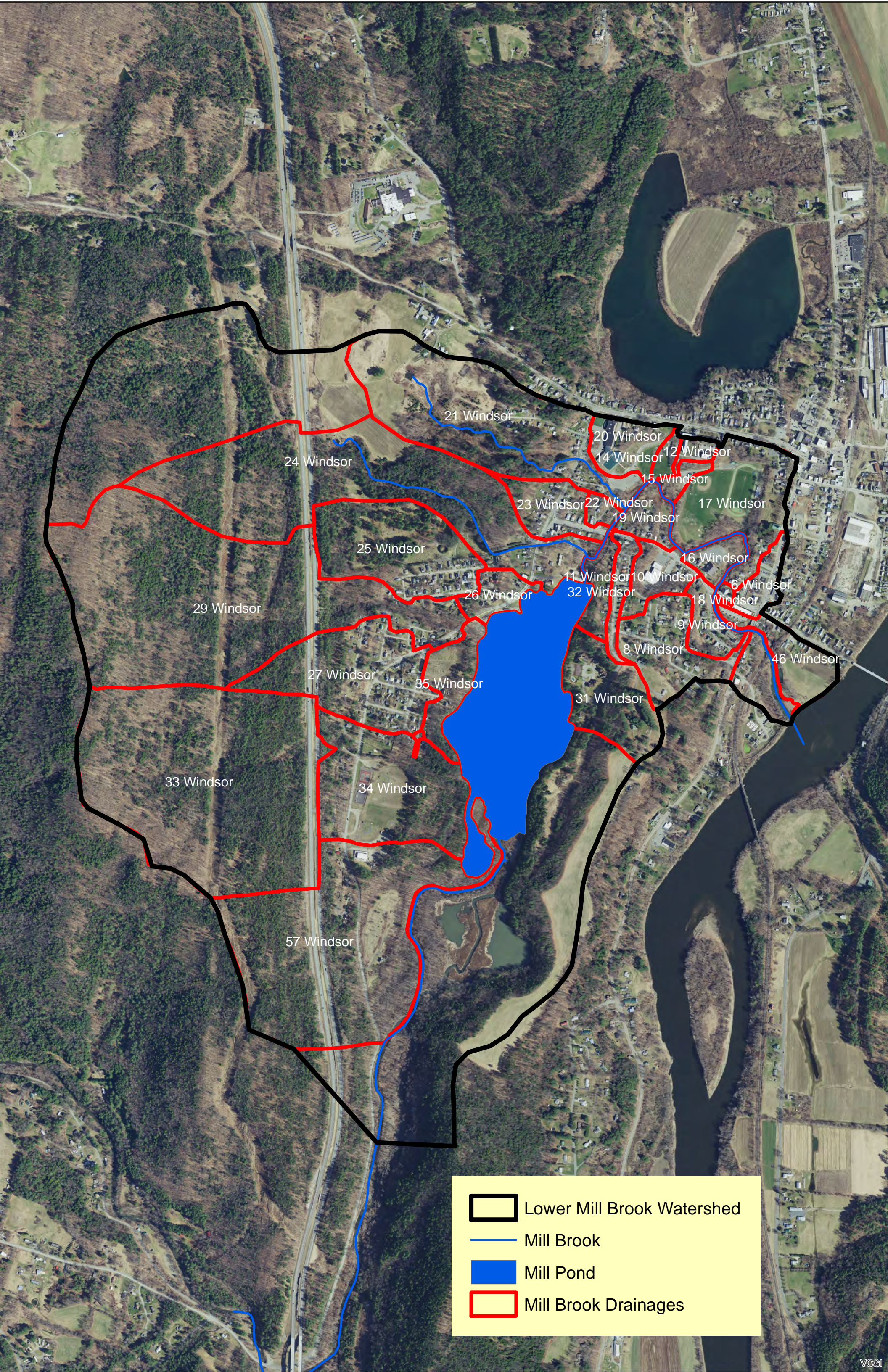






Mill Brook, Windsor, Vermont

Mill Brook in Windsor, Vermont has been found to be stressed by stormwater runoff as measured by the biology of the stream. The stream will be measured in 2021-2022 for macroinvertebrates and fish. There are at least 28 significant discharges to the brook from the developed lands of Windsor Village. The largest discharge to the stream is drainage area #29 which drains a large section of the central watershed. The recommended course of action for stormwater impacted streams is to install a treatment structure that controls the water quality volume. A map showing the location of the discharges and a possible retrofit location is provided. A cost estimate (excluding land costs) is provided.

