Water Quality

Roles for TRORC

Many Efforts – One Goal: Clean Water

State and Federal Law

Clean Water Act: All waters of the United States shall be fishable and swimmable by . . . 1983

10 VSA § 1250. State water quality policy

- It is the policy of the state of Vermont to:
- (1) protect and enhance the quality, character and usefulness of its surface waters and to assure the public health;
- (2) maintain the purity of drinking water;
- (3) control the discharge of wastes to the waters of the state, prevent degradation of high quality waters and prevent, abate or control all activities harmful to water quality;
- (4) assure the maintenance of water quality necessary to sustain existing aquatic communities;
- (5) provide clear, consistent and enforceable standards for the permitting and management of discharges;
- (6) protect from risk and preserve in their natural state certain high quality waters, including fragile high-altitude waters, and the ecosystems they sustain;
- (7) manage the waters of the state to promote a healthy and prosperous agricultural community, to increase the opportunities for use of the state's forest, park and recreational facilities, and to allow beneficial and environmentally sound development.
- It is further the policy of the state to seek over the long term to upgrade the quality of waters and to reduce existing risks to water quality. (Added 1985, No. 199 (Adj. Sess.), § 1, eff. May 17, 1986.)

Regional Plan: Planning Goals - 24 VSA § 4302

(5) To identify, protect, and preserve important natural and historic features of the Vermont landscape, including:

- (B) **outstanding water resources, including lakes, rivers, aquifers, shorelands and wetlands;**
- (C) significant scenic roads, **waterways**, and views;

(6) To maintain and improve the quality of air, **water**, wildlife, and land resources.

- (A) Vermont's air, **water**, wildlife, mineral and land resources should be planned for use and development according to the principles set forth in 10 V.S.A. § 6086(a).
- (B) **Vermont's water quality should be maintained and improved according to the policies and actions developed in the basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253.**

(14) To encourage flood resilient communities.

Regional Plan Elements

(6) A statement of policies on the:

- (B) protection and improvement of the quality of waters of the State to be used in the development and furtherance of the applicable basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253.

(11)A Flood resilience element

Newer efforts

- **A1 Designation** The region is home to many very high quality waters. These waters have been called out in basin plans or other studies by the state. They are also protected through the regulatory process, but have often not been designated as such, leading to potential surprises in permitting. All waters above 2,500 in elevation are designated at A1 waters, but that designation currently changes as soon as they drop below that elevation, despite the stream not changing. Many small upland streams in lower elevations meet A1 characteristics.
- **River Corridor Maps** We hope to work at the local level in correcting/adjusting the river corridor map in order to make these maps more accurate and increase the likelihood that towns will use them.
- **Flood and River Corridor Bylaws** We will continue to help towns on bylaws that address flood risks, both in areas FEMA has designated as well as areas roughly mapped by the state at risk of lateral erosion and landslide.

- **Municipal and Mitigation Plans** We will be able to provide some funded assistance on addressing water quality and flooding in municipal plans as well as work on mitigation plans.
- **Basin Planning** Our staff will be involved in the update to the Basin 10 plan that covers the southern part of our region. The basin plan is the document that both compiles water quality information and proposes actions to address watery quality concerns
- **Educating Towns/Gathering Input** TRORC will provide at outreach about the requirements of the new Vermont Clean Water Act (VCWA), related regulatory requirements (including new requirements on farms and roads), and keep our towns noticed on rulemaking.

A1 Waters

By statute (10 VSA §1253), all surface waters above 2,500 feet of elevation in Vermont are Class A(1). Other waters may be so designated by DEC's Watershed Management Division conducting rulemaking to amend Chapter 4 of the Vermont Water Quality Standards (VWQS). There have been no amendments to WQS Chapter 4 to reclassify surface waters since 1990. Still, below the A(1) statutory elevation threshold, there are numerous surface waters which have been documented to attain the biological criteria established for Class A(1), or exhibit characteristics consistent with Class A(1).

VWQS Section 3-02 Class A(1) Ecological Waters

A. Management Objectives Managed to achieve and maintain waters in a natural condition, compatible with the following designated uses:

