LOWER ELKHORN
Natural Resources District

WELCOME

We are pleased you are here to learn more about and provide feedback on the North Fork Elkhorn River Flood Risk Reduction Plan.

HOW TO GET THE MOST OUT OF THIS MEETING:

Review each display and talk with project team members to learn more and share your ideas.

Spend as much or as little time with us as you like.

Complete a comment form and drop it in the box.

Project Overview

The Lower Elkhorn Natural Resources District (LENRD) is working to develop a plan that addresses flooding in the North Fork Elkhorn River Watershed.

Funding is provided by the NRCS Watershed and Flood Preventions Operations (WFPO) Program.

The final plan will need approval of both the NRCS and LENRD Board of Directors.

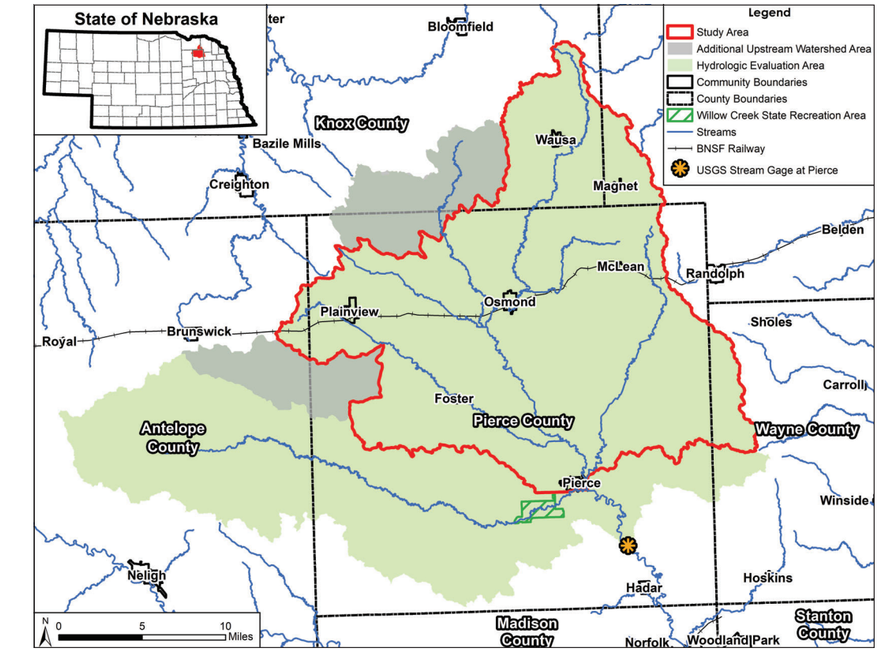
The watershed plan will:

- Identify existing flooding problems.
- Evaluate potential projects for flood reduction.
- Serve as an implementation plan.

The Plan's draft Purpose and Need statement:

The project purpose is flood prevention (flood damage reduction) within and near the communities of Pierce and Osmond. The project is needed due to the long history of flooding damages that have occurred throughout the watershed, impacting communities and agricultural areas.

North Fork Elkhorn River Watershed Plan-EA



The purpose of tonight's meeting is to:

- Outline the causes and sources of flooding in Osmond and Pierce.
- Share a comprehensive list of the alternatives, or potential projects, identified to reduce flood risk.
- Provide an overview of the alternatives evaluation process.

The watershed plan focuses on reducing flood risk in the Osmond and Pierce areas, but no final decisions have been made on draft alternatives.

Project Process

The project started in fall 2023 and the final plan is scheduled to be completed in early 2025.

The planning process is based on the requirements of the NRCS WFPO program.

LENRD made public and stakeholder engagement a priority of this project.

