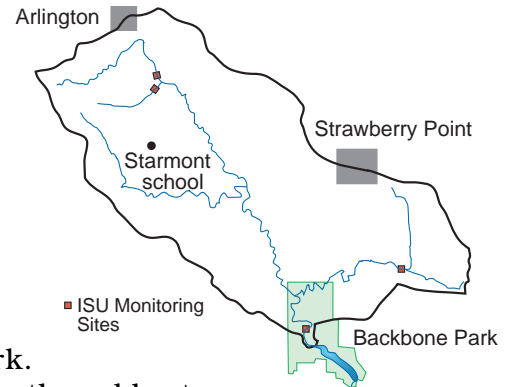


# *Maquoketa Headwaters Watershed*

Conservation

Public Participation



## **About Maquoketa Headwaters**

- Maquoketa headwaters is a 40,073-acre watershed delivering its water to the lake at Backbone State Park.
- The Iowa Department of Natural Resources maintains the coldwater portion (9.2 miles) below Iowa Highway 3 as a “put and take” trout fishery. Richmond Springs, a 1.2 mile coldwater trout stream and the lower 3.7 miles of the river above Backbone Lake are in public ownership. Eighteen species of fish have been identified in the Maquoketa Headwaters and most are typical of Iowa’s coldwater streams. A recent angler survey reported 34,675 fishing trips with annual fishing expenditures estimated at \$1,664,000.
- Eighty percent of the watershed is in crop production. Eighty-eight of the 219 farms have livestock operations. Nutrient runoff and sediment are significant nonpoint source concerns.
- A goal of the Maquoketa Headwaters project is the development of a strong watershed organization committed to watershed/community planning.

## **What is a water quality project?**

- An opportunity for those who live in or have a stake in Maquoketa Headwaters watershed to voluntarily determine the future of the area.
- A process that will lead to local decisions about ways to protect soil and water quality that are practical and cost-effective.

## **Why is a water quality project important?**

- A locally-led project demonstrates that the watershed community can evaluate and set their own goals and standards for environmental protection and economic development.
- It is your opportunity to manage your water resource.
- If we don’t address water quality issues in Maquoketa Headwaters today, someone else will likely do it for us tomorrow.

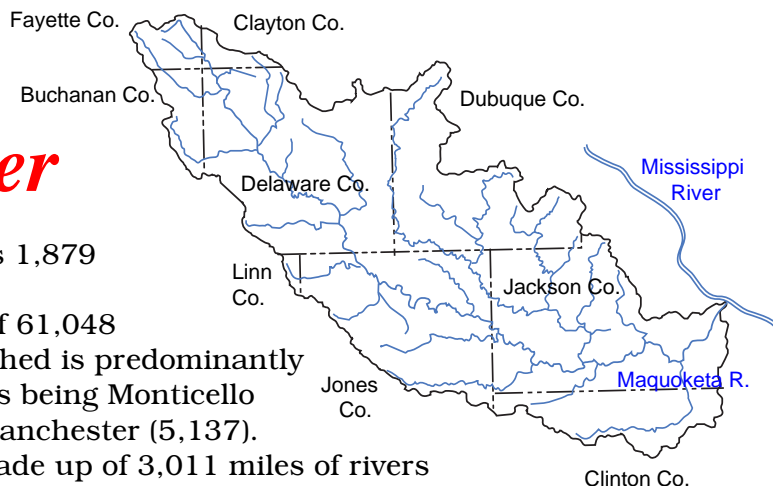
## **How is a water quality project accomplished?**

- Invite all watershed residents and landowners to participate in this project.
- Together, assess watershed conditions and options.
- Develop strategies to improve the Maquoketa Headwaters watershed.
- Implement strategies.
- Measure success.

## **What can you do as a citizen?**

- Think about what clean water means to you, your family, your business, your schools, churches and others in the Maquoketa Headwaters area.
- Get involved! Learn about the options. Come prepared to join your neighbors in setting watershed goals – and make them happen.

# About the Maquoketa River



- The Maquoketa River watershed is 1,879 square miles or 1,198,754 acres.
- The watershed has a population of 61,048 people (1990 census). The watershed is predominantly rural with the largest communities being Monticello (3,522), Maquoketa (6,130) and Manchester (5,137).
- The Maquoketa River system is made up of 3,011 miles of rivers and streams of which 1,218 miles are continually flowing.
- Iowa DNR estimates that there are 199,482 annual fishing trips with angler expenditures and resulting economic activity of \$18,487,880 per year.
- The Maquoketa River Basin is listed as a Number One Priority on the 1998 Iowa Unified Watershed Assessment, Restoration Priorities and Restoration Action Strategies.
- Land use in the Maquoketa River Watershed is predominantly agricultural (92%), timber (6%) and urban (2%).
- It is estimated that the watershed has 4,250 farms with 3,200 livestock operations.

## **Environmental Concerns**

- The Maquoketa River is one of 13 tributaries of the Mississippi River that is being monitored by the Long-Term Resource Monitoring Program and results have shown that the Maquoketa has the highest level of suspended sediment and plant nutrients.
  - ◆ Each year the Mississippi River carries 1 million tons of sediment as it enters Iowa. USGS data show the Maquoketa River contributes an additional 1/2-million tons.
  - ◆ The average total nitrogen is 6.6 milligrams per liter (mg/L) with subwatersheds up to 19.6 mg/L. Ten mg/L nitrate nitrogen is the EPA criterion for domestic water supplies.
  - ◆ The average phosphorus level is 0.4 mg/L with subwatersheds up to 4.7 mg/L. Algae grow increasingly better in water over 0.05 mg/L phosphorus.
- The North Fork Maquoketa River is one of the more erosive watersheds in eastern Iowa. On a scale of 1 (least erosion) to 10 (most erosion), North Fork subwatersheds rank from 7 to 9. The headwaters region near Luxemburg has a rank of 9. Whitewater, Lytle, Mineral and Bear creek subwatersheds of the mainstream Maquoketa have a rank of 8.
- A 7,000-square mile hypoxia zone has been identified in the Gulf of Mexico. Hypoxia occurs when high concentrations of plant nutrients causes excessive growth of small aquatic plants (phytoplankton) which die throughout the summer consuming oxygen during decomposition. The dissolved oxygen in the Gulf water becomes depleted resulting in displacement of aquatic life, including fish populations.

## **Environmental Management**

- Rather than farms or rural communities being visited by regulators, more flexibility in addressing surface and groundwater quality can be achieved when citizens participate in the development of practices and solutions.