MEETING NOTES

Project 22103

TO: **Heather Smeltz, P.E. – Natural Resources Conservation Service**

FROM: **Robert Huzjak, P.E. – RJH Consultants, Inc.**

DATE: **July 27, 2022**

RE: **Development of a Watershed Plan and Environmental Document for the Chiques Creek Watershed Project – Public Scoping Meeting #1**

This memorandum presents a summary of items discussed during the Public Scoping Meeting held on Wednesday, July 27, 2022, from 6:00 PM to 8:00 PM at the Rapho Township Building (971 N. Colebrook Rd., Manheim, PA 17545). The scoping meeting is a requirement of the Chiques Creek Watershed Legacy Sediment Removal Project. The meeting was hosted by the National Resources Conservation Service (NRCS) and was supported by the Lancaster County Conservation District (LCCD), RJH Consultants, Inc. (RJH), and Wood Environmental Solutions (Wood).

The following individuals conducted the presentation:

NRCS	LCCD	WOOD	RJH
Heather Smeltz	Matt Kofroth	James Barbis	Robert Huzjak
Denise Coleman		Gregory Duncan	Chris Leclair

Purpose

The purposes of this meeting were as follows:

- Explain project background and purpose.
- Provide an overview of the project scope and approach.
- Review project goals and project schedule.
- Discuss watershed resources that may be impacted by potential alternatives. Obtain feedback from attendees on the relative importance of various watershed resources.
- Obtain and document general feedback from attendees.

Attendance

Fifteen (15) members of the local community attended the meeting in person. Although the meeting could be attended virtually using Zoom Meetings software, there were no virtual attendees.

Presentation

A PowerPoint slide deck was used to facilitate the meeting and share pertinent information with meeting attendees. The PowerPoint used in the meeting is included with this memo as Attachment A. The following are key notes from the presentation and are not intended to be a verbatim account.

- NRCS is the owner of the project. LCCD is the administrative sponsor, providing technical input to the project and facilitating the immediate and long-term implementation of the project. RJH is the lead engineering consultant on the project, responsible for the technical analysis and deliverables. Wood is the environmental consultant on the project, providing support to RJH for the environmental aspects of the project.
- The meeting objective was to introduce attendees to the project background, purpose, need, scope, goals, and schedule, and obtain feedback on these items.
- This project is currently in the Watershed Planning Process, which is the first step in a three-part process followed by design and construction. The planning phase is required to identify and evaluate potential solutions to a problem and determine if funding should be pursued to implement the solutions.
- The purpose of the project is to implement land treatment projects that reduce the amount of nutrient-laden legacy sediment transported by Chiques Creek. The purpose of the planning phase is to identify, evaluate, and compare different land treatment methods that will reduce the amount of legacy sediment transported by Chiques Creek.
- The need for the project is that the Chiques Creek watershed is stressed by legacy sediment, transporting excessive amounts into the Chesapeake Bay annually. This has negative environmental and economic consequences both locally within the watershed and regionally.
- The planning scope comprised of six key steps: data collection and evaluation, natural resources evaluation, project site screening and selection, land treatment project concept development, field reconnaissance, and evaluating project concepts.
- The planning process is currently in the data collection and natural resources evaluation phase.
    - Several key data sources have been acquired and are being used to characterize the watershed, including sediment erosion rate, sediment volume, vegetation location and density, mill dam locations, and delisted catchment areas.
    - Opportunities to improve natural resources and potential impacts to natural resources are being evaluated, and a prominent part of this evaluation is the feedback acquired from the local community, agencies, and public. The project team seeks input on the relative importance of various resources from the agency and public perspectives.
- Site selection will involve a multi-step screening process to arrive at 10 sites for further study. A land treatment project concept will be developed and evaluated for each of the final 10 sites.
    - A “site” in this project is considered a single parcel of land as defined by the county assessor.
    - Ultimately, the final 10 sites require voluntary landowner participation in the project.
    - Landowners who volunteer to participate in this planning phase of the project are not, in any way, tied to the design and construction phase of the project.
- Land treatment projects can use various methods to prevent the erosion of legacy sediments. Some methods, such as rock walls or riprap bank stabilization, are primarily structural and stabilize eroded streambanks. Other methods, such as sediment removal and floodplain restoration, focus on restoring the channel geometry and riparian

vegetation to a more natural state. Each method is usually associated with a set of site conditions for which it is most applicable, and the aim of the project is to understand the site characteristics and applied methods that provide the most benefit in the Chiques Watershed.