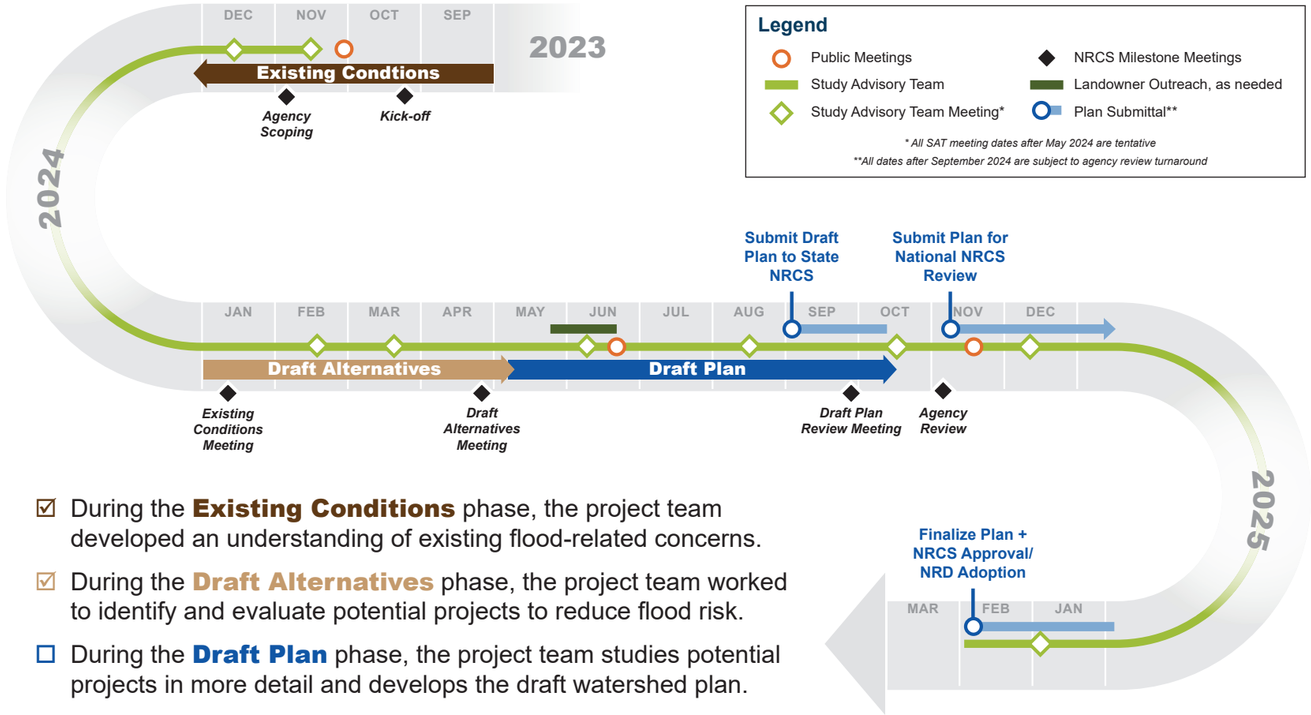
- A 17-member Study Advisory Team (SAT) comprised of local community members have met five times since November 2023 to help ensure the planning process and resulting plan reflects local concerns and values.
- Input from the November 2023 public meetings helped validate modeling data and confirm local flood-related concerns.

Public comment table at Pierce open house in November

Public comment table at Osmond open house in November

SAT reviewing preliminary alternatives on February 19

Anticipated Schedule as of June 12, 2024



- ☑ During the **Existing Conditions** phase, the project team developed an understanding of existing flood-related concerns.
- ☑ During the **Draft Alternatives** phase, the project team worked to identify and evaluate potential projects to reduce flood risk.
- ☐ During the **Draft Plan** phase, the project team studies potential projects in more detail and develops the draft watershed plan.

Community involvement has been integral.

Existing Conditions & Sources of Flooding

Osmond

Focus areas:

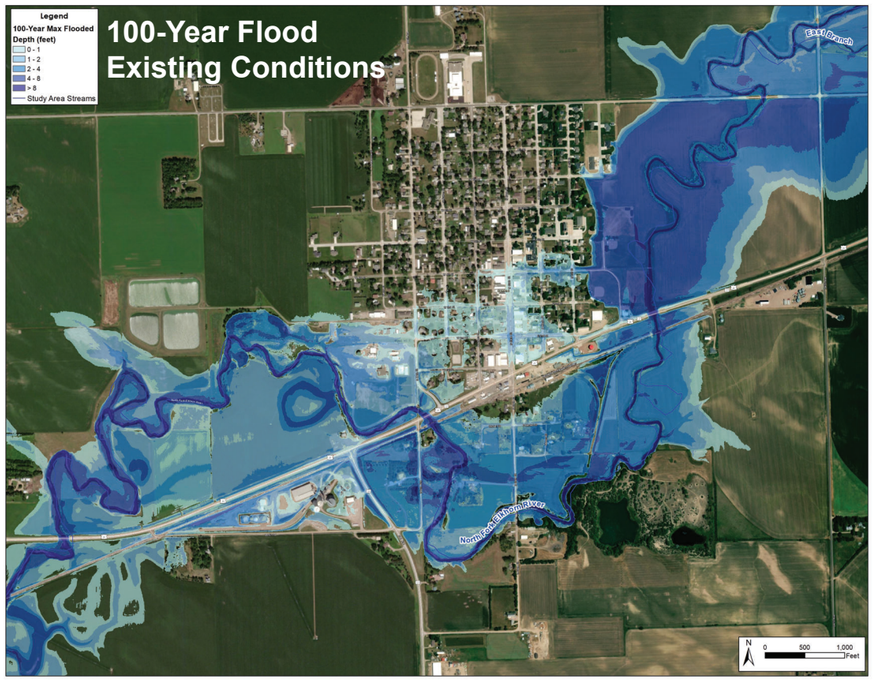
- East/northeast side of town
- Increased flows and impacts to downtown
- Area south of railroad tracks
- Southwest part of town