Addressing the large discharges of stormwater to the brook will reduce contamination, stream channel erosion and protect the swimming water quality in Mill Pond. It will prevent the stream from becoming declared stormwater impaired on the state of Vermont's 303d list of impaired waters. It will also reduce nitrogen currently being discharged to the Connecticut River and Long Island Sound.



-  Lower Mill Brook Watershed
-  Mill Brook
-  Mill Pond
-  Mill Brook Drainages

| Watershed Number | Action List # | Proposed Action | Proposed or Existing Stormwater Treatment Practice | Permit Number | Watershed Area (Acres) | Current BMP Sediment Reduction Credit | Sediment Load with Current Reductions (lbs.) | Priority Action Sediment Reduction Credit | Sediment Load with Priority Action (lbs.) | Nitrogen Load with Current Reductions (lbs.) | Priority Action Nitrogen Reduction Credit | Nitrogen Load with Priority Action (lbs.) | Water Quality Volume (ft ³) | Estimated Basin Construction Cost | Estimated Other BMP Construction Cost | Cost of Sediment Removal Per Pound (based on annual sediment load) | Cost of Nitrogen Removal Per Pound (based on annual nitrogen load) | Assistance Program | # LID-Roof Raingardens to Treat Water Quality Volume |
|------------------|---------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------|---------------|------------------------|---------------------------------------|----------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------|-------------------------------------------|-------------------------------------------|-----------------------------------------|-----------------------------------|---------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------|------------------------------------------------------|
| 29 Windsor | | | CB | | 117.52 | 0% | 8618 | 0% | 8618 | 71.8 | 0% | 71.8 | 21239.5 | | | | | CWIP,SRF,LISF | 244 |
| 57 Windsor | | | CB/GS/CR | 4123-9015 | 89.12 | 0% | 8120 | 0% | 8120 | 67.7 | 0% | 67.7 | 20011.2 | | | | | CWIP,SRF,LISF | 230 |
| 33 Windsor | | | CB | | 110.46 | 0% | 7813 | 0% | 7813 | 65.1 | 0% | 65.1 | 19255.7 | | | | | CWIP,SRF,LISF | 221 |
| 24 Windsor | | | CB/GS | | 86.33 | 0% | 6944 | 0% | 6944 | 57.9 | 0% | 57.9 | 17113.9 | | | | | CWIP,SRF,LISF | 196 |
| 8 Windsor | | | CB | | 18.74 | 0% | 6040 | 0% | 6040 | 50.3 | 0% | 50.3 | 14885.3 | | | | | CWIP,SRF,LISF | 171 |
| 6 Windsor | | | CB | | 5.82 | 0% | 5596 | 0% | 5596 | 46.6 | 0% | 46.6 | 13790.8 | | | | | CWIP,SRF,LISF | 158 |
| 21 Windsor | 1 | Repair erosion in ravine adjacent to school. Infiltration basin for lower school parking lot. | GS/CB/RR/IB | | 59.81 | 0% | 5137 | 50% | 2568 | 42.8 | 50% | 21.4 | 12659.4 | \$693,000 | | \$270 | \$32,380 | CWIP,SRF,LISF | 145 |
| 34 Windsor | | | OF/GS | | 41.59 | 0% | 4545 | 0% | 4545 | 37.9 | 0% | 37.9 | 11202.4 | | | | | CWIP,SRF,LISF | 129 |