- Field reconnaissance will be performed on the final 10 sites.
    - The field data collection will be minimally invasive, and generally include a localized survey, soil sampling, site walk, and photography.
    - Field work will only be performed on properties where landowners have volunteered to participate and allowed the field data collection to take place on their property.
- Project concepts will be developed for each of the 10 sites and will be evaluated based on both quantitative and non-quantitative costs and benefits to determine the overall effectiveness of the project.
- The planning phase of the project is targeted for completion in Fall 2023.
- Comments are due to Heather Smeltz by August 26th, 2022.

Open Discussion and Comments

Presenters led the meeting attendees through a worksheet to obtain feedback on the relative importance of various natural resources that could be improved/impacted as part of the project. Attendees were encouraged, but not required, to fill out the worksheet in a manner that reflects their personal opinions.

Attendees were given the opportunity to ask questions and express general comments and concerns. The questions and comments received in the meeting are summarized as follows.

What is the priority for using native species to replant in the riparian buffer zones?

- The scope of our project is to look at the cost-benefit analysis of 10 sites. Introducing native species would be considered a non-quantifiable benefit component of a potential alternative at a project site. Native plants are one of the benefits the project team could choose to prioritize in a replanting and restoration alternative.

There are over 4500 miles of stream projects in Lancaster County. The project is picking 10 sites – how are those sites going to help the stream segments in the county that are already receiving help?

- The 10 sites we are selecting are part of a pilot study to figure out what types of projects work in this watershed. If there are ongoing projects either upstream or downstream of a selected site, the project team may adjust the project concept accordingly, but the 10 selected sites will not affect ongoing work. The planning phase is just a study to develop a broad range of alternatives and eliminate project concepts that do not seem appropriate or applicable.

The Penn State Master Watershed Stewards are an organization that might be able to help with this project. Would they be able to help with this project?

- Penn State has been involved with the Chiques project through the Agriculture and Environmental Center. Generally, NRCS welcomes input and volunteering from any willing groups. Volunteers can help with parts of the implementation process and offset project costs.

Is this the only pilot project of this nature in the entire country?

- At this point, this is the only project in the country with the goal of removing legacy sediment using this funding source.
- Using the Watershed and Flood Protection Program funding source, the NRCS is not as limited by funding and project restrictions, i.e., eligible projects can be on public or private lands.

It will be difficult to make a difference on a watershed scale with these types of legacy sediment projects until PADEP has created a credit incentive program.

Attachments

Attachment A — PowerPoint Presentation: “Chiques Creek Legacy Sediment Removal Project, Public Scoping Meeting”

Attachment A
PowerPoint Presentation

Chiques Creek Legacy Sediment Removal Project

Public Scoping Meeting

July 27, 2022, 6:00-8:00 PM

Rapho Township
971 N. Colebrook Road
Manheim, PA 17545

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Meeting Agenda

1. Introductions and Roles
2. Project Background
3. Planning Process Scope and Strategy
4. Next Steps
5. Open Discussion

Meeting Logistics

- Instructions to Meeting Attendees
  - Handout that we will use later in the presentation to get your feedback.
  - Maps are displayed around the room.
- Instructions to Online Attendees
  - Muted and unable to speak.
  - Chat function is enabled and being monitored.
  - Add name, address, and email/phone number to the meeting chat.

Introductions

Project Owner

USDA Natural Resources Conservation Service (NRCS)

- Denise Coleman | *State Conservationist*
- Heather Smeltz, P.E. | *Project Lead*

Project Sponsors

Lancaster County Conservation District and Lancaster County, PA

- Christopher Thompson | *LCCD District Manager*
- Matt Kofroth | *LCCD Watershed Specialist*
- Lancaster County Commissioners

Consultant Lead

RJH Consultants, Inc.

- Robert Huzjak, P.E. | *Project Manager*

Environmental Consultant

Wood Environmental Solutions, Inc.

- James Barbis, P.E. | *Project Manager*

Role of Local Sponsors

Lancaster County Conservation District (LCCD) and
Lancaster County, PA

- LCCD is providing technical input.
- Coordinating property access and records.
- Responsible for permits, maintenance, and utility coordination.