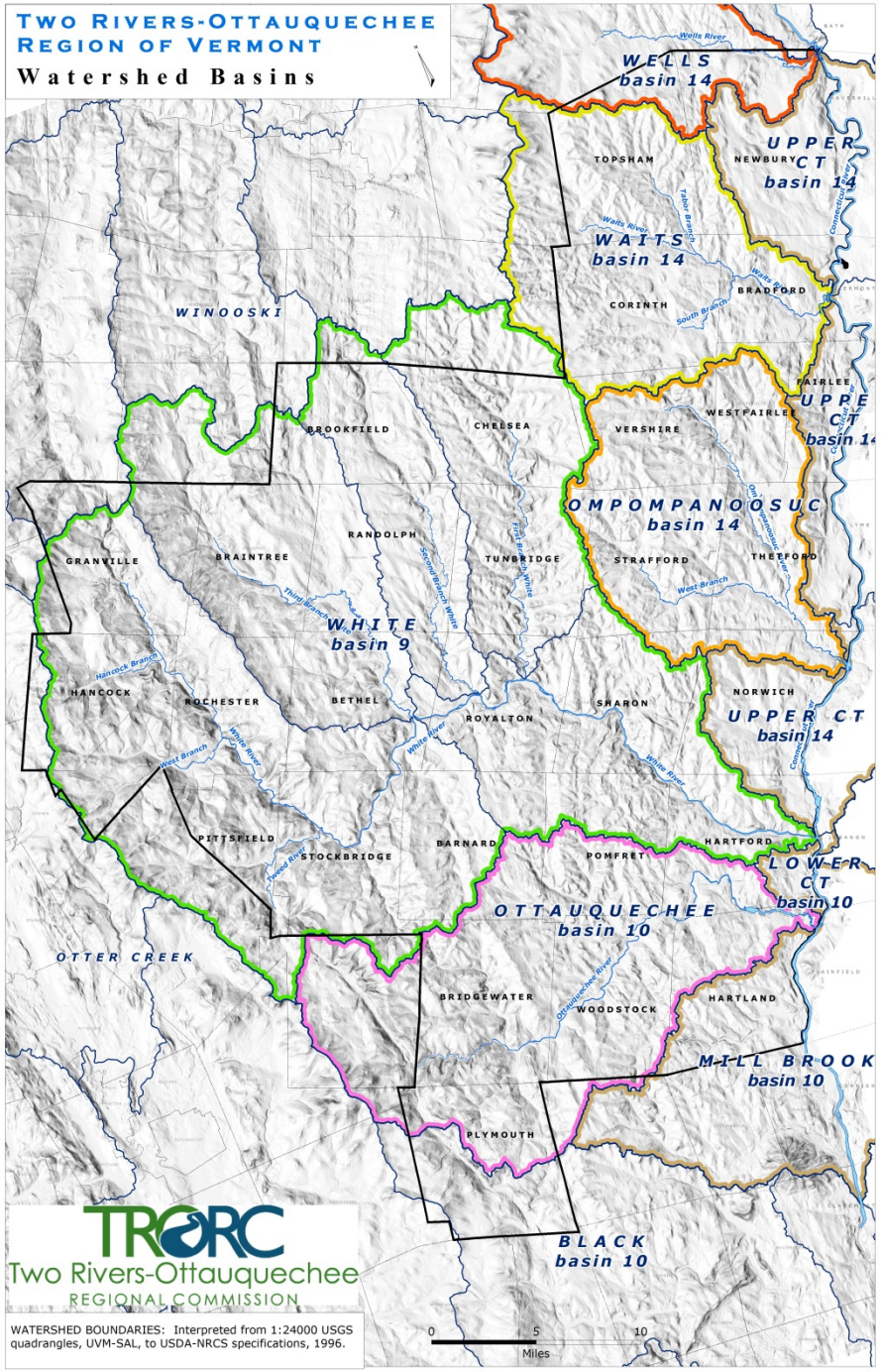
- 1. Aquatic Biota, Wildlife, and Aquatic Habitat - consistent with waters in their natural condition. Biological criteria indicate no more than a minimal change from the reference condition.
- 2. Aesthetics - water character, flows, water level, bed and channel characteristics, and flowing and falling waters in their natural condition.
- 3. Swimming and Other Primary Contact Recreation - highest quality in waters, in their natural condition with negligible risk of illness or injury from conditions that are a result of human activities.
- 4. Boating, Fishing, and Other Recreational Uses - highest quality as compatible with waters in their natural condition.