Source/cause of flooding:

- North Fork Elkhorn River overflowing its banks

Constraints:

- Existing width of highway and railroad bridges



Pierce

Focus areas:

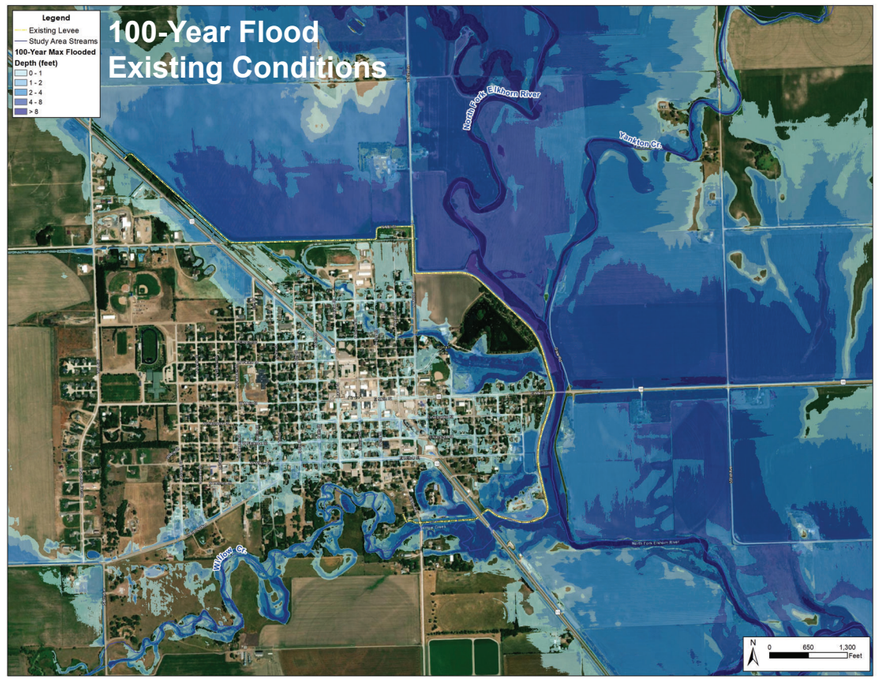
- Northwest Pierce
- Southwest Pierce
- East of Hwy 13
- Levee freeboard

Source/cause of flooding:

- Interior: rainfall that gets trapped behind the levee
- East of levee: North Fork Elkhorn River

Constraints:

- USACE and FEMA levee standards



There are multiple sources of flooding.

WFPOs focus on 100-year flood risks, though proposed solutions could be designed beyond that level of protection if the benefits outweigh the cost.

Alternatives Identification & Evaluation Process

“Alternatives” are potential projects that could reduce flood risk or extent of flood damage.

Structural Alternatives

Involve constructing infrastructure to control or alleviate flooding.

These change the probability of flooding:

- Diversion channels
- Channel widening, channel clean out
- Dams
- Bridge/culvert improvements
- Detention cells
- Levees/berms

Nonstructural Alternatives

Involve modifying behavior, land use, or policy to keep people safe.

These reduce or eliminate the consequences of flooding:

- Property buy-outs
- Building modifications
- Ag/Urban BMPs
- Cropland conversion
- Wetland storage/ restoration

All flood risk reduction alternatives, both structural and nonstructural, were explored during the evaluation process.

- Projects must offer greater financial benefits than costs.
- The ‘no action’ scenario serves as a baseline for comparing alternatives.
- Alternatives are initially assessed individually before being combined.
- The most effective strategies often involve combining alternatives to achieve multiple goals.