Role of Engineering Consultants

RJH Consultants (RJH) and
Wood Environmental Solutions (Wood)

- Collect and evaluate watershed data.
- Perform data analysis to characterize the watershed.
- Use results to inform the planning process.
- Evaluate sediment treatment strategies.
- Prepare final project documents.

Meeting Objectives

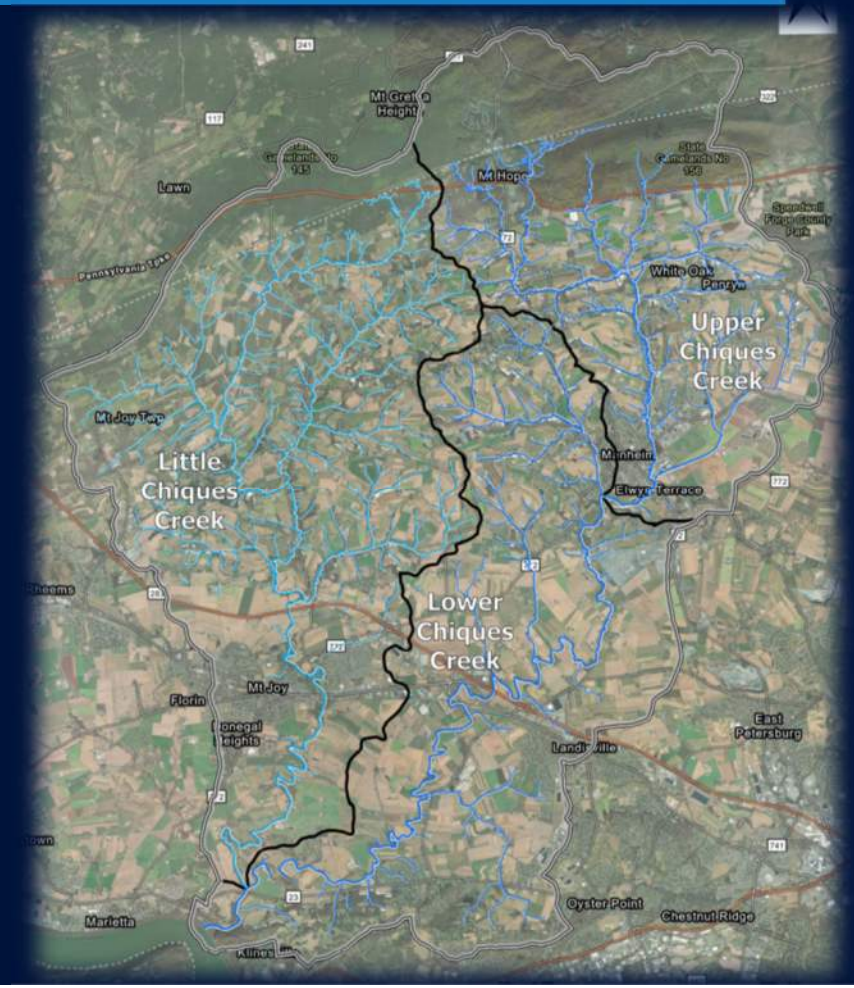
1. Provide project background and purpose.
2. Provide an overview of the project scope and approach.
3. Collect feedback from the public and landowners.
4. Review project goals and project schedule.
5. Identify resources that may be impacted by potential alternatives.

Project Area

The project area is the Chiques Creek Watershed, which is a 110 square mile drainage basin.

The Chiques Creek Watershed is comprised of the Upper, Little, and Lower Chiques Creek drainage areas.

The project is focused on stream corridors and riparian areas with legacy sediments.



Project Background

The streams in the Chiques Creek Watershed are stressed by sediment.

Land Use

- Primarily agriculture
- Urban development
- Lack of forest cover

- Siltation
- Streamflow alterations
- Excess suspended sediment
- Nutrient enrichment

Mill Dams

- 50+ present throughout the watershed

- The stream channel has been disconnected from the historic floodplain.

The watershed requires a sediment reduction of up to 40% from the existing baseline to meet the targeted sediment loads.

Watershed Project Planning Process

Planning	Design	Construction
18 months	2 years	2 years

This project is currently in the Watershed Planning phase, which involves:

- Identify the purpose and need.
- Gather and analyze data.
- Characterize the watershed.
- Evaluate key resources.
- Evaluate potential solutions.
- Determine if funding should be pursued to implement solutions.

