

WATER: Just How Clean Is It? A summary of water quality issues within the Mackinaw River Watershed. Mary Jo Adams, Editor

Based on a variety of quality measurements taken in the biological stream characterization index (IBI), the Mackinaw River is rated as one of the cleanest rivers in the state. The index classifies streams from grade A (excellent) to grade E (very poor), based on water purity and the condition of aquatic species. Several sections of the Mackinaw River are "A" rated (lower Henline Creek for example), and overall, the water quality is good, relative to other rivers in the state. *Conservancy scientists suggest that the Mackinaw River is one of Illinois' cleanest rivers for two reasons. First, there appears to be a strong regional groundwater influence, meaning that groundwater seeps into the river. This seepage dilutes pollutants and increases the level of low water flow. Second, the Mackinaw River is a more stable river than most Illinois streams because it is held in place by three glacial deposits, making bank erosion more difficult in the Mackinaw as compared to many other rivers. Does this mean that there is no pollution to be found in the river? No, unfortunately not. As clean as the Mackinaw River is, the quality of the water can be improved.

Technically, water pollution can be divided into two types: *point-source* pollution, and *nonpoint-source* pollution. A point-source pollutant is one that comes from a specific, single location, such as a waste disposal site, factory, or sewer. Nonpoint-source pollution comes from run-off from fields, highways, golf courses, and suburban areas. Unfortunately, water is an excellent medium for picking up all sorts of pollutants, regardless of their source. Oil, manure, lead, nitrogen, phosphorus....these are just a few of the substances that get mixed into our water, which in high amounts, is unhealthy for us all.

The pollution in the Mackinaw River watershed comes from both point-source and non-point-source, from both urban/suburban and agricultural areas. Urban/suburban sources are from road oil and salt washed into storm sewers, herbicides and pesticides from lawns and golf courses, and human sewage from eight smaller towns along the Mackinaw River which have no waste treatment system. Agricultural sources of pollution are nutrients lost from fields, livestock pastures, and unstable stream banks. Plus, there is the more visual source of pollution (from humans), such as old tires, automobiles, washing machines, beer cans, and other debris which is carelessly tossed into or alongside of the river and creeks. All of this stuff eventually finds its way into the river, degrading the quality of the water.

The Clean Water Act, passed in 1972, is responsible for cleaning up the acts of our country's largest point-source polluters. This has led to a significant improvement in the water quality of our major lakes and rivers. However, as long as there are humans on this planet, both point-source pollution and non-point-source pollution will continue to exist. One of our goals is to...? Just like any other river, the Mackinaw has its share of polluters, which in reality, includes every one of us who live in this watershed. Some of us have a greater impact than others, some of us less. But since we all need and depend on the water in the river and the watershed, we all need to be a part of **an effort to minimize our own negative impacts on water quality.**

Important water quality variables measured by the EPA include the following:

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|-------------------------|-----------|
| *pH | *Ammonia |
| *Phosphate | *Mercury |
| *Total Suspended Solids | *Lead |
| *Potassium | *Copper |
| *Barium | *Arsenic |
| *Manganese | *Nitrogen |

Towns/Cities within the Mackinaw River Watershed WITH/WITHOUT Wastewater Treatment Plants:

WITH

Colfax (McLean County)
Gridley (McLean County)
Towanda (McLean County)
Congerville (Woodford County)
El Paso (Woodford County)
Eureka (Woodford County)
Goodfield (Woodford County)
Metamora (Woodford County)
Roanoake (Woodford County)
Deer Creek (Tazewell County)
Green Valley (Tazewell County)
Hopedale (Tazewell County)
Mackinaw (Tazewell County)
Morton (Tazewell County)
Tremont (Tazewell County)

WITHOUT

Sibley (Ford County)
Anchor (McLean County)
Carlock (McLean County)
Cooksville (McLean County)
Hudson (McLean County)
Lexington (McLean County)
Benson (Woodford County)
Kappa (Woodford County)
Secor (Woodford County)
South Pekin (Tazewell County)