| 23 Windsor | | | CB | | 11.29 | 0% | 4511 | 0% | 4511 | 37.6 | 0% | 37.6 | 11116.6 | | | | | CWIP,SRF,LISF | 128 |
| 17 Windsor | | | OF | | 28.13 | 0% | 4403 | 0% | 4403 | 36.7 | 0% | 36.7 | 10850.4 | | | | | CWIP,SRF,LISF | 125 |
| 10 Windsor | 1 | Raingarden for Town offices | GS/CB/BRA | | 8.43 | 0% | 4260 | 20% | 3408 | 35.5 | 20% | 28.4 | 10498.4 | | \$10,000 | \$12 | \$1,409 | CWIP,SRF,LISF | 121 |
| 25 Windsor | 1 | Swirl separator and sand filter to protect swimming area | VS-SF/CB | | 33.26 | 0% | 4237 | 85% | 636 | 35.3 | 60% | 14.1 | 10442.4 | \$950,262 | | \$264 | \$44,855 | CWIP,SRF,LISF | 120 |
| 20 Windsor | | | CB/GS | 3668-9010 | 9.77 | 0% | 3959 | 0% | 3959 | 33.0 | 0% | 33.0 | 9756.2 | | | | | CWIP,SRF,LISF | 112 |
| 11 Windsor | | | GS/CB | | 5.25 | 0% | 3621 | 0% | 3621 | 30.2 | 0% | 30.2 | 8924.2 | | | | | CWIP,SRF,LISF | 102 |
| 9 Windsor | | | CB | | 6.88 | 0% | 2515 | 0% | 2515 | 21.0 | 0% | 21.0 | 6197.8 | | | | | CWIP,SRF,LISF | 71 |
| 26 Windsor | | | CB | | 6.63 | 0% | 2260 | 0% | 2260 | 18.8 | 0% | 18.8 | 5570.0 | | | | | CWIP,SRF,LISF | 64 |
| 27 Windsor | | | CB/IB | | 35.29 | 70% | 2091 | 0% | 2091 | 17.4 | 0% | 17.4 | 17175.5 | | | | | CWIP,SRF,LISF | 197 |
| 46 Windsor | | | OF | | 11.46 | 0% | 1650 | 0% | 1650 | 13.8 | 0% | 13.8 | 4066.9 | | | | | CWIP,SRF,LISF | 47 |
| 16 Windsor | | | OF | | 5.00 | 0% | 1353 | 0% | 1353 | 11.3 | 0% | 11.3 | 3333.6 | | | | | CWIP,SRF,LISF | 38 |
| 31 Windsor | | | CB/GS | 3216-9010 | 20.84 | 40% | 1330 | 0% | 1330 | 14.8 | 0% | 14.8 | 5462.6 | | | | | CWIP,SRF,LISF | 63 |
| 12 Windsor | | | CB/DW/FS | 3800-9010 | 2.32 | 40% | 1069 | 0% | 1069 | 11.9 | 0% | 11.9 | 4390.0 | | | | | CWIP,SRF,LISF | 50 |
| 19 Windsor | | | OF | | 6.42 | 0% | 1019 | 0% | 1019 | 8.5 | 0% | 8.5 | 2510.9 | | | | | CWIP,SRF,LISF | 29 |
| 35 Windsor | | | OF | | 11.41 | 0% | 963 | 0% | 963 | 8.0 | 0% | 8.0 | 2373.8 | | | | | CWIP,SRF,LISF | 27 |
| 32 Windsor | | | OF | | 6.13 | 0% | 692 | 0% | 692 | 5.8 | 0% | 5.8 | 1706.3 | | | | | CWIP,SRF,LISF | 20 |
| 18 Windsor | | | CB | | 0.76 | 0% | 573 | 0% | 573 | 4.8 | 0% | 4.8 | 1411.1 | | | | | CWIP,SRF,LISF | 16 |
| 22 Windsor | | | CB | | 2.31 | 0% | 561 | 0% | 561 | 4.7 | 0% | 4.7 | 1383.1 | | | | | CWIP,SRF,LISF | 16 |
| 15 Windsor | | | DW/OF | | 2.66 | 0% | 524 | 0% | 524 | 4.4 | 0% | 4.4 | 1291.9 | | | | | CWIP,SRF,LISF | 15 |
| 14 Windsor | | | GS/CB | | 2.28 | 0% | 449 | 0% | 449 | 3.7 | 0% | 3.7 | 1107.1 | | | | | CWIP,SRF,LISF | 13 |

Target Maps

*Showing Priority Action List
Drainage Areas*

And Potential Retrofit Locations

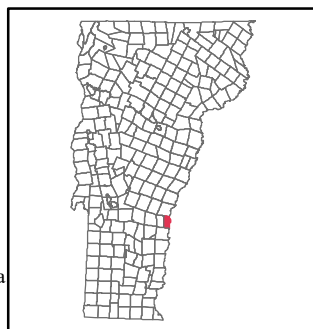


Windsor, VT

DEC Stormwater Infrastructure Mapping Project

This map shows high priority subwatersheds which are ranked by connectedness, percent of impervious cover, field observations, and potential retrofit measures and locations.