Purpose and Need

Purpose

Project

Implement land treatment projects that reduce the amount of nutrient-laden legacy sediment transported by Chiques Creek.

Planning Phase

Identify, evaluate, and compare different riparian-zone land treatment alternatives that will effectively reduce the amount of nutrient-laden legacy sediment transported by Chiques Creek.

Need

- Chiques Creek contributes approximately 70 million pounds per year of nutrient-laden sediment (total annual load) into the Chesapeake Bay each year, primarily from streambank erosion of legacy sediment.
- The erosion of nutrient-laden sediment in Chiques Creek produces negative environmental and economic consequences both locally within Chiques Creek and regionally within the Chesapeake Bay.

Planning Objectives

Develop criteria to evaluate land treatment project concepts that would reduce the amount of legacy sediments leaving the Chiques Creek Watershed.

Evaluate the conditions under which certain treatment methods provide the most benefit.

Determine whether riparian zone sediment reduction projects are economically feasible and mutually beneficial in the Chiques Creek Watershed.

Planning Scope

1. Data Collection and Evaluation
2. Natural Resources
3. Potential Project Site Screening and Selection
4. Land Treatment Project Concepts
5. Field Reconnaissance
6. Evaluate Project Concepts

Planning Scope

1. **Data Collection and Evaluation**
2. Natural Resources
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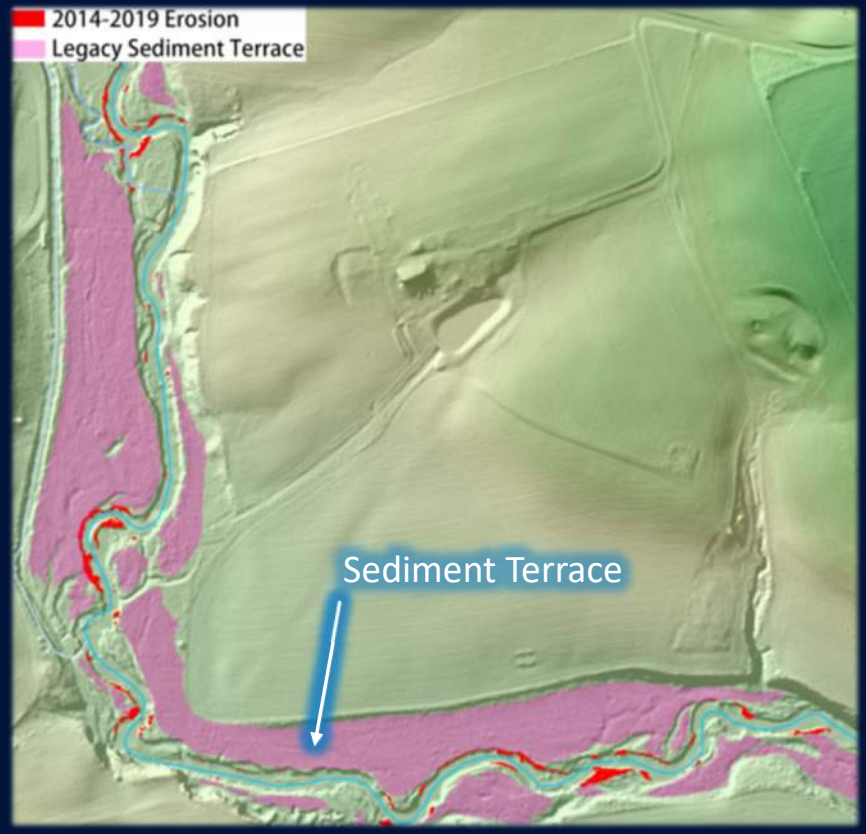
Planning Scope

Data Collection and Evaluation

Legacy Sediment Terrace Volume

- Use LiDAR survey data and floodplain mapping.
- Estimate the extents of the legacy sediment terraces along the stream corridors in the watershed.
- Calculate the volume of sediment in the terrace.

This data highlights areas that have a large potential for sediment erosion.

