Tracking and Communicating Vermont’s Clean Water Progress

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Vermont Department of Environmental Conservation

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Vermonters care about clean water
Vermont’s Clean Water Priorities and Clean Water Restoration Plans (i.e., Total Maximum Daily Loads, or TMDLs)
Vermont Clean Water Act (Act 64 of 2015)
“All-in for Clean Water”

Reasonable assurance to meet nonpoint source targets

New water quality regulations

New Clean Water Fund

New tracking, accounting, and reporting requirements
Scope of Vermont’s Clean Water Restoration Tracking (i.e., TMDL Progress)
Lake Champlain TMDL Accountability Framework

1. TMDL establishes phosphorus targets
2. TBP I.D. five-year interim phosphorus planning targets
3. TBP I.D. priority actions to meet five-year planning targets
4. Track actions implemented via regulatory/funding programs
5. Estimate annual average phosphorus load reductions
6. Measure progress against TMDL base load and targets

EPA issues report cards by planning basin on five year rotation
Scope of Vermont’s Clean Water Restoration Tracking (i.e., TMDL Progress)
Interagency Clean Water Projects Dashboard

Helen Carr
What is the Dashboard?

An online interactive platform displaying clean water project data from the state’s clean water tracking database to the public

Search clean water project data from six state agencies and view individual project reports with detailed information

Scope includes projects that have been funded or completed from state fiscal year 2016 to 2018

Complements the Vermont Clean Water Initiative 2018 Investment Report
Why create the Dashboard?

- Part of the Governor’s PIVOT initiative
- Provides **transparency** to the public on investments made with state clean water funding and the outcomes of each
- Allows legislators, watershed groups and watershed planners to **search** and view the types and number of projects ongoing or completed in their regions
- Shows the **impact** each investment is making toward clean water goals
Dashboard Functions

Access details of clean water projects funded by state agencies through a search engine and an interactive map.

1. Project Search

- **Listing**
- **Map**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Step</th>
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<tbody>
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<table>
<thead>
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<table>
<thead>
<tr>
<th>Town</th>
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<th>Basin Plan</th>
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<table>
<thead>
<tr>
<th>Project Status</th>
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<tbody>
<tr>
<td>Funded</td>
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<tr>
<td>--------</td>
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- **Search**
- **Clear**

1. A multiple parameter search with two viewing options. An individual project report can be viewed for each item searched (see reverse).

2. List View: Displays a summary of information on each project searched.

3. Map View: Displays projects within a defined geographic area. Click on pins to view project information and report.

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**Northfield Village Green Bioswale**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Type</th>
<th>Program</th>
<th>State Fund:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northfield Village Green Bioswale Installation</td>
<td>Stormwater - Implementation</td>
<td>Clean Water Initiative Program: Agency of Natural Resources</td>
<td>$115,890</td>
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<tr>
<td>County</td>
<td>Washington</td>
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<tr>
<td>Basin</td>
<td>Winooski</td>
<td></td>
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<tr>
<td>Status</td>
<td>Funded SFY 2016</td>
<td>Completed SFY 2017</td>
<td></td>
</tr>
</tbody>
</table>

- **Project Status**: Funded SFY 2016
- **Completed SFY 2017**

**For more information visit**: [https://vermont.gov/water]
How do I get there?

CLEAN WATER INITIATIVE

https://dec.vermont.gov/watershed/cwi

Clean Water Dashboard

Interagency Clean Water Projects Dashboard

An interactive application that displays clean water project information including project type, project funding, project results and nutrient reductions from the state's clean water tracking database. The user can search clean water project data from six state agencies and download individual project reports. This dashboard complements the Vermont Clean Water Initiative 2018 Investment Report and includes projects that have been funded or completed from state fiscal year (SFY) 2016 to 2018.

OR Google “Clean Water Projects Dashboard”
Next Steps: Dashboard

Add projects that are planned but not yet funded - Coming soon!

