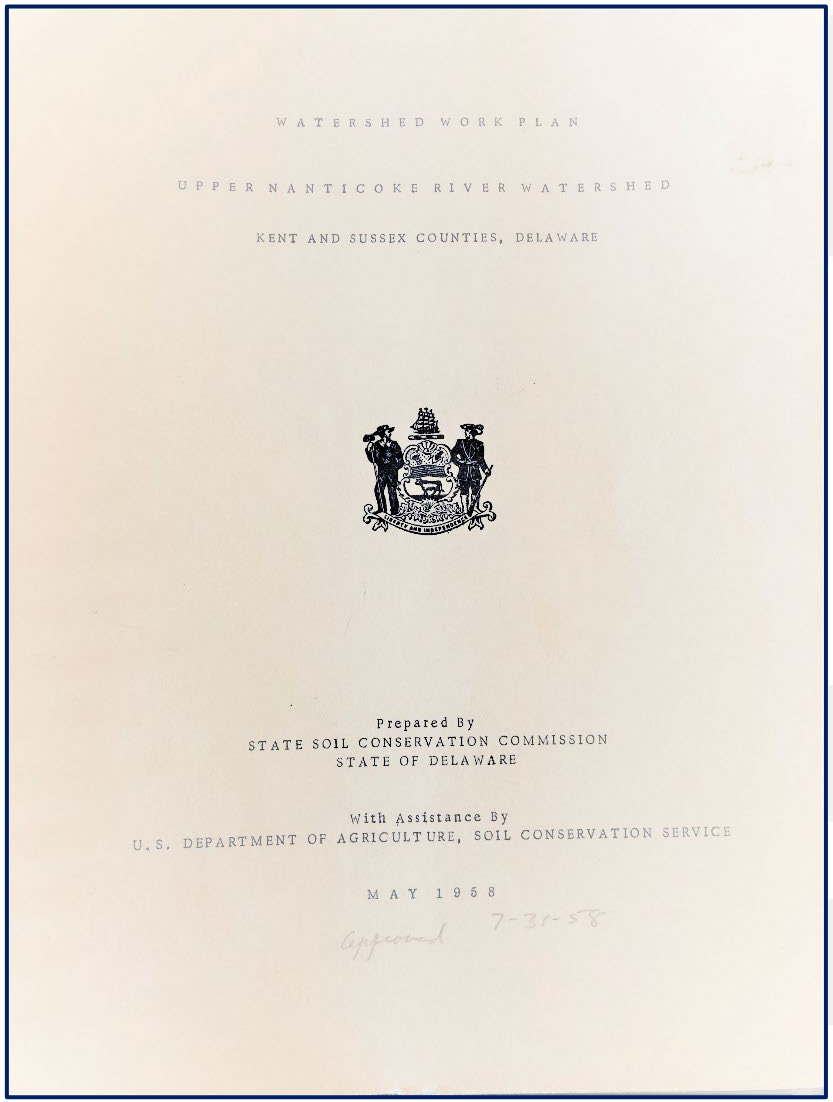
Watershed Project Plan and Environmental Document