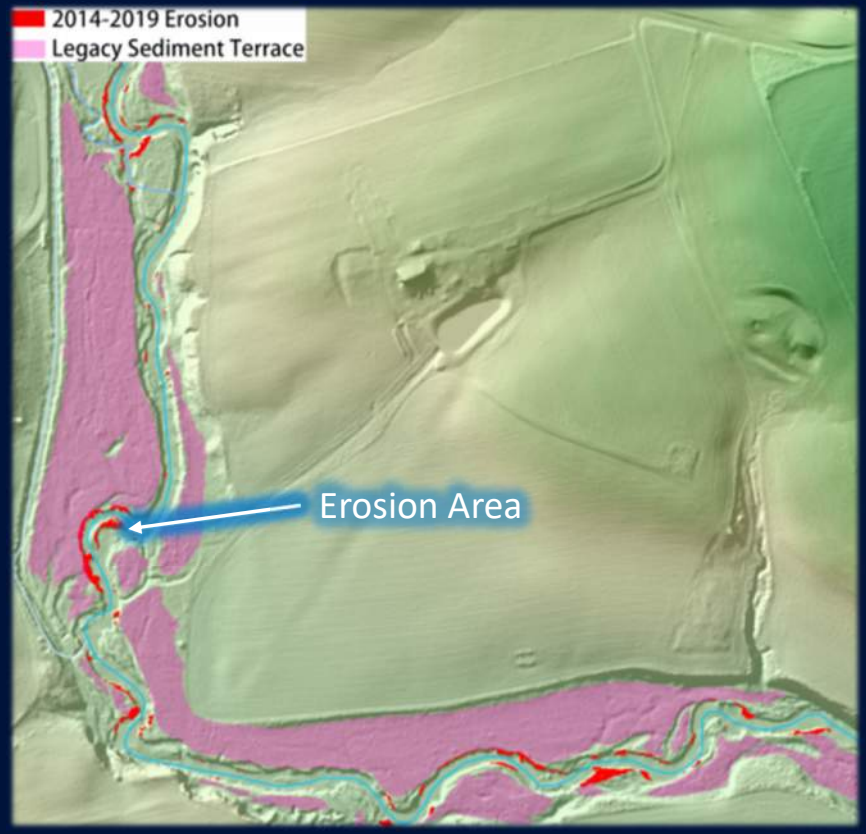


Planning Scope

Sediment Erosion Rate

- Use LiDAR survey data.
- Estimate the streambank sediment erosion that occurred throughout the watershed between 2014 and 2019.
- Calculate the volume and rate of erosion.

This data highlights areas where legacy sediment has recently eroded.

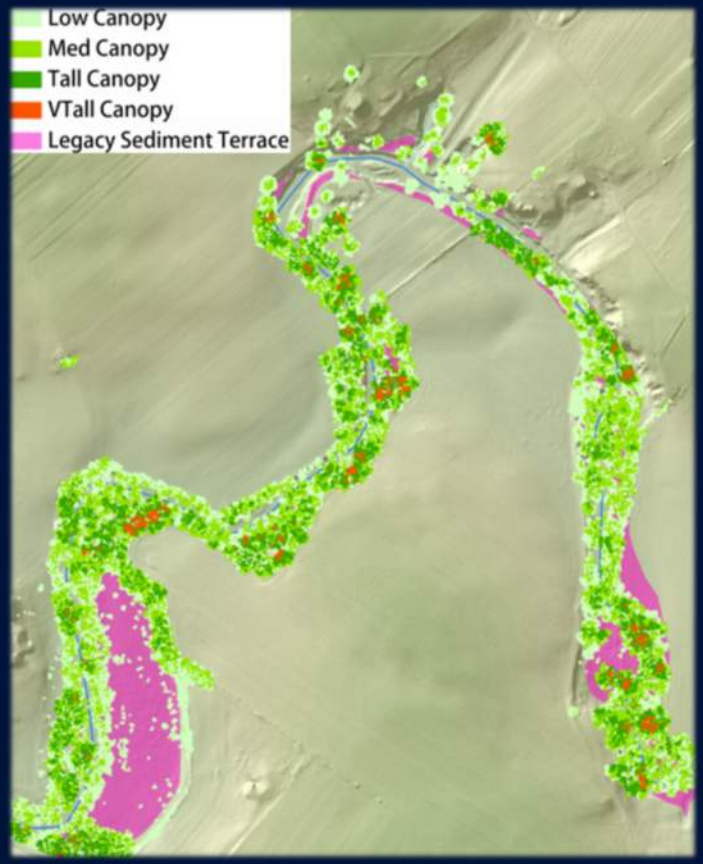


Planning Scope

Data Collection and Evaluation

Vegetation Density

- Use aerial imaging.
- Estimate the height and density of vegetation along the stream corridors.