Effect of A1 Classification and Process

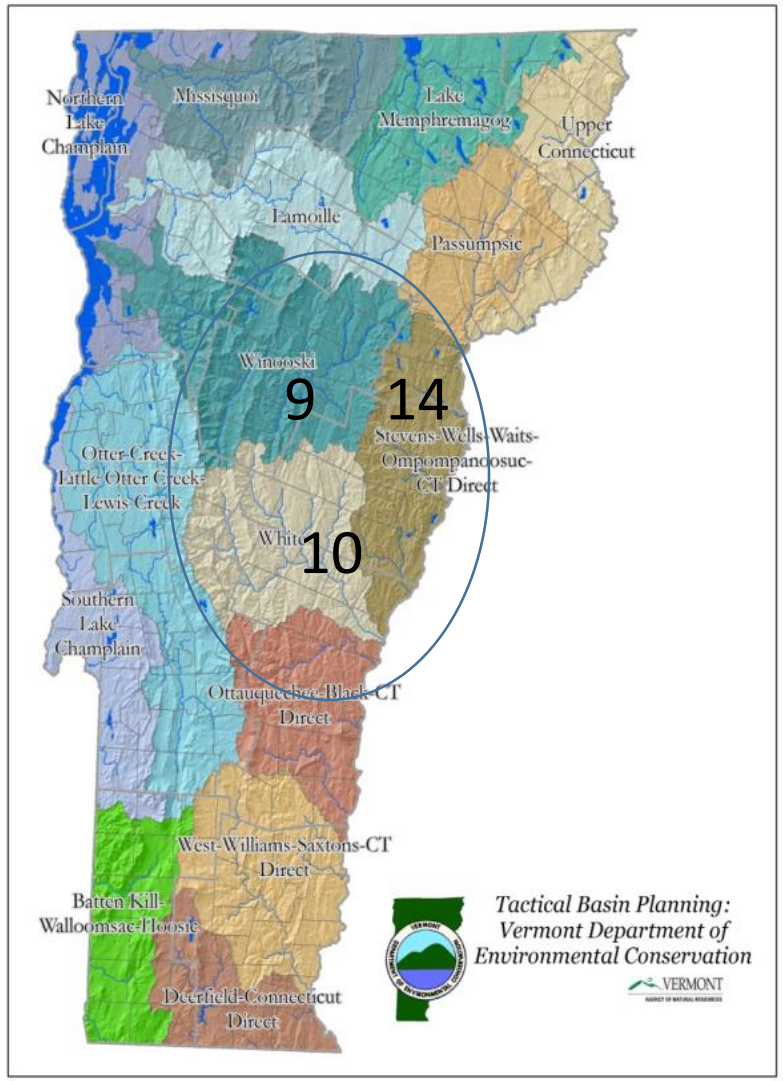
- **Harvesting Operations** Logging jobs occur throughout Vermont in Class A(1) watersheds on a regular basis, in compliance with AMP's, with A(1) conditions maintained.
- **Stream Alterations** The Rules do not draw distinction between the protections afforded to Class B or Class A(1) streams.
- **Vermont's Act 250** For projects subject to Act 250 jurisdiction, under Criterion 1(E), the Agency will commonly seek, and the District Commissions of the Natural Resources Board may grant, preclusions to allowable activities in the buffers of streams. Typically, the Agency will seek a minimum of 50 feet of protection for stream buffers, and Agency guidance envisions minimum buffer widths of 100 feet for Class A(1) surface waters.
- **Direct discharge permits issued under State or delegated Federal NPDES authority.** No permits for direct discharges of treated sewage to Class A(1) watersheds. As such, neither a State nor Federal NPDES permit could be issued for a direct discharge to surface waters classified as A(1).
- **Wastewater and Potable Water Supply discharge permits issued under State authority.** Title 10 VSA §1259 sets a maximum size for an indirect discharge system (e.g., in-ground septic system) at 1,000 gallons per day.
- **Initial Rule Filing** In the initial filing, a proposal is filed with the Secretary of State as prescribed by the APA. The draft amended rule and supporting documentation are evaluated in this phase by Vermont's Interagency Committee on Administrative Rules. The initial filing takes up to 45 days to complete.
- **Proposed Rule Filing** In this phase, the rule is published by the Secretary of State for formal public comment. Hearings are scheduled to describe the rule and receive public comment, which are similar to the pre-rulemaking outreach.
- **Final Rule Filing** In this phase, the final rule including any changes resulting from public comment are presented to the Vermont Legislative Committee on Administrative Rules (LCAR). Subject to LCAR approval, the final rule is thus ready for adoption.
- **Final Rule Adoption** In this phase, the administrative tasks of finalizing the rule amendment are completed, including the identification of an effective date.

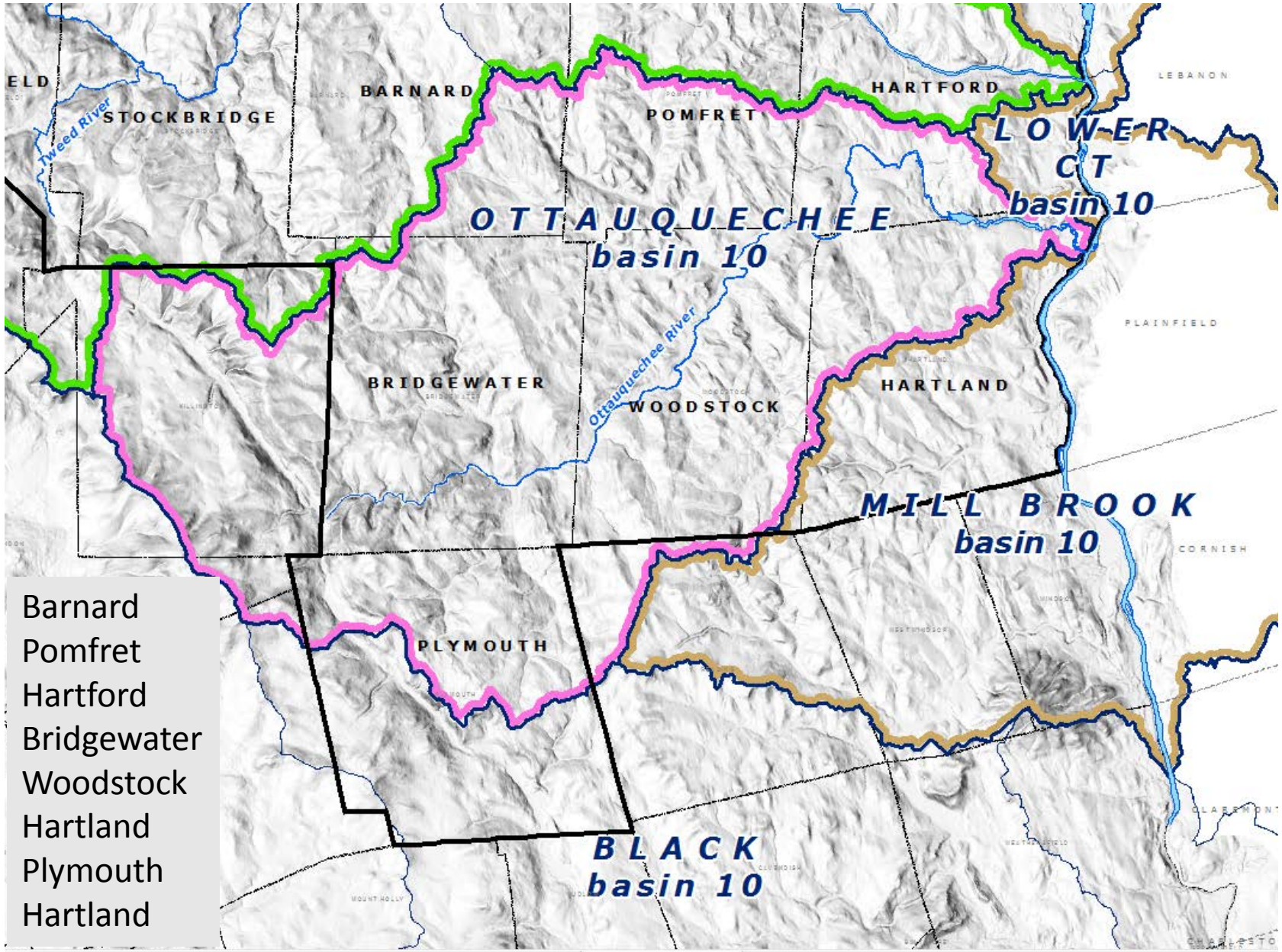
Flood Resiliency Elements: All plans adopted after July 1, 2014

