SHELL ROCK RIVER WATERSHED MANAGEMENT PLAN

WMA Members

Cities

- Nora Springs
- Northwood
- Plymouth
- Shell Rock

Counties

- Bremer
- Butler
- Cerro Gordo
- Floyd
- Mitchell
- Worth

Soil and Water Conservation Districts (SWCD)

- Bremer
- Butler
- Cerro Gordo
- Floyd
- Mitchell
- Worth

For more on the Watershed Management Plan:

Read the full draft plan and learn more about the WMC by visiting www.jeo.com/shell-rock-river-wmc or scan the QR code below with your smart phone.

Comments on the plan will be accepted until Friday, December 15, 2023 and can be submitted online or to a project team member.

Funding provided by Iowa DNR/EPA Section 319 Watershed Improvement Program and the Environmental Protection Agency (EPA)

Plan developed by JEO Consulting Group

The Plan Purpose

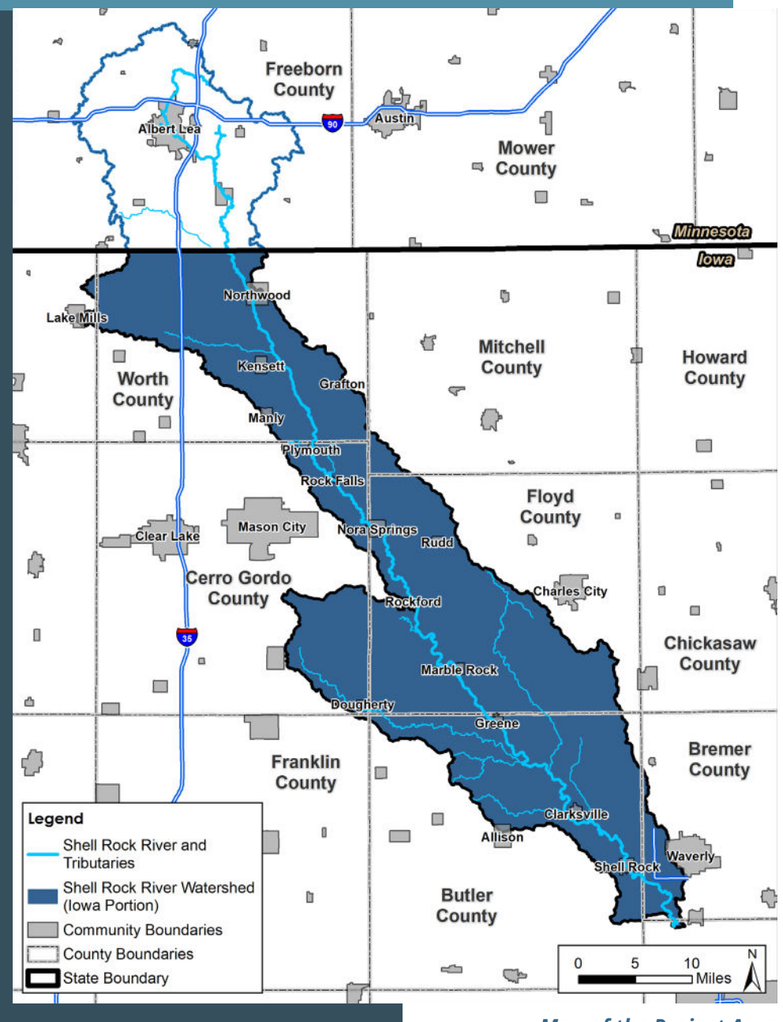
The Shell Rock River Watershed Management Plan is sponsored by the Shell Rock River Watershed Management Coalition (WMC), which is a voluntary coalition of local counties, cities, and soil and water conservation districts within the watershed.

The plan was developed through public input, and identifies and prioritizes projects and activities to address flooding, water quality, and recreation issues across the watershed.

Implementation of the plan is based on voluntary cooperation between WMC members, landowners, and other stakeholders. Information, education, and outreach efforts will be a critical component of all implementation efforts.

Established Goals

1. Flood resiliency will be improved at the individual, community, and watershed level to prevent loss of life, reduce property losses, and avoid damage to infrastructure.
2. Improve water quality to support all uses and ensure it meets state standards and goals.
3. Utilize recreation on the river to enhance local communities and connect the public with the watershed.
4. Create an informed, educated, and passionate public that works towards improving watershed management.



