Lower Rat River Subwatershed

Subwatershed Description

The Lower Rat River subwatershed is 21.9 square miles in size and includes the lower 12 miles of the Rat River. The Lower Rat River subwatershed consists of the Rat River and many unnamed intermittent tributaries (See map 3-5). Many of these tributaries are dredged channels. Much of the river bottom is covered with silt and muck. A portion of the river lies within the Rat River Wildlife Area, a publicly owned hunting and fishing area.

Water Resources Conditions

Fisheries surveys conducted during the summer of 1991 found that the downstream sampling site in the Lower Rat River subwatershed supported sport fish as well as rough fish populations. The presence of yearling sport fish at the Highway W site suggests that conditions may be favorable for sport fish at certain times of the year (i.e.-spring spawning). However, mudminnows were the most abundant species found and water temperatures were not very favorable for sport fish.

Water Resource Objectives

The following resource management objectives are recommended for the Lower Rat River subwatershed:

- Increase aquatic life in the Rat River by improving overall habitat conditions.

  a. Reduce sedimentation of gravel and rubble.
  b. Reduce nutrient loading to reduce macrophyte growth and improve overall dissolved oxygen levels.

- Protect and enhance wildlife habitat by improving wetland and grassland habitat through reduction of sediment and phosphorus loadings.

Upper Rat Subwatershed

Subwatershed Description

Upper Rat River is the second largest subwatershed, 27.8 square miles in size. It includes the upper 11 miles of the Rat River, beginning from the headwaters about 3 miles west of Hortonville to the confluence with the Little Rat River 2.5 miles south of Dale. The downstream area encompasses a portion of the Rat River State Wildlife Area. The upstream portion contains areas that are experiencing rapid residential development where sediment and phosphorus loading from construction site erosion is a concern (See map 3-6).

Water Resource Conditions

The Upper Rat River primarily supports a tolerant and very tolerant forage fish community, although the summer of 1991 fish survey did find some young sportfish. The HBI (Hilsenhoff Biotic Index) rated the site as poor to fair, indicating significant organic pollution. The stream habitat rating was fair.

Water resource problems include sedimentation, nutrient loading, channelization, and low flows. A number of streambank erosion sites were inventoried, especially in wooded areas in the upper portion of the subwatershed. The sites tend to be somewhat short, so the total amount of eroded sediment is not significant.

Water Resource Objectives

The following resource management objectives are recommended for the Upper Rat River subwatershed:

- Increase aquatic life in the Rat River by improving overall habitat conditions.

    a. Reduce sedimentation of gravel and rubble.
    b. Increase available cover using streambank stabilization.
    c. Reduce nutrient loading to reduce macrophyte growth and improve overall dissolved oxygen levels.

- Protect and enhance wildlife habitat by improving wetland and grassland habitat through reduction of sediment and phosphorus loadings.