Alternatives Screening Criteria

Step 1: The “Sniff Test”

- **Purpose and Need –** Does it reduce flood risk and/or damages?
- **Feasible –** Can it be done/built?
- **Practical –** Is it sensible and efficient?

Step 2: A Closer Look

- **Effective –** To what extent does it reduce flood risk?
- **Impacts –** What impacts does this have on people, land, property, environment, etc.?
- **Permitting –** What are the permitting requirements?
- **Local Input –** Would the community support this alternative?
- **Cost –** What would this cost to implement?
- **Benefit Cost Ratio –** Do the benefits outweigh the cost?

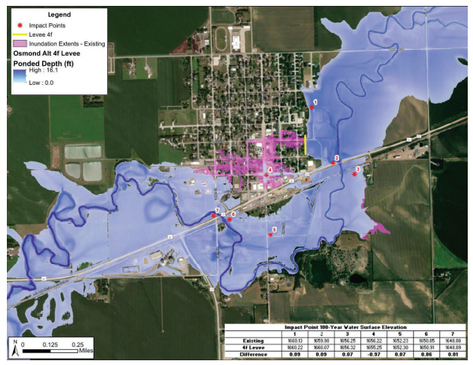
Draft Alternatives (Potential Projects) for Osmond

Alternatives still being considered:

4th Street Road Raise

This short levee/berm on the east side of Osmond could reduce flood extents in downtown almost completely.

Estimated Cost: $700,000



Nonstructural

Nonstructural alternatives, such as building modifications or property buyouts could be pursued with or by property owners in various locations. However, these would be in conjuction with structural alternatives.

Estimated Cost: TBD

Note: NRCS requires the "no action" alternative to be included in the final list of alternatives.

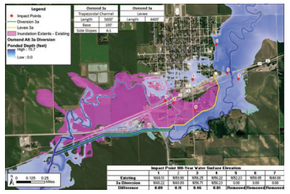
Alternatives removed from consideration through the screening and evaluation process:

Diversion Channel

Screened out because:

- Anticipated cost is more than anticipated benefits
- Provides little to no reduction to downtown Osmond

Estimated Cost: $15,000,000

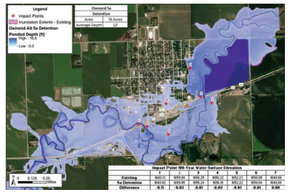


Detention Cell

Screened out because:

- Does not decrease extent or depth of flooding

Estimated Cost: $27,000,000

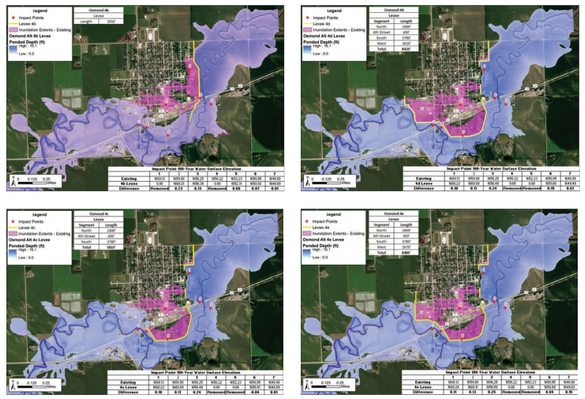


Levee/Berm

Various levee configurations
Screened out because:

- Costs were more than anticipated benefits

Estimated Cost:
$4,000,000 - $9,000,000

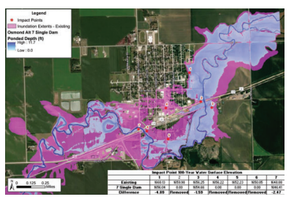


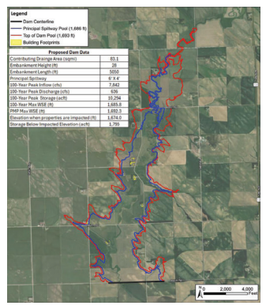
Dam

Screened out because:

- Anticipated cost is significantly more than anticipated benefits
- Significant impacts to homes and farms

Estimated Cost: $50,000,000



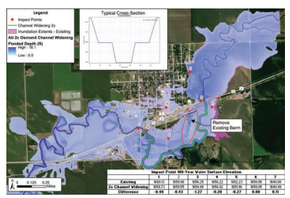


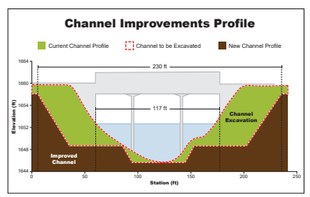
Channel Widening and Cleanout

Screened out because:

- Anticipated cost is significantly more than anticipated benefits
- Existing bridge sizes constrain the level of channel improvements that are possible

Estimated Cost: $7,000,000





Bridge/Culvert Replacement

Screened out because:

- Anticipated cost is significantly more than anticipated benefits

Estimated Cost: $20,000,000

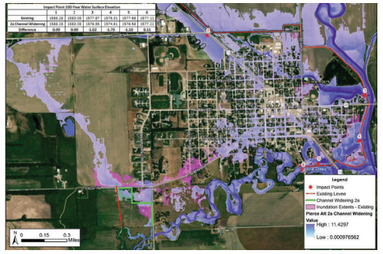
Draft Alternatives (Potential Projects) for Pierce

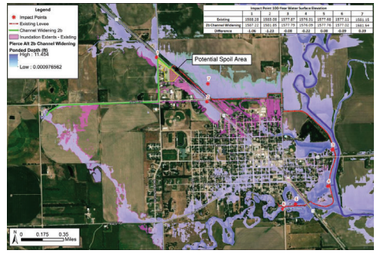
Alternatives still being considered:

Ditch and Culvert Improvements

Ditch and culvert improvements could provide significant flood risk reduction from west Pierce if combined with other alternatives.

Estimated Cost: $5,200,000

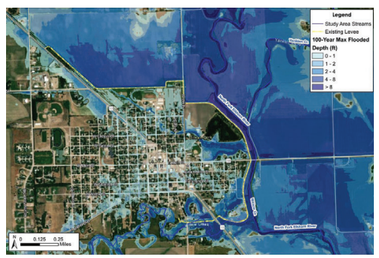




Levee Improvements

Improving the levee to current regulatory standards could provide east Pierce flood risk reduction from the river.

Estimated Cost: TBD



Nonstructural

A variety of nonstructural alternatives could be pursued with or by property owners in various locations, including:

Estimated Cost: TBD

Note: NRCS requires the "no action" alternative to be included in the final list of alternatives.

Detention Cell & Pump Station

A detention cell could provide significant flood risk reduction in east Pierce. A pump station could provide additional flood fighting capability and flexibility.

Detention Cell Estimated Cost: $1,400,000
Pump Station Estimated Cost: TBD

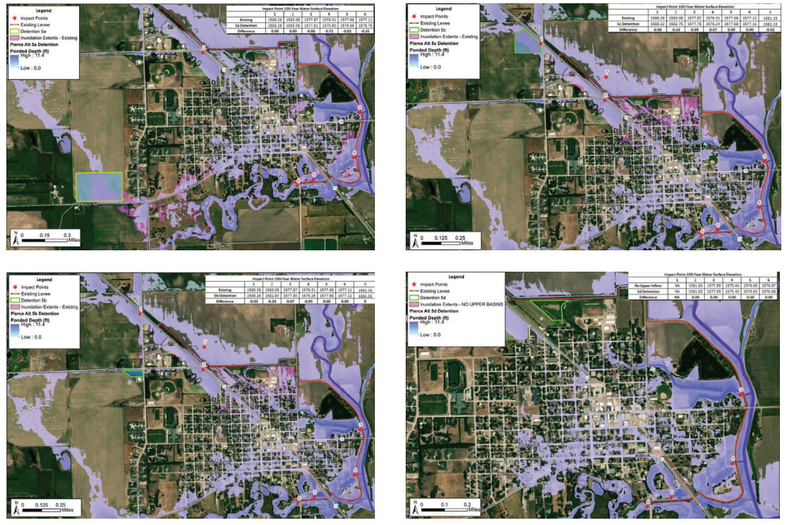
Alternatives removed from consideration through the screening and evaluation process:

Detention Cell (Multiple Options for Location)

Screened out because:

- Ditch and culvert improvements were more effective, less costly, and had less impacts to landowners.

Estimated Cost: $8,500,000



Bridge/Culvert Replacement

Screened out because:

- No potential bridge replacements identified
- Culvert improvements appear in channel widening

Next Steps

The project team will continue evaluating alternatives, identify a “preferred alternative,” and assemble a draft watershed plan.

The Study Advisory Team will be convened several more times to provide input on the alternatives and draft plan before it is submitted for state and national NRCS review.

The public will have the opportunity to review and comment on the draft final plan in late fall/early winter 2024.

We Want Your Input!