The data shown on this map is only as accurate as the available sources and field observations allowed and should be used as a basic planning level tool only.



Stormwater points

- Pipe Cross (not connected)
- Catchbasin
- Dry Well
- Drop Inlet
- Grate/Curb Inlet
- Yard drain
- CB tied to sanitary sewer
- Junction Box
- Stormwater Manhole
- Outfall
- Culvert inlet
- Culvert outlet
- Pond outlet structure
- Treatment feature (see notes)
- Retrofit
- Unknown Point
- Information Point

Stormwater line

- Storm line
- Storm line (old Sanitary line)
- Tunnel (storm)
- Combined sewer
- Sanitary line
- Swale
- Footing drain
- Under drain
- Roof drain
- Infiltration pipe
- French drain
- Trench drain
- Emergency spillway
- Stream
- Overland flow

NRCS - Soils

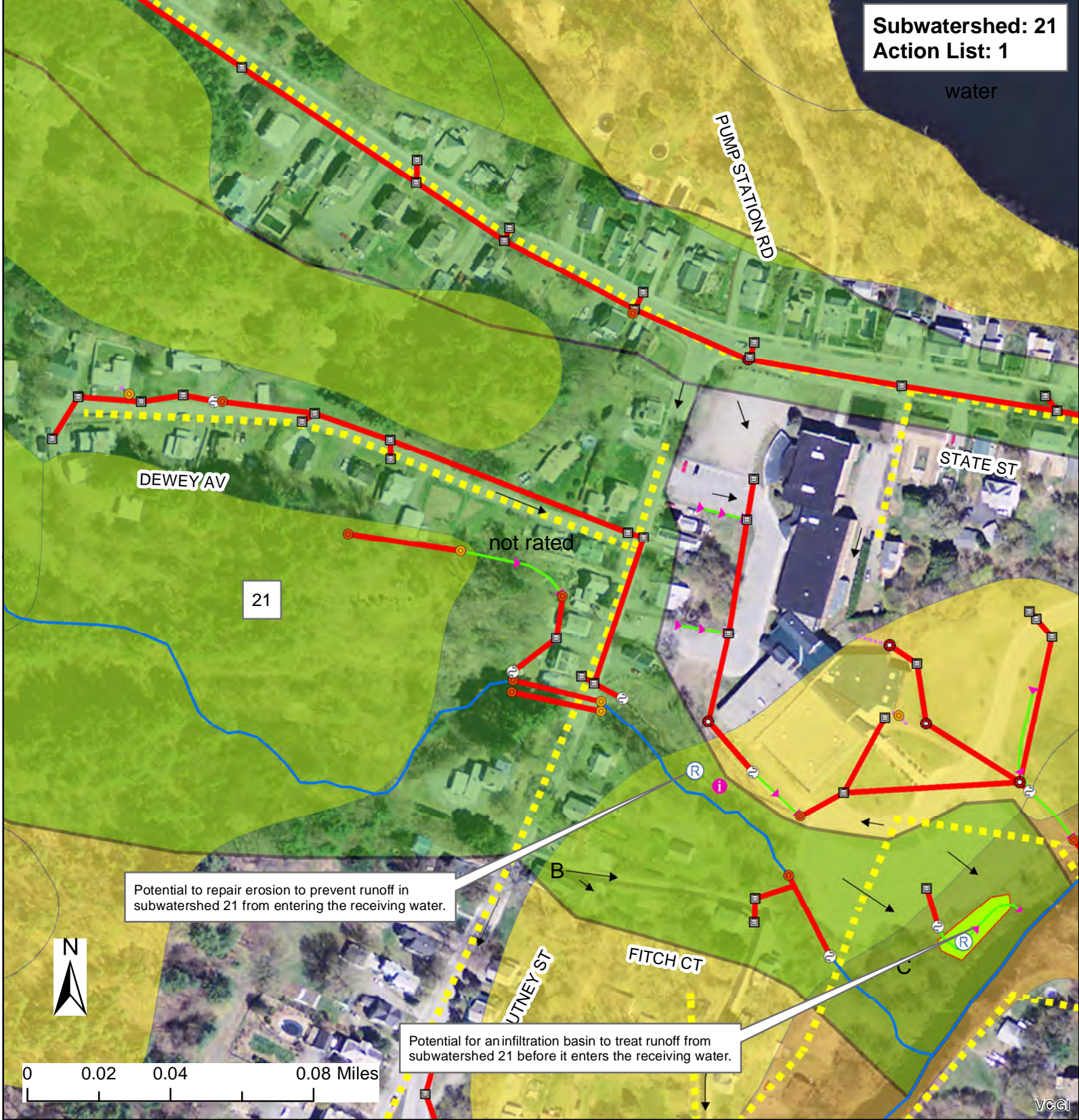
- A
- B
- C
- D

SubwatershedID

- Priority Subwatershed
- Stormwater Treatment Area
- Potential Stormwater Treatment Area

Creator: Jim Pease, David Ainley
DEC - WSMD - Ecosystem Restoration Program
Plotted Date: 3/9/2016
