

# East and West Nishnabotna River Watershed Management and Flood Resiliency Plans

## Executive Summary



A watershed management and flood resiliency plan was prepared for both the East and West Nishnabotna River Watersheds located in southwest Iowa. These plans were sponsored by East and West River Nishnabotna Watershed Coalitions (Joint Coalition) and developed as part of the Iowa Watershed Approach.

Approved in 2019, the plans identify and prioritize projects and activities to address flooding and water quality concerns in the two watersheds. The plans are completely voluntary in nature, however, they will need updated every 5 years to maintain eligibility for funding assistance with implementation efforts.

The plans are organized around three concepts: **Assessment**, **Action**, and **Implementation**.

### VISION

The East and West Nishnabotna River Watershed Coalitions will work in a collaborative effort to coordinate to reduce flood risks to life and property and improve the water quality within the Nishnabotna Watershed for future generations.

**"My takeaway can be summarized with six Cs: These issues are Complex; they are Challenging; it's going to take Coalitions, Coordination, and Conversation among everyone; and Cooperation across the watershed."**

- Watershed Stakeholder attending public meeting

Chapter 1 of each plan provides a brief overview of the plan and history of the watershed.

View the full plans at [www.goldenhillsrcd.org](http://www.goldenhillsrcd.org)

Funding provided by The Iowa Watershed Approach  
Watershed coordination by Golden Hills RC&D | Plan developed by JEO Consulting Group



## ASSESSMENT | ACTION | IMPLEMENTATION

The East and West Nishnabotna River Watersheds face similar issues.

**Flooding**

caused by increased runoff due to land use changes

**High nitrogen and phosphorus levels**

caused by erosion (in fields and streams) and by fertilizer runoff

**High levels of bacteria**

caused by waste from livestock, humans, and wildlife

**Stream bank erosion**

caused by stream channelization and higher runoff rates

Flooding from the West Nishnabotna River near Avoca, during March 2019.

Installation of a bioretention site at the Mills County Fairgrounds. This is an example of an urban BMP.

Agriculture is a driver of the local economy and land use within each watershed.

Flooding from the West Nishnabotna River near Oakland, during March 2019.

**LEGEND**

- River
- East Nishnabotna Watershed
- West Nishnabotna Watershed
- HUC 12 Subwatershed
- Priority HUC12 Subwatershed
- Community Boundary

See Chapter 2 and Chapter 3 of each plan for a description of watershed characteristics and an assessment of existing conditions.

## More than a plan. A path forward.

Supporting a unified vision statement, the two plans share the same goals, objectives, and action items.

### GOALS

1. Work in a collaborative effort with a diverse group of stakeholders
2. Reduce flood risks to life and property
3. Increase flood resiliency through community, county, and regional partnerships to mitigate, prepare for, respond to, and recover from floods
4. Maintain and improve water quality to meet state water quality standards
5. Increase public awareness and education on flood risks, flood resiliency, and water quality management



In each plan, **Chapter 4** includes an action plan that outlines steps to achieve the plan's vision, goals, and objectives, while **Chapter 5** identifies strategies to create awareness and activity around implementation.

The action plan identifies priority activities that each city, county, and SWCD, along with the Joint Coalition should take over the next 5 years.

### ACTION PLAN FRAMEWORK



#### EDUCATION

Community outreach efforts aimed at increasing awareness of and participation in flood resiliency and water quality improvement activities.

#### PROJECTS

Individual improvements made to a specific area to achieve an outcome.

#### POLICY

Guidelines or protocols set forth by a governing authority to achieve a specific outcome.

#### MONITORING

Collecting and evaluating data over time to track progress.

#### PRACTICES

Long-term implementation of site-specific BMPs to achieve an outcome.

Enhanced flood resiliency and improved water quality is a long-term (decades) goal monitored through short-term (years) changes in other resources.

#### INPUTS

- People
- Funding
- Public resources
- Private resources

#### HUMAN

- Partner organizations
- Partner agribusinesses
- Farmer knowledge and attitude
- Point source communities and management knowledge attitude

#### LAND

- Land use changes
- Practice adoption
- Point source implementation

#### WATER

- Calculated load reduction
- Measured loads in priority watersheds
- Organized watersheds reported load changes
- Measured loads at existing monitoring stations

Adopted from the Iowa Nutrient Reduction Strategy's logic model for measurable indicators of desirable change

## EVERYONE HAS A ROLE TO PLAY in mitigating flooding and improving water quality

### JOINT WATERSHED COALITION

- Act as the lead facilitator and coordinator for projects throughout the watersheds
- Help identify and connect funding opportunities with local project sponsors
- Serve as a regional source for information

### LANDOWNERS & RESIDENTS

Using cost-share opportunities, voluntarily implement BMPs, like:

- Cover crops
- Terraces
- Oxbow restoration
- Saturated buffers
- Buffer strips
- Perennial cover
- Farm ponds
- Floodplain restoration
- Bioreactors
- Wetlands
- Channel bank stabilization
- Prairie STRIPS

### CITY & COUNTY GOVERNMENTS

- Serve as local sponsors for implementing projects
- Leverage local funds against other grant programs
- Adopt policies that reduce runoff or protect floodplains
- Identify and implement urban storm water BMPs, like:
  - » Stormwater management
  - » Infiltration basins
  - » Dams and levees
  - » Channel improvements
  - » Bridge improvements
  - » Non-structural strategies (zoning, acquisitions, floodplain remapping, etc.)
  - » Join the Community Rating System program

### SOIL AND WATER CONSERVATION DISTRICTS

- Provide technical and financial support for BMPs

## WE CAN DO MORE TOGETHER

### LEVERAGING THE POWER OF PARTNERSHIPS

Local project sponsors use the action plan to direct resources toward meeting goals and objectives. When a local champion can assemble partnerships to contribute towards a project, even more can be achieved.



Chapter 6, 7, and 8 of each plan summarizes recommended projects for implementation, strategies to evaluate implementation efforts, and serves as a collection of helpful resources.



ACTION PLAN

PARTNERSHIPS  
Funding and Technical Resources