No final decisions have been made. The project team is collecting public comments on draft alternatives until Friday, July 26, 2024.

There are three ways to provide comment:

Complete a comment form and drop it in the comment box before leaving tonight.

Complete the comment form online *(see website information below).*

Send written comments to Curt Becker at cbecker@lenrd.org.

For the latest project information, visit the project website at **jeo.com/north-fork-wfpo** or scan the QR code with your phone’s camera.

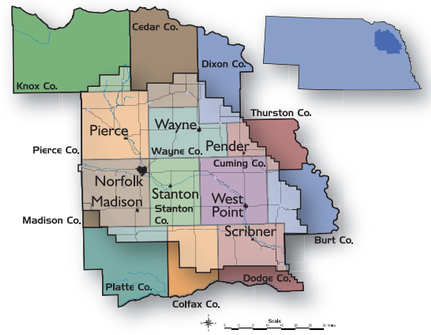
Lower Elkhorn NRD

In 1972, the Nebraska Legislature established 23 Natural Resources Districts (NRDs) as local government units with broad responsibilities to protect natural resources.

The Lower Elkhorn Natural Resources District (LENRD) serves the people in all or parts of 15 counties in Northeast Nebraska.

MISSION STATEMENT

Striving to improve the quality of life for all citizens of the Lower Elkhorn Natural Resources District by promoting and demonstrating sound methods of stewardship which conserve, develop, and manage all natural resources.



LOWER ELKHORN NRD

NRD Responsibilities Established by Legislature

1. Erosion Prevention and Control
2. **Flood Prevention and Control****
3. **Floodwater and Sediment Control****
4. Soil Conservation
5. Water Supply for any beneficial uses
6. Groundwater and Surface Water Management
7. Pollution Control
8. Solid Waste Disposal and Sanitary Drainage
9. Drainage Improvements and Channel Recertification
10. Management of Fish and Wildlife Habitat
11. Development and Management of Recreation Areas
12. Forestry and Range Management

***Responsibilities partially fulfilled by WFPO projects*

Highlights of LENRD Major Accomplishments since 1972

- Development of flood reduction projects
- Wildlife habitat improvement programs
- Community forestry and urban recreation projects
- Educational assistance to schools and community groups
- Cost-share assistance for conservation practices
- Four recreation areas
- Distribution of millions of trees

Protecting Lives. Protecting Property. Protecting the Future.

The WFPO Program

The Watershed and Flood Prevention Operations (WFPO) Program provides technical and financial assistance to states, local governments, and Tribes to plan and implement authorized watershed project plans for the purposes of:

- **Flood Prevention**
- **Watershed Protection**
- **Public Recreation**
- **Public Fish and Wildlife**
- **Agricultural Water Management**
- **Municipal & Industrial Water Supply**
- **Water Quality Management**
- **Watershed Structure Rehabilitation**

The Natural Resources Conservation Service (NRCS) administers the WFPO Pogram.

The Program is authorized by the Flood Control Act of 1944 (P.L. 78-534) and the provisions of the Watershed Protection and Flood Prevention Act of 1954 (P.L. 83- 566).

The WFPO Program provides 100% funding to local agencies for the development of a WFPO plan.

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 (NHPA) established a comprehensive program to preserve the history and culture of the United States. Section 106 of the NHPA requires federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve throughout the country. The Section 106 process gives interested parties and the public the chance to weigh in on these matters before a final decision is made.

What are Historic Properties?

In the Section 106 process, a historic property is a prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places.

If you know of any historic or cultural resources that may be affected by this project or if you would like to comment on this project's potential to impact historic properties, please contact NRCS Cultural Resource Specialist Elisha Mackling at Elisha.Mackling@usda.gov or NRCS Archaeologist Mike Chodoronek at Michael.Chodoronek@usda.gov.

WFPO Planning Process

Step 1 — A local agency requests planning assistance from the NRCS. NRCS approves the request.

Step 2 — Complete a Preliminary Investigation Feasibility Report (PIFR), which includes a brief study about the watershed to provide assurance that a watershed project plan can be developed.

Step 3 — Once the PIFR is approved, WFPO funding is requested for planning. Planning is 100% funding through WFPO.

Step 4 — Planning includes development of a Watershed Plan and Environmental Assessment (Plan-EA). **This project is here**

Step 5 — The Plan-EA is reviewed by State and National NRCS, the LENRD and the public.

Step 6 — Once the final Plan-EA is approved, projects identified in the plan are eligible for additional WFPO funding for design.