- Hartland
- Brookfield
- Pomfret
- Barnard
- Strafford
- Corinth
- Vershire



Tactical Basin Planning





Barnard
Pomfret
Hartford
Bridgewater
Woodstock
Hartland
Plymouth
Hartland

Tactical Basin Plans

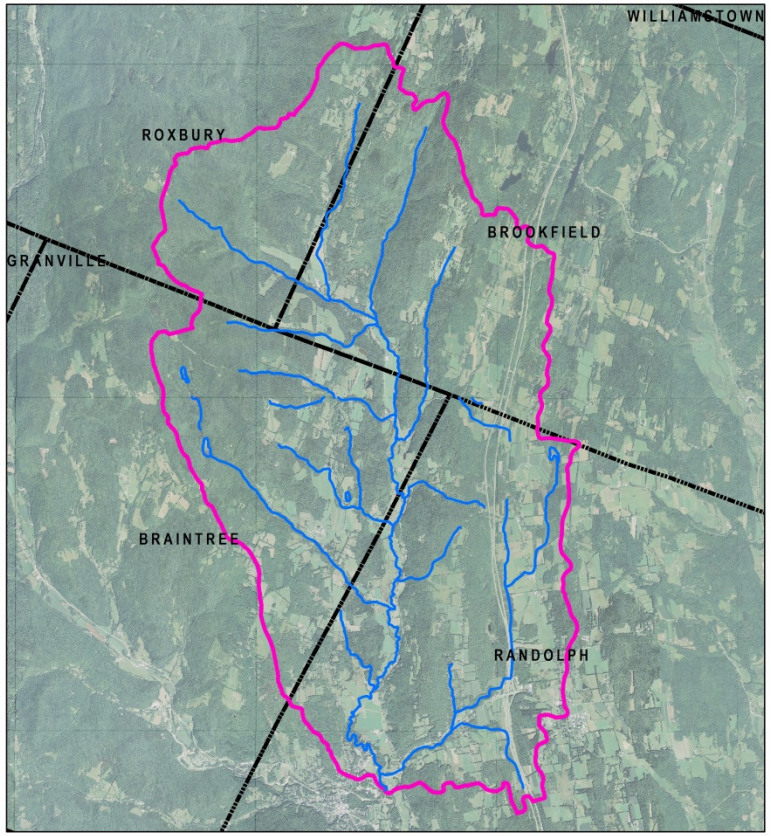
Inputs

- Water quality monitoring data and stream geomorphic assessments
- River Corridor plan priorities- crossings and river corridor protection
- Flood Resilience Elements and Hazard Mitigation Plans
- Stormwater Infrastructure reports and Master Plans
- Road erosion inventories and **town priorities**