Data Sources: VTRANS Roads data, VT Hydrography data set, DEC Stormwater database, NRCS soils survey
Imagery Source: VCGI 2012, .5m

water



Potential to repair erosion to prevent runoff in subwatershed 21 from entering the receiving water.

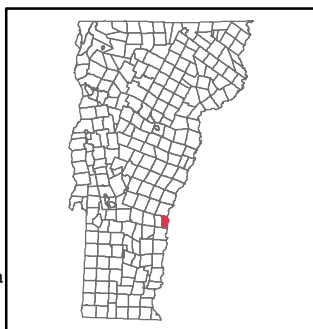
Potential for an infiltration basin to treat runoff from subwatershed 21 before it enters the receiving water.

Windsor, VT

DEC Stormwater Infrastructure Mapping Project

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Stormwater points

- Pipe Cross (not connected)
- Catchbasin
- Dry Well
- Drop Inlet
- Grate/Curb Inlet
- Yard drain
- CB tied to sanitary sewer
- Junction Box
- Stormwater Manhole
- Outfall
- Culvert inlet
- Culvert outlet
- Pond outlet structure
- Treatment feature (see notes)
- Retrofit
- Unknown Point
- Information Point

Stormwater line

- Storm line
- Storm line (old Sanitary line)
- Tunnel (storm)
- Combined sewer
- Sanitary line
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- French drain
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- Emergency spillway
- Stream
- Overland flow

