The following are Snapshots of our Story Map Presentation

GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

Presented by
Chris Dubin and Pam Brangan

Located in Winooski, Vermont

• 1 of 11 Regional Planning Commissions
  ◦ Only MPO
• 19 member municipalities
• Home to 1/4 of Vermont residents

The mission of the Chittenden County Regional Planning Commission is to act as the principal forum for planning, policy and community development in the region. We will do this by providing planning and technical assistance that meets the needs of our member municipalities and the public, while remaining consistent with our federal and state requirements. Our work will result in the development and implementation of plans that
GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

Background

- History of Act 64 (Vermont’s Clean Water Act)
- Resulting MRGP Legislation
- Inventory, Prioritize, Implement!

Input Dataset
GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

Input Dataset

Capitol
GIS Solutions for Vermont's Stormwater Road Erosion Inventory

Building the Dataset

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Road Segment Name</th>
<th>Town Highway Number &amp; Segment ID Number</th>
<th>AHA Miles Slope</th>
<th>Erosion Type</th>
<th>Road Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>3</td>
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</tr>
</tbody>
</table>
GIS Solutions for Vermont's Stormwater Road Erosion Inventory

Fieldwork Solution

Supporting Data

- culverts
  - how many culverts along a segment?
- streams
  - is there a stream nearby?
- parcels
  - for reference
- driveways
  - for reference
- addresses
  - for reference

Welcome to VTCULVERTS

Provided by the Vermont Agency of Transportation and the Vermont Regional Planning Commissions

The Vermont Agency of Transportation was directed by the Vermont Legislature to complete and deploy an integrated software product to handle data entry, access and status reporting of town bridge and culvert inventories currently collected by the Regional Planning Commissions (RPCs), towns and their contractors.

All town bridge and culvert inventory data which has been previously collected and submitted through the old VODOTT website is currently located in this system. All bridge and culvert data that adheres to the requirements of this database may be entered into this application.
GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

Fieldwork Solution

Analysis of existing data
- Type of culvert
GIS Solutions for Vermont's Stormwater Road Erosion Inventory

Fieldwork Solution

Collector

- Paved, number of conveyances (Road Drainage)
- Paved, Filtered roadway conveyances
- Paved, Stabilized but NOT filtered conveyances
- Paved, roadway culverts (non-driveway)
- Paved, Roadway culverts less than 18 in
- Paved, culvert ends treated with headers in
- Paved, culvert outlets stabilized
- Paved, # of driveway culverts
- Paved, driveway culverts less than 15 in
- Paved, roadway stream erosion
- Paved, slopes <5%, Drainage Ditch/Sheet Flooding
- Paved, Road Drainage Erosion, slope > 5%
Fieldwork Solution
GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

QA/QC Process

Python Script
- Design
- Build
- Test
- Execute

Results and Evaluation
GIS Solutions for Vermont’s Stormwater Road Erosion Inventory

Next Steps/Lessons Learned

- Overcollected data was a good thing
  - Everchanging Permit
- QA/QC was critical
- Flexibility in Dataset design
- statewide GIS Data Structure Standard Development

Questions?

Pam Brangan, GIS/IT Coordinator
Chris Dubin, Transportation Planner
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Questions?

Pam Brangan, GIS Data & IT Manager
Chris Dublin, Transportation Planner