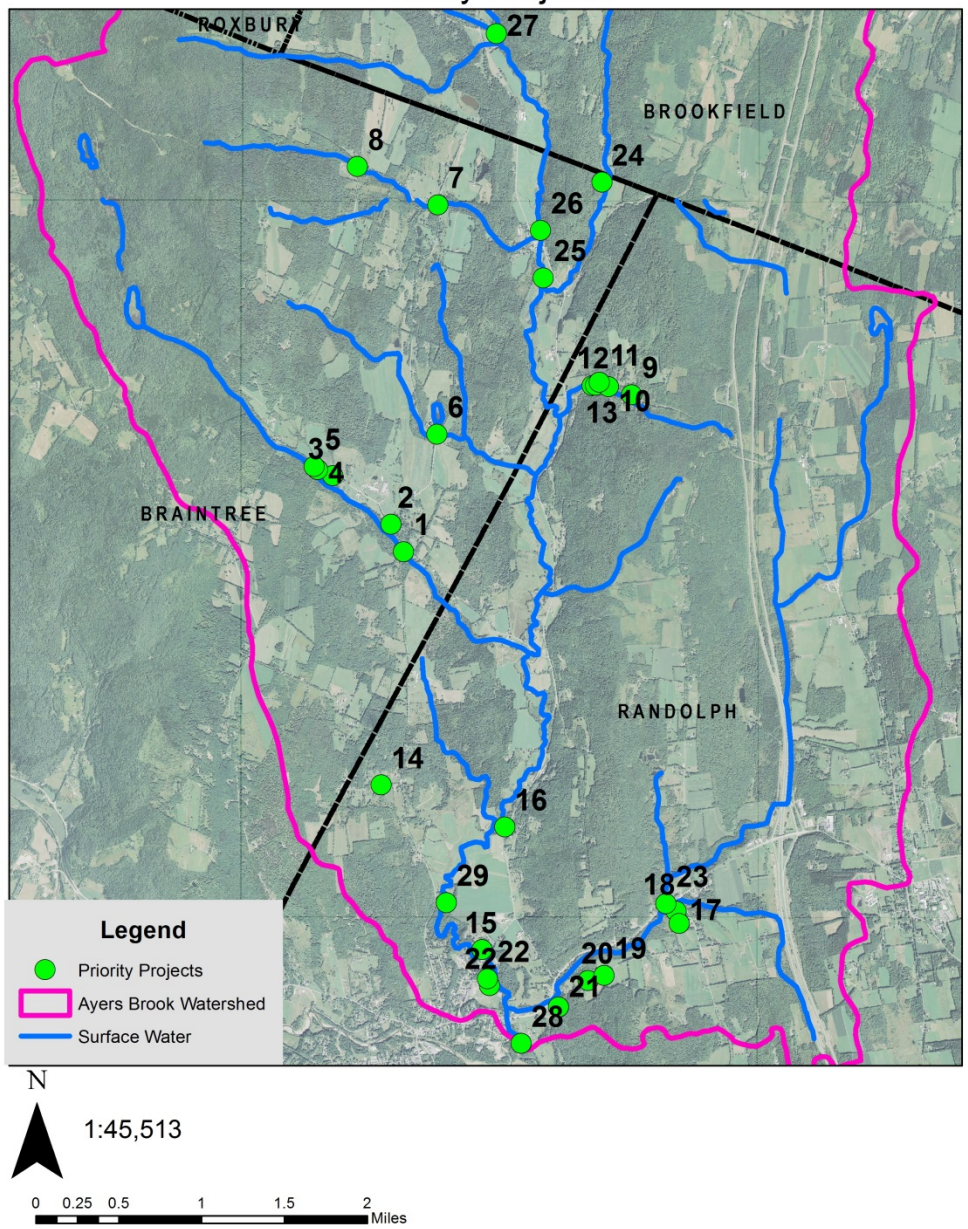
Implementation

- Prioritized list of projects:
  - roads, bridge and culverts
  - dams
  - point source reductions
  - non-point source reductions
  - illegal discharges
  - failed septics
  - fishing and boating access
  - conservation
  - wastewater treatment plants
- Potential A1 waters
- Direction for future data gathering
- Brownfields

Ayers Brook Watershed



Priority Projects



Howard Hill Road, Randolph

Peth Road, Braintree

ID	Street Name	Project Description and Recommended Treatment	Town	Latitude	Longitude	Priority
3	Peth Road	Culvert Upsize, Stone-Line Ditches	Braintree	43.975979	-72.676428	High
4	Peth Road	Culvert Upsize, Stone-Line Ditches	Braintree	43.976526	-72.678247	High
8	Farnsworth Brook Road	Bridge or Arch	Braintree	44.00298	-72.67352	High
22	Forest Road/Route 12	Biorention Area	Randolph	43.932386	-72.657238	High
22	Forest Road/Route 12	Biorention Area	Randolph	43.932162	-72.657125	High
23	Route 66	Detention Pond	Randolph	43.938257	-72.636547	High
5	Peth Road	Culvert Upsize, Stone-Line Ditches	Braintree	43.976801	-72.67869	Medium
6	Brainstorm Road and Craighill Road	Bridge or Arch	Braintree	43.979636	-72.663843	Medium
7	Farnsworth Brook Road	Bridge or Arch	Braintree	43.999691	-72.663742	Medium
10	Howard Hill Road	Stone-Line Ditches, Install Outlet Header	Randolph	43.983805	-72.643129	Medium
11	Howard Hill Road	Culvert Upsize, Stone-Line Ditches, Check Dams, Bank Stabilization	Randolph	43.984184	-72.644207	Medium
12	Howard Hill Road	Culvert Upsize, Stone-Line Ditches, Check Dams, Bank Stabilization	Randolph	43.983937	-72.644671	Medium
13	Howard Hill Road	Culvert Upsize, Stone-Line Ditches, Check Dams, Bank Stabilization	Randolph	43.98391	-72.645098	Medium
14	Hollyhock Hill	Culvert Upsize	Randolph	43.948995	-72.670497	Medium
15	Ayers Brook Reach T2.01-B	Bank Stabilization	Randolph	43.934628	-72.658283	Medium
16	Ayers Brook Reach T2.02	Riparian Buffers	Randolph	43.945343	-72.655555	Medium
19	Sunset Hill Drive	Stone-Line Ditches, Check Dams	Randolph	43.932403	-72.643528	Medium
20	Sunset Hill Drive	Culvert Upsize, Stone-Line Ditches	Randolph	43.931963	-72.645458	Medium
21	Sunset Hill Drive	Culvert Upsize, Stone-Line Ditches	Randolph	43.929637	-72.649023	Medium
1	Peth Road and Labounty Road	Bridge or Arch	Braintree	43.969374	-72.667852	Medium
2	Peth Road and Brainstorm Road	Stone-Line Ditches	Braintree	43.971749	-72.669363	Medium
9	Howard Hill Road	Stone-Line Ditches, Check Dams	Randolph	43.983103	-72.640308	Medium
25	Ayers Brook Reach T2.04-A	Bridge or Arch, Riparian Buffer, Livestock Fencing	Braintree	43.9933	-72.651	Medium
29	Ayers Brook Reach T2.01-C	Conservation Measures, Riparian Buffers	Randolph	44.9389	-72.6629	Medium
17	Radio Drive	Culvert Upsize, Stone-Line Ditches	Randolph	43.936953	-72.634456	Low
18	Radio Drive	Culvert Upsize, Stone-Line Ditches	Randolph	43.938014	-72.634847	Low
24	Bear Hill Road and Route 12	Hydrologically Connected Roads, Riparian Buffers	Brookfield/Braintree	44.001661	-72.643952	Low
26	Ayers Brook Reach T2.04-B	Conservation Measures, Riparian Buffers	Braintree	43.9975	-72.6514	Low
27	Ayers Brook Reach T2.04-C	Conservation Measures, Riparian Buffers	Brookfield	44.1046	-72.6566	Low
28	Ayers Brook Reach T2.01-A	Conservation Measures	Randolph	43.9266	-72.6537	Low

