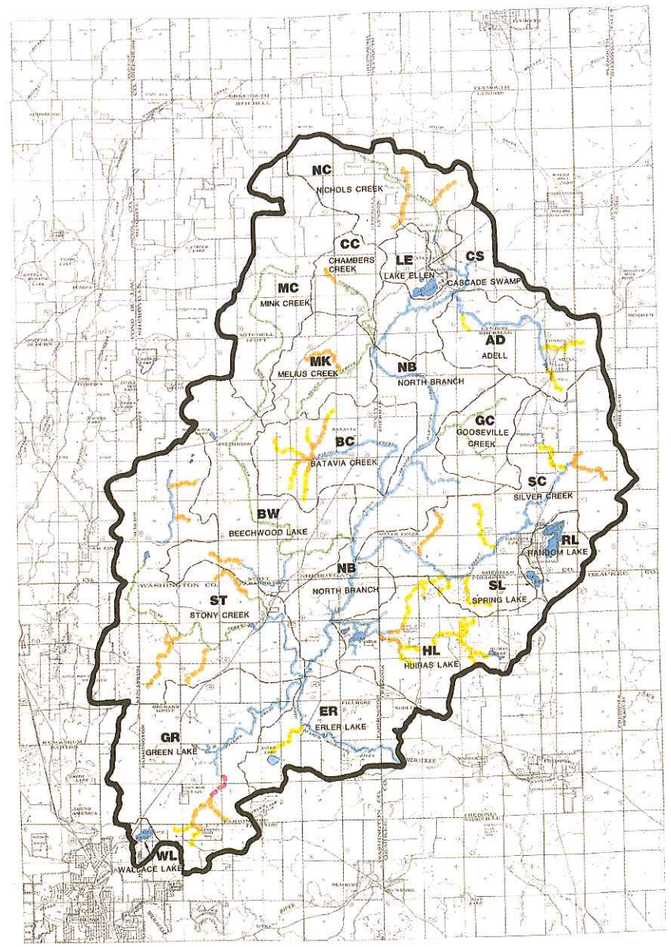
As previously discussed, only a small portion of the watershed is in urban land use. However, runoff from existing residential, commercial, and industrial areas carries a variety of pollutants to surface waters. Fortunately, unlike much of the Milwaukee River Basin, their limited extent here reduces the extent of adverse water quality impacts that urban runoff may cause.

The evaluation of the severity and extent of urban nonpoint pollution focuses on the three incorporated areas: the villages of Adell, Cascade, and Random Lake. It determines the sources and quantities of two pollutants: suspended sediment and lead.

As in rural areas, the sediment not only directly impacts water quality and aquatic habitat but also transports high concentrations of other pollutants. The amount of lead carried in urban runoff has been decreasing over the last ten years as a result of lower quantities in gasoline and fuel efficient automobiles. However, lead is used as an indicator pollutant to determine other substances transported in urban runoff, including heavy metals such as cadmium, chromium, and copper, which may have adverse water quality impacts.

The quantity of sediment entering streams attributed to urban runoff (783 tons) is small when compared to rural sources. However, increased land use development results in greater runoff and higher pollution loading rates. Lead quantities reflect the potential contributions of a variety of toxic materials to impact water quality.

MAP 3



Potential Biological And Recreational Uses Of Surface Waters

-LEGEND-

LEGEND

BIOLOGICAL USES
FAL-A Cold Water Sport Fish
FAL-B Warm Water Sport Fish
FAL-C Cold/Warm Water Forage Fish
INT-D Intermediate D
MAR-E Marginal E

RECREATIONAL USES
Full Body Contact
Partial Body Contact

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

MILWAUKEE RIVER
NORTH BRANCH WATERSHED
FOND DU LAC, OZAUKEE, SHEBOYGAN, AND WASHINGTON COUNTIES, WISCONSIN

WISCONSIN DEPARTMENT OF NATURAL RESOURCES