Upper Nanticoke River Watershed Improvements

Kent and Sussex Counties, DE

THE UPPER NANTICOKE WATERSHED WORKPLAN



WATERSHED WORK PLAN

UPPER NANTICOKE RIVER WATERSHED

KENT AND SUSSEX COUNTIES, DELAWARE

Prepared By
STATE SOIL CONSERVATION COMMISSION
STATE OF DELAWARE

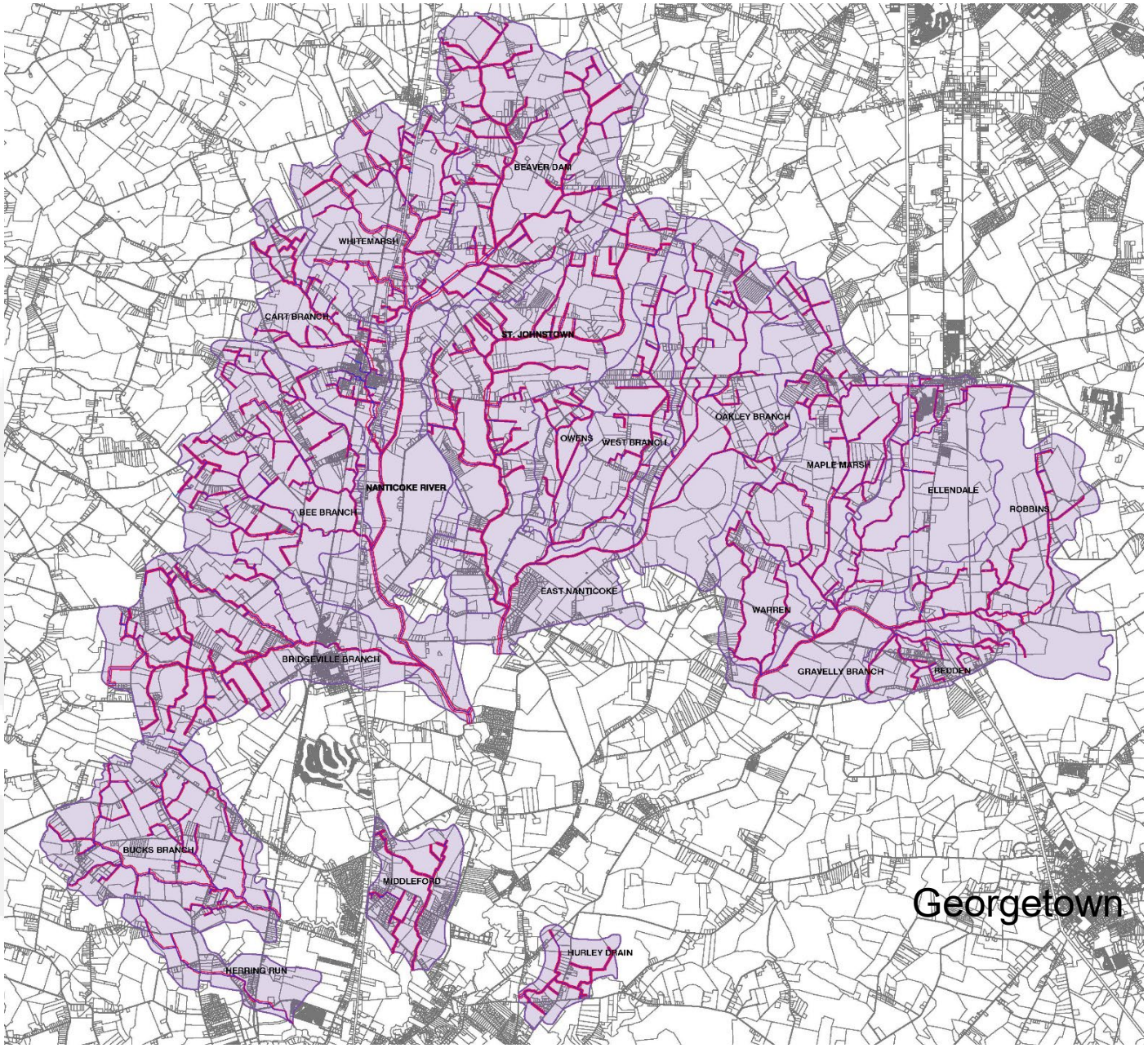
With Assistance By
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE

MAY 1958

Approved 7-31-58

- Prepared under the Authority of the Watershed Protection and Flood Prevention Act Public Law 83-566 with the assistance of the USDA Soil Conservation Service (now NRCS) in 1958
- 24 Active Tax Ditch Organizations
- Estimated $4.8 million investment (present day $77.9 million) in drainage improvements and land treatment measures

The Upper Nanticoke River Watershed



WHY ARE WE HERE?

In 2019, the Sussex Conservation District requested funding through the Watershed & Flood Prevention Operations Program to address the aging tax ditches in the Upper Nanticoke River Watershed

WHY THE NEW PROJECT?

- Original Plan outlived lifespan
- Additional funding to the Watershed & Flood Prevention Operations Program in 2018
- Aging tax ditches need work beyond traditional maintenance
- Properly functioning tax ditches are essential to the agriculture industry in the state

WATERSHED PROJECT PLAN

- Feasibility Study
- Considers several project alternatives
- Evaluates project alternatives against environmental and public concerns
- Determines if project should be funded.

PLANNING PROCESS (NEPA) OVERVIEW

- Became law in 1970
- First national framework for environmental protection
- Required for all major federal actions