DEC Municipal Roadway General Permit Timeline

Fall 2015 & Winter 2016
Outreach to municipalities and regional planning commissions will commence

Winter 2016
Undertake stakeholder process to develop permit and standards

Fall 2016 & Winter 2017
Draft general permit

Fall 2017 & Winter 2018
Issue final general permit

2018–2021
Specific permit application and implementation deadlines will vary and will be determined during the development process

Contact Information

DEC Municipal Roads General Permit
Regulatory process and requirement questions
Jim Ryan, DEC, jim.ryan@vermont.gov, 802-490-6140

Vermont Back Roads
General Information and application instructions
Alan May, VTrans Municipal Assistance Bureau, alan.may@vermont.gov, 802-828-4585

Transportation Alternatives Program
Scott Robertson, VTrans Municipal Assistance Bureau, scott.robertson@vermont.gov, 802-828-5799

VTrans District Offices
vtransoperations.vermont.gov/maintenance_districts

Regional Planning Commissions
http://www.vapda.org/

Vermont's Clean Water Act and Municipal Transportation

How Act 64, the 2015 law to improve water quality, will affect municipal roadways

VERMONT CLEAN WATER INITIATIVE

VERMONT

VTrans Working to Get You There
Vermont Agency of Transportation

Act 64 and Transportation

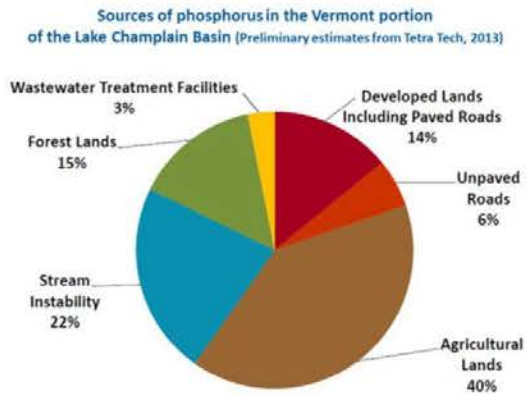
Cap on phosphorus levels in Lake Champlain

The Environmental Protection Agency has developed a Total Maximum Daily Load (TDML) that sets a cap on the amount of phosphorus that is allowed to enter Lake Champlain. Excess phosphorus is a main contributor to blue-green algae blooms that impair the lake's water quality.

Pictured: Blue-green algae bloom in Lake Champlain

Transportation infrastructure and phosphorus

Developed lands, wastewater treatment facilities, agriculture, unstable stream banks, and forestland all contribute to phosphorus loading. State and municipal roadways and other transportation infrastructure constitute a considerable portion of pollution from developed lands.



Act 64 and municipal roads

In response to the TDML phosphorus loading allocations, the Vermont legislature passed Act 64, the Vermont Clean Water Initiative, which creates a new permit process for municipalities aimed at addressing stormwater run-off from roadways, both paved and unpaved. The Vermont Department of Conservation (DEC) and VTrans are developing new financial and technical assistance programs to aid municipalities in their efforts to comply with this new mandate.

VTrans: Lending a hand to Municipalities

DEC Municipal Roads General Permit

Under the DEC Municipal Roads General Permit (DEC MRGP), municipalities must implement a customized, multi-year municipal stormwater management plan. Strategies may include:

- inventorying roadways and identifying connections to surface waters;
- implementing solutions such as stone-lined and U-shaped ditches, turnouts, check dams, road crowning, and grass -lined drainage ditches;
- upgrading drainage culverts and stabilizing culvert outlets where erosion is present.