This data will be used to evaluate how different land treatment methods could be applied.

Planning Scope

Data Collection and Evaluation

Mill Dams

- Historic – Constructed more than 50 years ago.
- Non-historic – Constructed less than 50 years ago.
- The watershed contains more than 50 mill dams.
- Mill dams can alter the natural watercourse, impound sediments, and impact erosion.

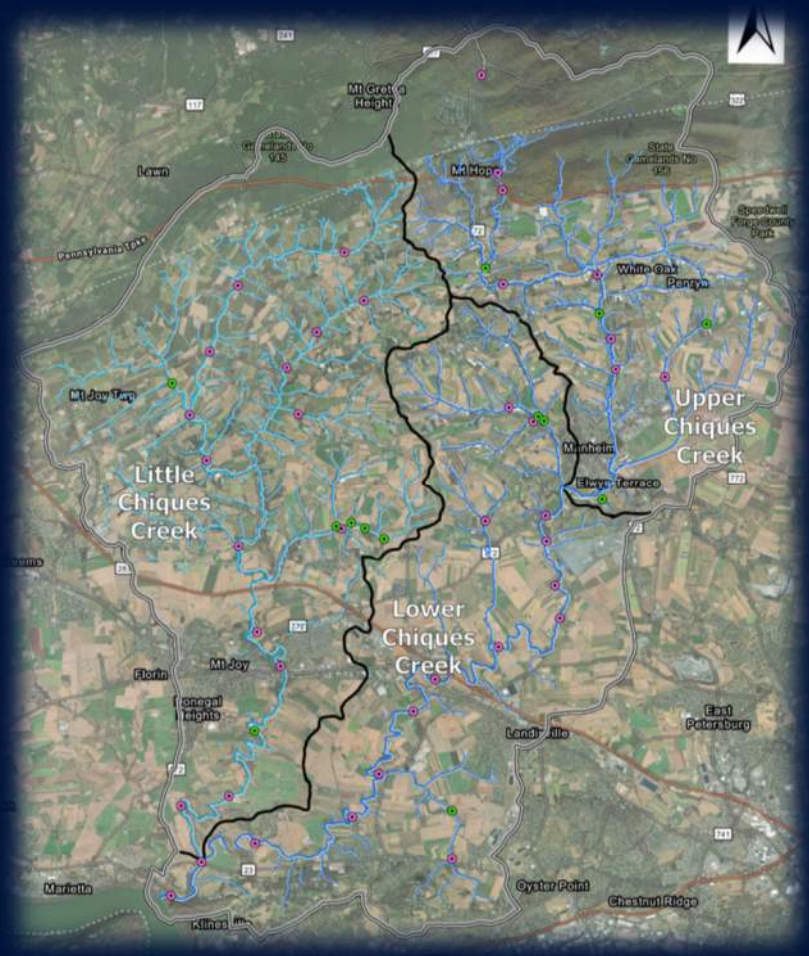
This data can be used to evaluate how the proximity of an area to a mill dam impacts erosion.

Planning Scope

Data Collection and Evaluation

Mill Dams

- 39 Historic *(Pink)*
- 13 Non-historic *(Green)*
- 52 Total



Planning Scope

Data Collection and Evaluation

Delisted Catchments

- Designated by PA Department of Environmental Protection (PADEP)
- Delisted describes a stream segment that:
  - had been placed on a list of impaired streams
  - was removed from the list because of proactive pollution reduction measures

This data highlights portions of the watershed that are likely to have projects and participation already.

The red areas are delisted catchments.

Planning Scope

1. Data Collection and Evaluation
2. **Natural Resources**
3. Potential Project Site Screening and Selection
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5. Field Reconnaissance
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Planning Scope

Natural Resources

Local natural resources are affected by land treatment projects.

Opportunities

- Wetland restoration
- Core habitat improvements
- Floodplain restoration
- Recreational opportunities
- Future mitigation bank for MS4

Impacts

- Core habitat
- Cultural resources
- Existing utilities
- Vegetation during construction

This list is not complete – we want to hear your feedback on natural resources.

We will walk through a worksheet together in the discussion portion of the presentation.