NRCS - Soils

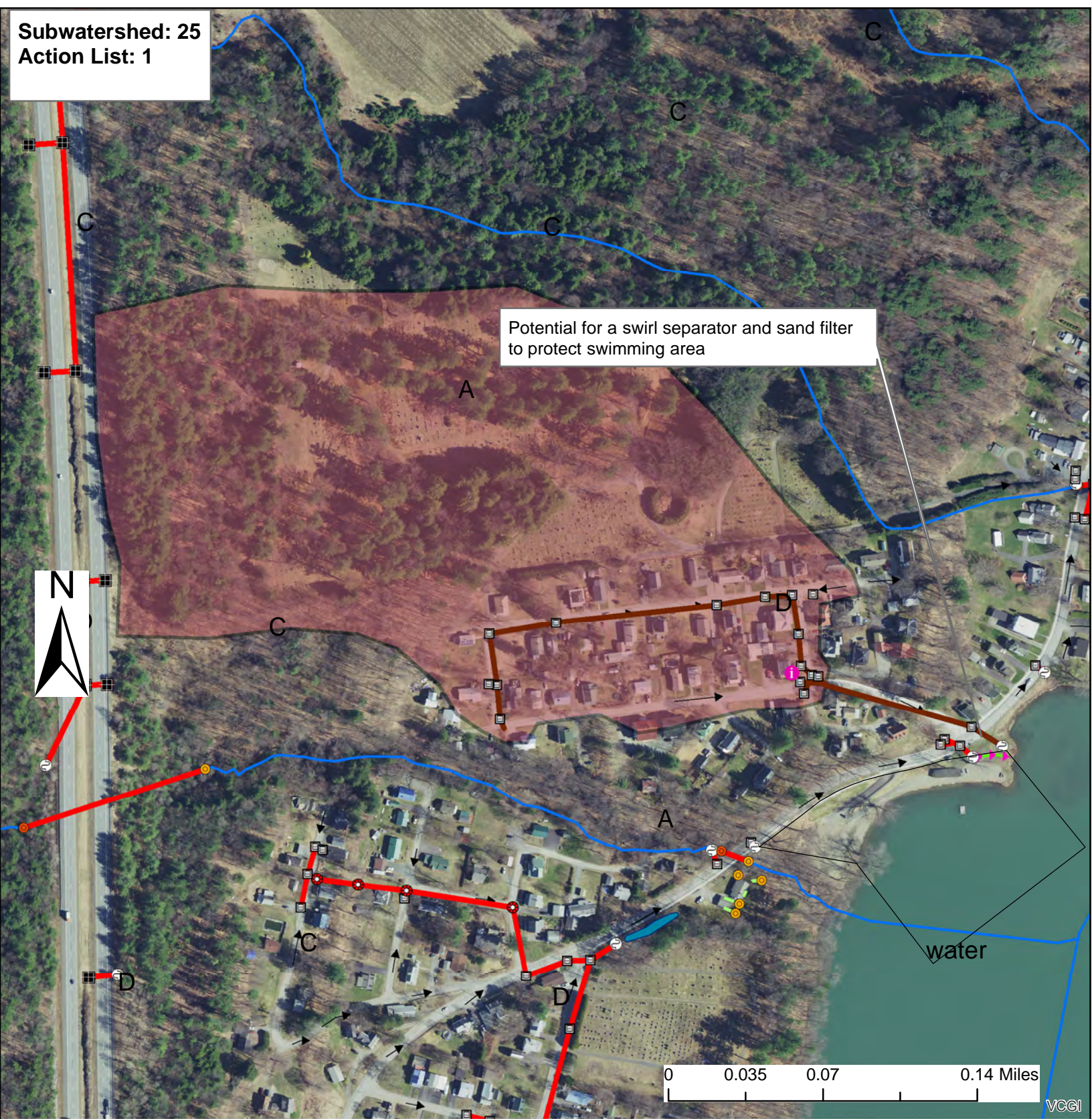
- A
- B
- C
- D

SubwatershedID

- Priority Subwatershed
- Stormwater Treatment Area
- Potential Stormwater Treatment Area

Creator: Jim Pease, David Ainley
DEC - WSMD - Ecosystem Restoration Program
Plotted Date: 3/9/2016
Data Sources: VTRANS Roads data, VT Hydrography data set, DEC Stormwater database, NRCS soils survey
Imagery Source: VCGI 2012, .5m

Subwatershed: 25
Action List: 1



Lower Mill Brook Windsor, VT

DEC Stormwater Infrastructure
 Mapping Project

This map shows high priority subwatersheds which are ranked by connectedness, percent of impervious cover, field observations, and potential retrofit measures and locations.

The data shown on this map is only as accurate as the available sources and field observations allowed and should be used as a basic planning level tool only.

Stormwater points

- Pipe Cross (not connected)
- Catchbasin
- Dry Well
- Drop Inlet
- Grate/Curb Inlet
- Yard drain
- CB tied to sanitary sewer
- Junction Box
- Stormwater Manhole
- Outfall
- Culvert inlet
- Culvert outlet
- Control Structure
- Treatment feature (see notes)
- Retrofit
- Unknown Point
- Information Point

Stormwater line

- Storm line
- Storm line (old Sanitary line)
- Tunnel (storm)
- Combined sewer
- Sanitary line
- Swale
- Footing drain
- Under drain
- Roof drain
- Infiltration pipe
- French drain
- Trench drain
- Emergency spillway
- Stream
- Overland flow

NRCS Soils

- Windsor Public Lands
- A
- C
- C/D
- D

SubwatershedID

- Priority Subwatershed
- Stormwater Treatment Area
- Potential Stormwater Treatment Area

Creator: Jim Pease, David Ainley
 DEC - WID - Clean Water Initiative Program
 Plotted Date: 2/18/2022
 Data Sources: VTRANS Roads data, VT Hydrography data set, DEC Stormwater database, NRCS soils survey
 Imagery Source: VCGI Best Available Imagery