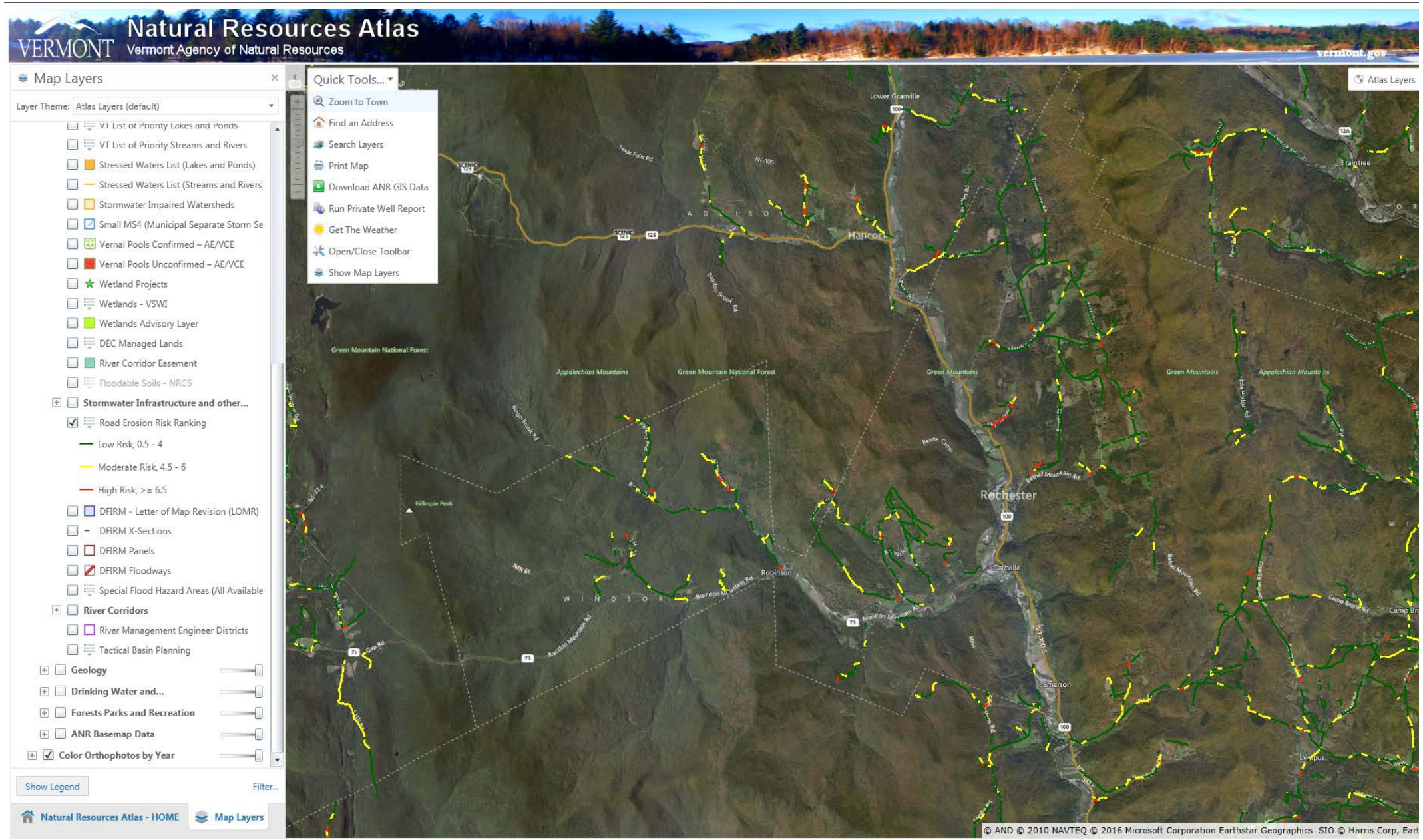
Pictured: Stone-lined ditch

Technical and financial assistance from VTrans and DEC

VTrans, DEC scientists and regulators, and regional planning commissions will be available to help municipalities understand the requirements and implement their stormwater management plans.

VTrans will continue to provide funding and technical assistance through the Municipal Mitigation Grant Program, which includes the Vermont Better Roads Program (formerly Vermont Better Back Roads), and the Transportation Alternatives Program—all growing sources of funding for developing and implementing municipal stormwater plans. Managing stormwater protects roadways from deterioration and makes our natural and built environment more resilient to future flood events, thus saving taxpayer dollars.

Once the permit is in effect, municipalities will be given a 20-year implementation schedule that is prioritized based on the greatest water quality benefit and the road stormwater management plan. VTrans Regional Maintenance Districts will be available to help provide direct technical assistance to municipalities. The VT Local Roads Program will provide training and other resources starting in 2016.


