Presentation Overview

- Overview of Drainage Program
- Tax Ditch Branch
- Public Ditch/RC&D Branch
- Importance of Programs
- Opportunities for Improvement
Evolution of the Drainage Program

**1937**
Dust Bowl
Roosevelt’s Uniform Soil Conservation Law

**1940’s**
- Soil Conservation District Act
- Soil and Water Conservation Commission
- Delaware County Conservation Districts Established
- “Drainage Program” from each Conservation District

**1951**
Uniform Drainage Law passes “Tax Ditches”
Drainage Organizations prior were “Ditch Companies”

**1954**
Public Law 566
Federal Watershed & Flood Protection Act
brought Fed $ for construction of Tax Ditches

**1960’s**
Demand for work on infrastructure on State roads and Tax Ditches constructed resulted in contractual employees hired

**1970’s**
- DNREC Division of Soil & Water Conservation Established
- Soil Conservation District Program Guidance
- Tax Ditch Program
- Highway Crossing Program
- Watershed Program
Evolution of the Drainage Program

1970’s
- Tax Ditch Construction
- Peaks
- Dragline to Hydraulic Excavator
- Clean Water Act Passes

1980’s
- Clean Water Act halted/hindered Tax Ditch construction
- DNREC Sediment and Erosion Control Regulations adopted

1985
- Swampbuster
- No aid to producers converting wetlands to cropland
- SCS/NRCS begins to end assistance in drainage/tax ditch construction

1990’s
- Delaware sues State of New York over Escheated funds
- Resulting in 21st Century Fund establishment
- 21st Century Fund $ for use in plan, design, & implementation to address reported drainage concerns

2000’s
- Drainage and Stormwater Section created and Drainage becomes a “Program” in DNREC
- Pipe Crew becomes Small Projects Crew
Drainage Program
Functions

• Work with private and public landowners throughout the State to assist with water management problems.
• Work closely with the Conservation Districts, DelDOT, and other partners to accomplish our goals.
• Manage the State’s Drainage and Stormwater Assistance Line
• Provide support to the Stormwater Sub-Committee of the Water Infrastructure Advisory Committee.
Drainage Program Funding

![Drainage Program Funding Graph]
Tax Ditch Program

- Operates under the roles and responsibilities assigned in the Delaware Code under Title 7 Chapter 41 “Agricultural and Soil Conservation; Drainage and Reclamation of Lowlands
- What are Tax Ditches?
- Responsibilities of Program:
  - Administrative and Technical assistance for tax ditch organizations
  - Administer funds to the Conservation Districts to provide financial assistance for tax ditch maintenance
  - Assist with maintenance and inspection of tax ditch systems
  - Repository for tax ditch systems and information
## Tax Ditches in Delaware

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Tax Ditches</th>
<th>Miles of Tax Ditch Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Castle</td>
<td>26</td>
<td>57</td>
</tr>
<tr>
<td>Kent</td>
<td>78*</td>
<td>769</td>
</tr>
<tr>
<td>Sussex</td>
<td>137*</td>
<td>1,193</td>
</tr>
<tr>
<td>Totals</td>
<td>234 (7 are dual county*)</td>
<td>2,019</td>
</tr>
</tbody>
</table>
Tax Ditch Stakeholders

• Taxables
• Tax Ditch Officers
• Landowners outside of watersheds
• Agencies – DNREC, Conservation Districts, DelDOT, municipalities
## Tax Ditch Program Responsibilities
**provided to Tax Ditch Officers**

<table>
<thead>
<tr>
<th>Administrative Assistance</th>
<th>Technical Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Ditch System Maps for Managers</td>
<td>Maintenance Stakeout</td>
</tr>
<tr>
<td>Tax Ditch System Maps for Contractors</td>
<td>Tax Ditch Channel Survey for Evaluation</td>
</tr>
<tr>
<td>Tax Ditch Assessment Lists</td>
<td>Maintenance Inspection</td>
</tr>
<tr>
<td>Mailing Labels &amp; Meeting Notices</td>
<td>Maintenance Crossing Pipe Sizing</td>
</tr>
<tr>
<td>Attendance at Annual Meetings</td>
<td>Environmental Permitting Assistance</td>
</tr>
<tr>
<td>Tax Ditch Audits</td>
<td>System Inspections</td>
</tr>
<tr>
<td>Bonding Guidance</td>
<td>Operation and Maintenance Plan Development</td>
</tr>
<tr>
<td>Warrant Calculation and Guidance</td>
<td></td>
</tr>
<tr>
<td>Warrant Processing and Filing</td>
<td></td>
</tr>
<tr>
<td>Annual Tax Ditch Assessment Updates</td>
<td></td>
</tr>
<tr>
<td>Annual Tax Ditch Certified List Updates</td>
<td></td>
</tr>
<tr>
<td>Tax Ditch Banking Assistance</td>
<td></td>
</tr>
</tbody>
</table>
## Tax Ditch Program Responsibilities