Map of the Project Area

SHELL ROCK RIVER WATERSHED MANAGEMENT COALITION

Water Quality Recommendations

Key Recommendation: Expand water quality monitoring sites across the watershed to better understand conditions, identify pollutant sources, and monitor progress.

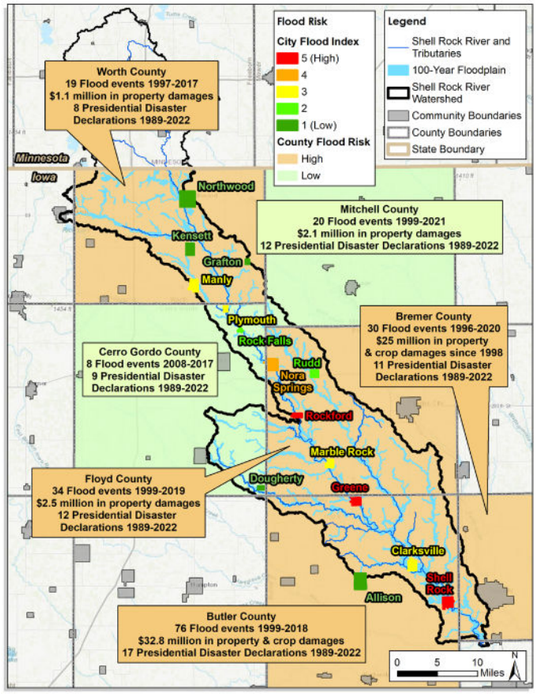
CONCERN & WATER QUALITY TARGETS	EFFECTS	PRIORITY BEST MANAGEMENT PRACTICES (BMPS)
Nutrient Pollution *(Nitrogen & Phosphorus)* Water quality targets for nutrients are based on the Iowa Nutrient Reduction Strategy: » 41% reduction in nitrate » 29% reduction in phosphorous	» Excess nutrients can lead to algae blooms in waterways. » When the algae begins decomposing it reduces oxygen in the water which harms aquatic life. » Sometimes these blooms are dominated by blue-green algae, which produces toxins that can be harmful to humans, livestock, and pets. » High levels of nitrates in drinking water can cause blue-baby syndrome in infants, and are regulated by EPA drinking water standards.	» Nutrient management » Cover crops » No-till or strip till » Wetlands » Bioreactors » Saturated buffers » Urban stormwater BMPs
Erosion & Sediment Pollution The water quality target for sediment is based on reducing erosion by 10%.	» Sediment transports other pollutants with it » Increases water turbidity (reduces clarity) » Buries stream and lake bottom aquatic habitat » Loss of farmland or threats to infrastructure » Loss of usable lake areas - recreation impacts	» No-till or strip till » Stream buffers » Stream stabilization » Terraces » Ponds » WASCOB » Prairie strips
***E. Coli* Bacteria Pollution** The water quality target for *E. coli* is based on meeting state water quality standards: » 126 CFU/100mL (annual average) » 235 CFU/100mL (maximum allowable concentration for a single sample)	» Ingesting water with disease-causing bacteria, viruses, or parasites (collectively called pathogens) can make you sick. » Effects could include: diarrhea, vomiting, cramps, nausea, headaches, fever, fatigue, and even sometimes death. » *E. coli* bacteria testing is used as an indicator for harmful pathogens in the water.	» Manure storage at small open feedlots » Grazing management plans » Stream access management » Manure management plans » Wastewater treatment system upgrades

Flooding Recommendations

Key Recommendation: Complete a hydrologic assessment across the watershed to better identify flood risks and evaluate community-level mitigation projects.

Cities with the highest risk to flooding from Shell Rock River:

» Clarksville
» Greene
» Manly
» Marble Rock
» Nora Springs
» Plymouth
» Rockford
» Shell Rock



Map of Flooding Impacts to the Entire Watershed

Recreation Recommendations

Key Recommendation: Complete a water trail plan for the Shell Rock River.

Through this planning process, additional public input will be gathered. This includes input from landowners along the river. Other items included in the planning process are access, signage, river obstacles (dams), and creation of maps or brochures to help river users and promote local tourism.

Map of Existing Recreation Areas