Add a way to export searched projects

Provide options to summarize the project data you have searched for

Develop accompanying documents to explain methods for tracking and accounting

We welcome your feedback!
Next Steps: EPA Report Cards

Phase 2 Implementation Plans

EPA issues interim report card

EPA issues final report card

Map of Vermont with regions labeled:
- Missisquoi
- Winooski
- Lamoille
- North Lake Champlain
- Otter Creek
- South Lake Champlain

- 2020
- 2023
- 2025
- 2016
- 2019
- 2021
- 2018
- 2022
- 2023
- 2019
- 2022
Next Steps: Additional Projects

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Lake Champlain</th>
<th>Lake Memphremagog</th>
<th>Connecticut River</th>
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</thead>
<tbody>
<tr>
<td>Agricultural cropland and pasture conservation</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>practices</td>
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</tr>
<tr>
<td>Agricultural forested riparian buffers</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Barnyard and production area management practices</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>River and floodplain restoration</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Riparian buffer restoration</td>
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<td>Nitrogen</td>
</tr>
<tr>
<td>Lakeshore restoration</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Wetland restoration</td>
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<td>Phosphorus</td>
<td>Nitrogen</td>
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<tr>
<td>Forest erosion control</td>
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<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Stormwater treatment practices</td>
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<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Road erosion control practices</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
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<tr>
<td>Wastewater treatment upgrades</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Combined sewer overflow abatement</td>
<td>Phosphorus</td>
<td>Phosphorus</td>
<td>Nitrogen</td>
</tr>
</tbody>
</table>

Summary of status to expand tracking and accounting ability:
- Developing methodologies to account for phosphorus reductions from all project types (where feasible) in 2017-2018. Expanded ability to quantify road erosion controls in SFY 2017.
- Lake Memphremagog TMDL finalized in 2017, providing phosphorus pollution rates for this region. Use Lake Champlain methods to estimate phosphorus reduction efficiencies by project type.
- Need Vermont nitrogen load rates to quantify the nitrogen load for land managed by practices. (depends on timing and results of EPA's regional Nitrogen Reduction Strategy.)

Expand ability to quantify pollutant reductions for projects in Connecticut River, and to cover additional project types.
Next Steps: Additional Programs

Expand tracking to new regulatory programs as they are rolled out (new stormwater permits and Required Agricultural Practices)

Expand tracking to federal funding programs, such as USDA-NRCS and Lake Champlain Basin Program
Next Steps: Enhanced Documentation

Standard Operating Procedures for Tracking Clean Water Initiative Activities

DRAFT

Table of Contents

Table of Contents ................................................. 2
Tracking & Accounting for Social Outcomes ......................... 5
  Tracking Extent of Outreach Efforts using nFORM ................. 5
  Tracking Extent of Technical Assistance ..................... 5
  Evaluating Social Indicators of Outreach & Technical Assistance ...... 5
Tracking Investments of CWI Funding Programs .................... 5
  DEC Ecosystem Restoration Grant Program .................. 5
  F&W Watershed Implementation Grant Program ............. 6
  VTrans Better Roads Grant Program ......................... 6
  AAFM Cost Share Programs .................................. 6
Tracking Performance Measures of CWI Funding Programs ........... 6
Accounting for TMDL Implementation ................................ 6
  Lake Champlain TMDL Implementation ....................... 6
    Accountability Framework .................................. 6
    Measuring Progress meeting TMDL WLAs & LAs ............. 7
      Wastewater WLA ....................................... 7
      Combined Sewer Overflow WLA .......................... 7
      Developed Lands WLA ................................... 8
      Future Growth WLA ...................................... 9
      Agriculture Production Area WLA ....................... 9
      Agriculture LA ........................................ 10
      Forest LA ............................................. 10
      Streams LA ............................................ 11
    EPA Issued Report Cards .................................. 13
    Schedule of TBP's and EPA Report Cards .................... 13
Next Steps: Verification

**Project Information**

Bioretention is a practice that treats runoff by passing it through a vegetated filter bed, with a filter mixture of sand, soil, and organic matter. Filtered stormwater is either returned to a conveyance system or infiltrated into the native soil.

- **Ark ID**: 138
- **BMP ID**: 62
- **Town (Autocomplete)**: Northfield
- **Inspector**: Helen
- **Inspection Date**: April 18, 2018
- **Date of Last Rain Event**:

**Project Location**

- **Location**: 44.257°N 72.584°W ± 65 m

**Capture Photo / Browse to Photo**

- **Erosion**
- **Sediment Accumulation/Deposition**
- **Debris Accumulation**
- **Vegetation**
- **Standing Water**
For more information:

Website cleanwater.vermont.gov
Reports http://dec.vermont.gov/watershed/cwi/cwf#reports
Projects http://dec.vermont.gov/watershed/cwi/projects

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