**provided to Landowners**

<table>
<thead>
<tr>
<th>Administrative Assistance</th>
<th>Technical Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-of-Way Inquiry Responses</td>
<td>Maintenance Stakeout</td>
</tr>
<tr>
<td>Court Order Change Documents</td>
<td>Maintenance Inspection</td>
</tr>
<tr>
<td>Tax Ditch Assessment Inquiry Responses</td>
<td>Minimum Pipe Sizing</td>
</tr>
<tr>
<td></td>
<td>Environmental Permitting Guidance</td>
</tr>
<tr>
<td></td>
<td>Evaluation of Tax Ditch Concerns Reported</td>
</tr>
<tr>
<td></td>
<td>Review of Land Development Plans for Letter of No Objection issuance</td>
</tr>
<tr>
<td></td>
<td>Participation at Public Outreach Events</td>
</tr>
<tr>
<td></td>
<td>Web Map Application</td>
</tr>
</tbody>
</table>
Public Ditch/RC&D

- RC&D Program
- Coordination with Districts for drainage projects
- Drainage concerns
- Project development
- Contract development and oversight
- Landowner permission
- Project oversight
- Small projects
Resource Conservation & Development Projects

- Began as a component of Delaware’s 21st Century Fund
- Original 21st Century funds have been expended
- Projects require approval by Joint Committee on Capital Improvement
- At least 10% of total project costs must be from non-RC&D Funds
- Partnership between DNREC and three conservation districts
Stakeholders

- Landowners
- Legislators
- Conservation Districts
- State agencies
- Municipalities
RC&D Process

Kent & Sussex Counties

- Addition to RC&D
- Prioritize
- Scoping
- Engineering and Design
- Permitting
- Funding
- Construction
- Completion

New Castle County

- Addition to RC&D
- Engineering and Design
- Vendor Selection
- Construction
- Completion
Why Prioritize?

- Demonstrate Accountability
- Qualitative not Quantitative
- Factors Considered:
  - Public Safety
  - Frequency of Flooding
  - Project Status
  - Property Damage
  - Ability to leverage other funds
  - Age of Project
Drainage Concern Submission

- Submitted by:
  - Hotline number/email
  - Inquiry from legislator
- DNREC handles concerns for Kent and Sussex Counties
- NCCDC handles concerns for New Castle County
Leveraging Funding

• Federal dollars could be used on tax ditch & RC&D projects

• Often partner led – ie. USFWS, USDA, TNC, CIB

• Must have other co-benefits
  • Wildlife habitat
  • Water quality

• Future project planning will incorporate more features to be eligible for federal funding
Importance of Drainage Program

• Tax Ditch Program
  • Provide technical and administrative support to over 234 tax ditch organizations, ranging from 2 – 56,000 acres
  • Over 2,000 miles of channels are benefited by the Program
  • Encompasses ~100,000 people and one-half of the state maintained roadways.

• Public Ditch/RC&D Program
  • Maintain the State’s Drainage Complaints
  • Administer RC&D funds
  • Work with Conservation Districts to develop projects, secure landowner permission, and conduct surveys
  • Secure project permits
  • Assist with manual drainage improvements
Opportunities for Improvement

• New Program Structure
• Tax Ditch Modernization
• Redefine RC&D roles in Kent and Sussex Counties
New Program Structure

- Tax Ditch Program
  - Administrative Support
    - New Castle Survey
    - Kent & Sussex Survey
    - Technical Assistance
  - Project Planning
  - Small Project Implementation
  - Design & Development
Tax Ditch Modernization

• Continuous Improvement to streamline processes within Program
• Form a Tax Ditch Modernization Workgroup to address:
  • Funding
  • Volunteerism
  • Changing Environment

![Graph showing the cumulative number of tax ditches formed in Delaware over time. 90% of the Tax Ditches were constructed prior to 1985.](image-url)
RC&D roles in Kent and Sussex County

• Increased collaboration between DNREC and the Conservation Districts

• Coordinated meetings between all parties with prioritization of project

• Additional funding will be provided to KCD and SCD to coordinate the RC&D programs in their respective counties, much like NCCD.
Thank you