Planning Scope

1. Data Collection and Evaluation
2. Natural Resources Impacts
3. **Potential Project Site Screening and Selection**
4. Land Treatment Project Concepts
5. Field Reconnaissance
6. Evaluate Project Concepts

Planning Scope

Site Screening and Selection

Road Map

Primary Considerations

- Data Collection and Results
- Natural Resources
- Landowner Participation

→ 55 sites

Based on 1st set of screening criteria

→ 30 sites

Based on 2nd set of screening criteria

→

10 sites

- We need landowners to volunteer to participate.
- Would be useful to evaluate the effectiveness of a sediment treatment method.
- A project on these sites would have understood or quantifiable benefits.
- The costs of a project would be considered and quantified.

Planning Scope

1. Data Collection and Evaluation
2. Natural Resources Impacts
3. Potential Project Site Screening and Selection
4. **Land Treatment Project Concepts**
5. Field Reconnaissance
6. Evaluate Project Concepts

Planning Scope

Land Treatment Project Concepts

Streambank Stabilization: Rock Wall

Before construction

After construction

- Unstable, eroded banks can be structurally stabilized with a natural aesthetic.
- This prevents the erosion and scouring of sediments on high energy banks where revegetation isn't practical.

Planning Scope

Land Treatment Project Concepts

Streambank Stabilization: Riprap Slope Protection

- Unstable, eroded banks can be structurally stabilized with riprap.
- This prevents the erosion and scouring of sediments on high energy banks where revegetation isn't practical.

Planning Scope

Land Treatment Project Concepts

Rock Veins

- Rock veins dissipate the energy of the stream in locations where sediment erosion is occurring or likely.
- This prevents the erosion and scouring of sediments on high energy banks where revegetation isn't practical.

Planning Scope

Land Treatment Project Concepts

Legacy Sediment Removal and Floodplain Reestablishment

Sediment removal and construction

Big Spring Run – Reestablished Floodplain

Planning Scope

1. Data Collection and Evaluation
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Planning Scope

Field Reconnaissance

Field reconnaissance will be performed on the 10 selected sites.

Field reconnaissance activities may include:

- Localized survey
- Legacy soil sampling
- Existing utility survey
- Site walk and documentation
- Photography of the stream corridor

Planning Scope

1. Data Collection and Evaluation
2. Natural Resources Impacts
3. Potential Project Site Screening and Selection
4. Land Treatment Project Concepts
5. Field Reconnaissance
6. **Evaluate Project Concepts**

Planning Scope

Evaluate Project Concepts

Project concepts will be evaluated based on quantifiable and non-quantifiable costs and benefits.

Costs

- Estimated cost to install land treatment project
- Construction impacts
- Cultural resource impacts

Benefits

- Estimated benefit from sediment removal
- Wetland or Floodplain Restoration
- Core Habitat Restoration
- Recreational benefit

This list is not complete – it will change on a site-by-site basis and as more information is gathered in the planning process.

Planning Schedule

Select 10 treatment project sites.	Fall 2022
Conduct site reconnaissance and evaluate treatment alternatives.	Late Winter to Early Spring 2023
Second Public Meeting	Winter/Spring 2023
Public review of draft documents.	Summer 2023
Public review of final documents.	Fall 2023
Planning Completion	Fall 2023

Open Discussion

Natural Resources

Public Involvement

What resource opportunities/impacts are of particular importance?
Are there any other known opportunities or impacted resources?
General concerns or comments?

Resource List

- Wetlands
- Critical Habitat
- Floodplains
- Recreation
- Cultural Resources
- T&E Species
- Fish and Wildlife
- Forests
- Invasive Species
- Land Use
- Migratory Birds
- Natural areas
- Parklands
- Prime and Unique Farmland
- Riparian Areas
- Public Health and Safety
- Regional Water Resource Plans
- Scenic Beauty
- Scientific Resources
- Soil resources
- Water Quality
- Water Resources
- Social Issues
- Provisioning services
- Regulating services
- Supporting services
- Cultural services
- *Other…*

Open Discussion

Other Questions

- Is there any existing data that you are aware of that may be of use to this project?
- Additional questions or comments?

Closing Comments

Final Thoughts

- Planning phase of a bigger project.
- Schedules and timelines are targets, not rigid.
- The participation of landowners and agencies is voluntary.
- The project is intended to reflect the values and opinions of the local agencies and community whenever possible.

Contact Heather Smeltz with the NRCS:

- Email: heather.smeltz@usda.gov
- Phone: (717) 237-2214

Comments are due to Heather Smeltz by: August 26, 2022