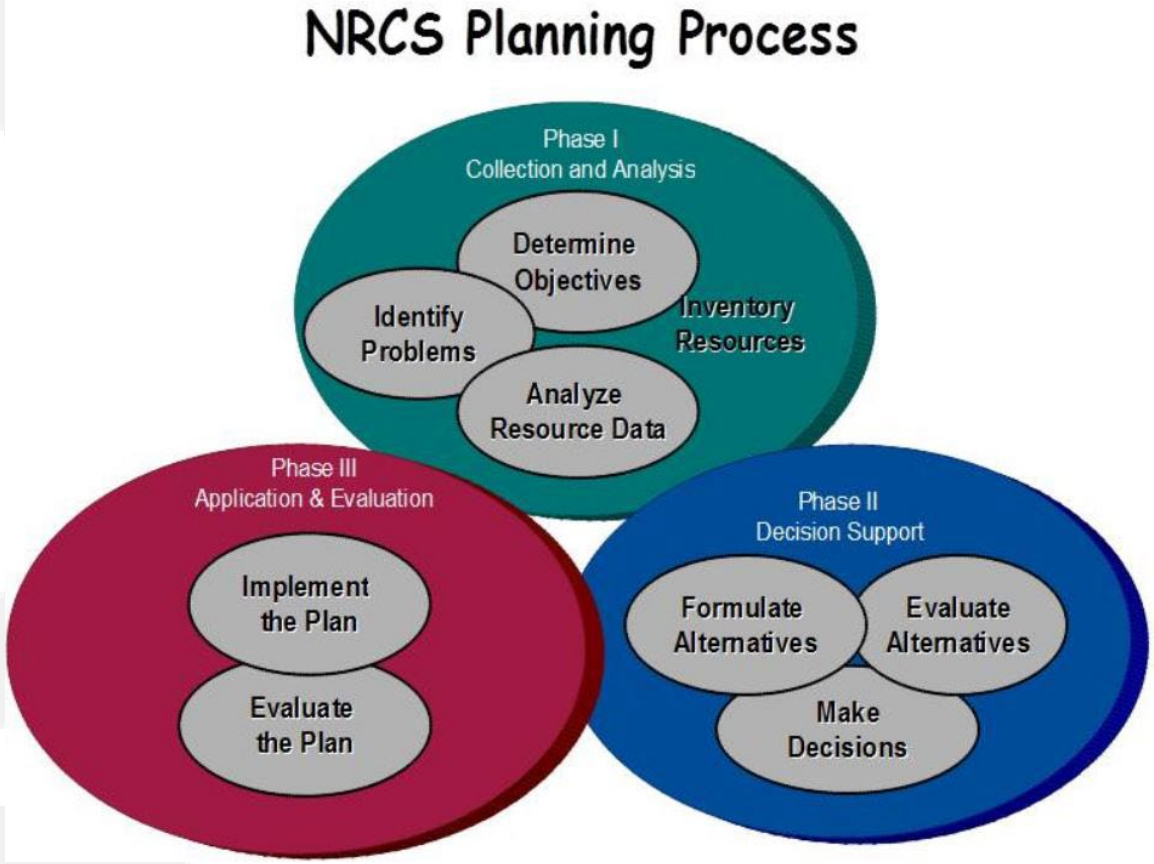


Photo courtesy of www.nrcs.usda.gov

THE NEPA PROCESS

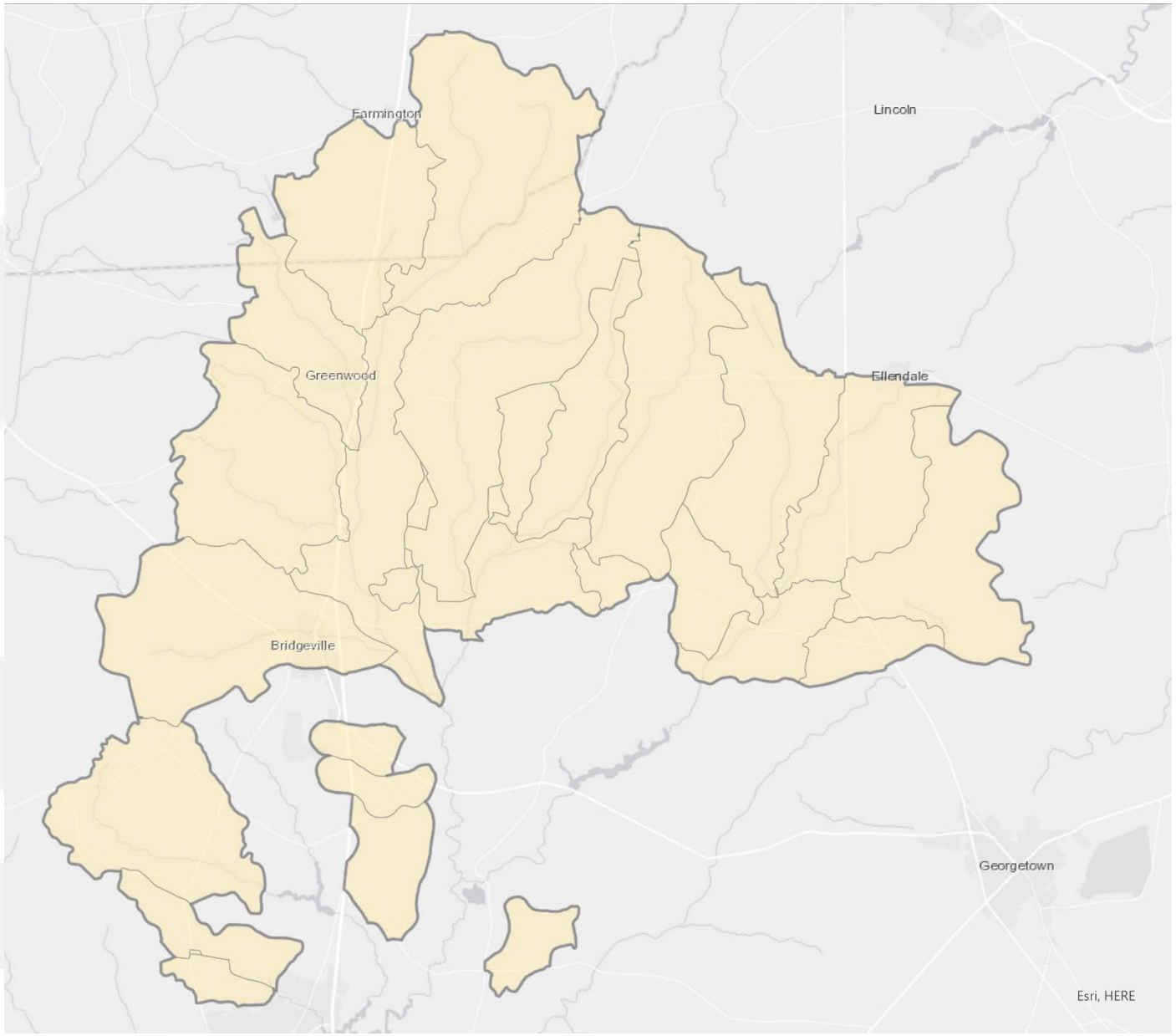
- Conduct Resource Inventories and Watershed Assessment
- Conduct Social Assessment
- Conduct Economic Assessment
- Formulate Alternatives
- Evaluate Alternatives
- Hold Public Meetings

RESOURCES CONSIDERED BY NEPA

- Air Quality
- Visual Character/ Aesthetics
- Land Use
- Hazardous Materials and Waste
- Noise
- Infrastructure and Utilities
- Water Resources
- Biological Resources
- Geology and Soils
- Cultural Resources
- Socioecomomics
- Environmental Justice

Overview of Project Area

Upper Nanticoke Watershed encompasses approximately 234 square miles. It includes roughly 112 miles of Tax Ditches.



DATA GATHERING AND EVALUATIONS

- Compile Data and Information Obtained from the Public Meeting and Tax Ditch Organizations Regarding Problem and Opportunity Areas
- Develop a Field Reconnaissance and Exploration Plan that Includes the Problem and Opportunities Areas
- Using the Collected Data, Perform Analyses to Evaluate Performance of Drainage Systems and Identify Water Treatment Sites
- Perform Environmental and Archaeological Assessments
- Formulate Alternatives to Restore Drainage Systems, Improve Water Quality, and Restore Ecosystem

CHANNEL STABILITY/CAPACITY

- Identify and correct bank stability issues
- Purpose to reduce bank erosion and extend the life of the channel
- Reduce loss of farmland and property
- May use structural or vegetative practices or a combination of both
- Maintaining or restoring channel capacity

DRAINAGE IMPROVEMENTS

Culverts

- Evaluate Capacity
- Restore Capacity By Removing Obstructions and/or Sediment
- Replace Damaged Pipes
- Increase Capacity of Drainage Structures to Lower Flood Levels

ECOSYSTEM RESTORATION

- Identify opportunities for ecosystem restoration such as wetlands and stream restoration
- Practices may include two stage ditches, floodplain reconnection by breaching berms, in-channel stream restoration or other practices

WATER QUALITY IMPROVEMENTS

- Identify opportunities for water quality practices to treat polluted runoff before transporting nutrients downstream
- Practices may include water control structures in ditches, denitrifying bioreactors adjacent to ditches or other practices which treat excess nutrients

NEXT STEPS

- Document and Assess Findings of Public Meetings
- Complete Field Studies and Investigations
- Identify and Evaluate Alternatives
- Coordinate with Various Governing Agencies
- Finalize Supplemental Watershed Plan and Environmental Document