VERMONT
Natural Resources Atlas
Vermont Agency of Natural Resources
vermont.gov
Map Layers
Layer Theme: Atlas Layers (default)
VT List of Priority Lakes and Ponds
VT List of Priority Streams and Rivers
Stressed Waters List (Lakes and Ponds)
Stressed Waters List (Streams and Rivers)
Stormwater Impaired Watersheds
Small MS4 (Municipal Separate Storm Se
Vernal Pools Confirmed – AE/VCE
Vernal Pools Unconfirmed – AE/VCE
Wetland Projects
Wetlands - VSWI
Wetlands Advisory Layer
DEC Managed Lands
River Corridor Easement
Floodable Soils - NRCS
Stormwater Infrastructure and other...
Road Erosion Risk Ranking
Low Risk, 0.5 - 4
Moderate Risk, 4.5 - 6
High Risk, >= 6.5
DFIRM - Letter of Map Revision (LOMR)
DFIRM X-Sections
DFIRM Panels
DFIRM Floodways
Special Flood Hazard Areas (All Available
River Corridors
River Management Engineer Districts
Tactical Basin Planning
Geology
Drinking Water and...
Forests Parks and Recreation
ANR Basemap Data
Color Orthophotos by Year
Show Legend
Filter...
Natural Resources Atlas - HOME
Map Layers
Quick Tools...
Zoom to Town
Find an Address
Search Layers
Print Map
Download ANR GIS Data
Run Private Well Report
Get The Weather
Open/Close Toolbar
Show Map Layers
Atlas Layers
Lower Granville
Hancock
Rochester
Talcville
Robinson
Emerson
Braintree
Green Mountain National Forest
Appalachian Mountains
Green Mountains
Gillespie Peak
ADDISON
WINDSOR
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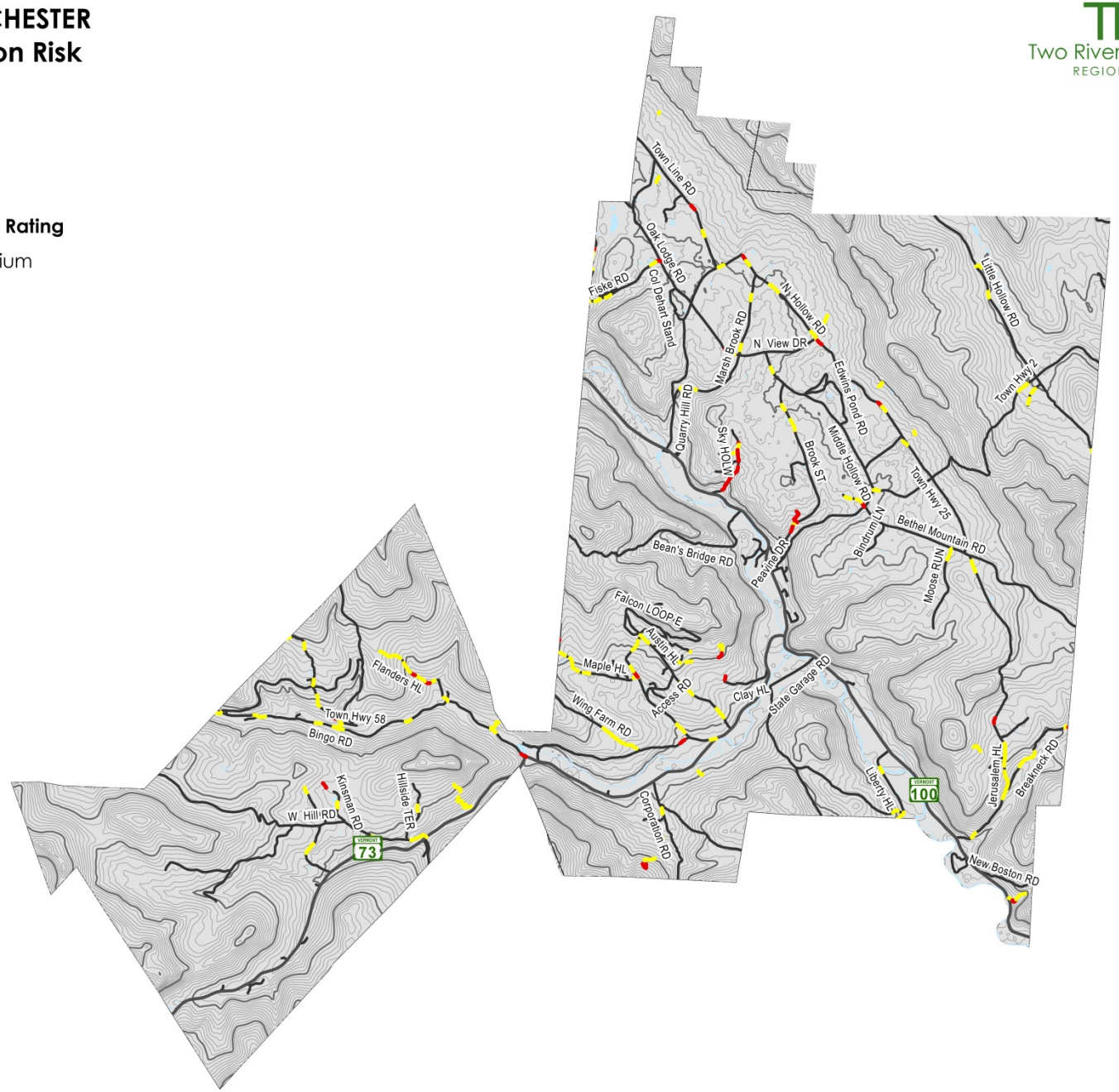
Town of ROCHESTER - Road Erosion Risk Map 2016

Two Rivers-Ottauquechee REGIONAL COMMISSION

N

Road Erosion Risk Rating

- Medium
- High



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