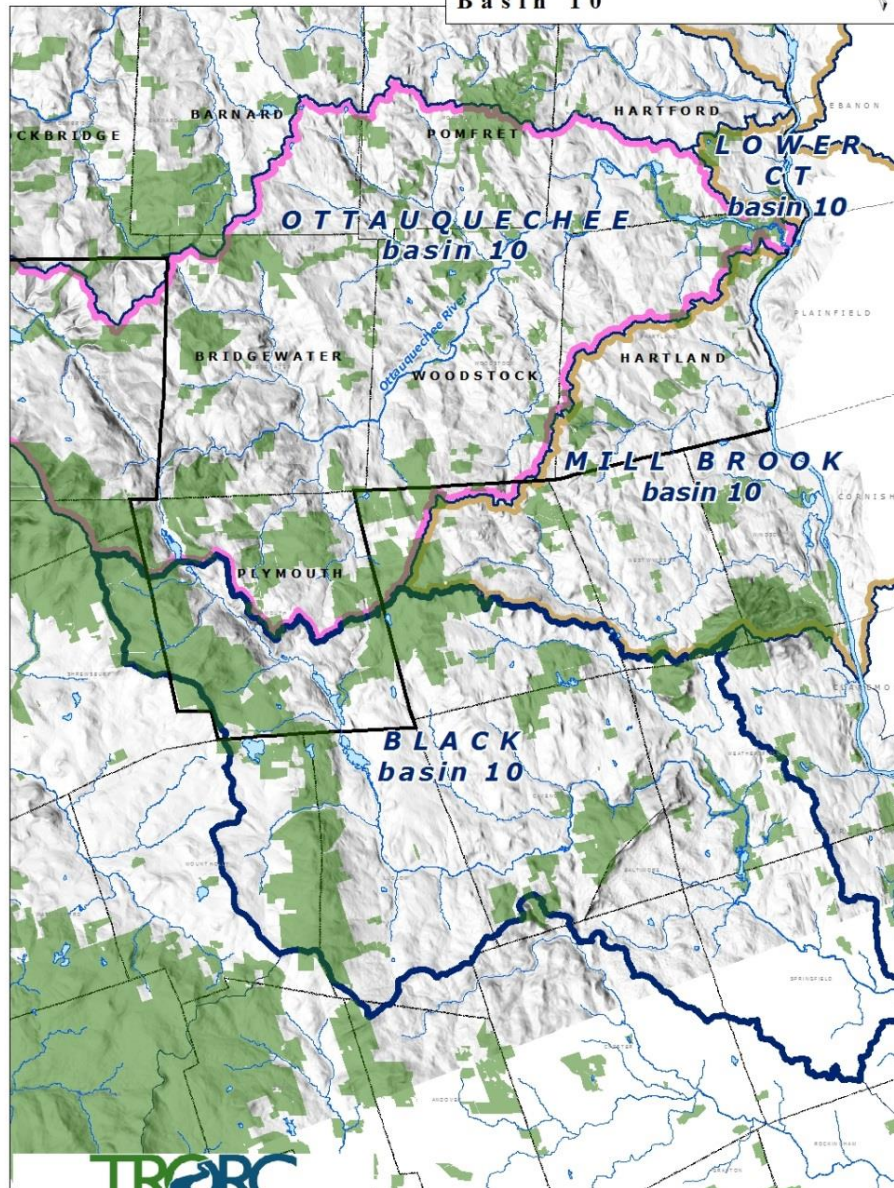


Basin 10: Ottauquechee and Black Rivers

Clean Water Advisory Committee: September 2017

**TWO RIVERS-OTTAUQUECHEE
REGION OF VERMONT**

Basin 10



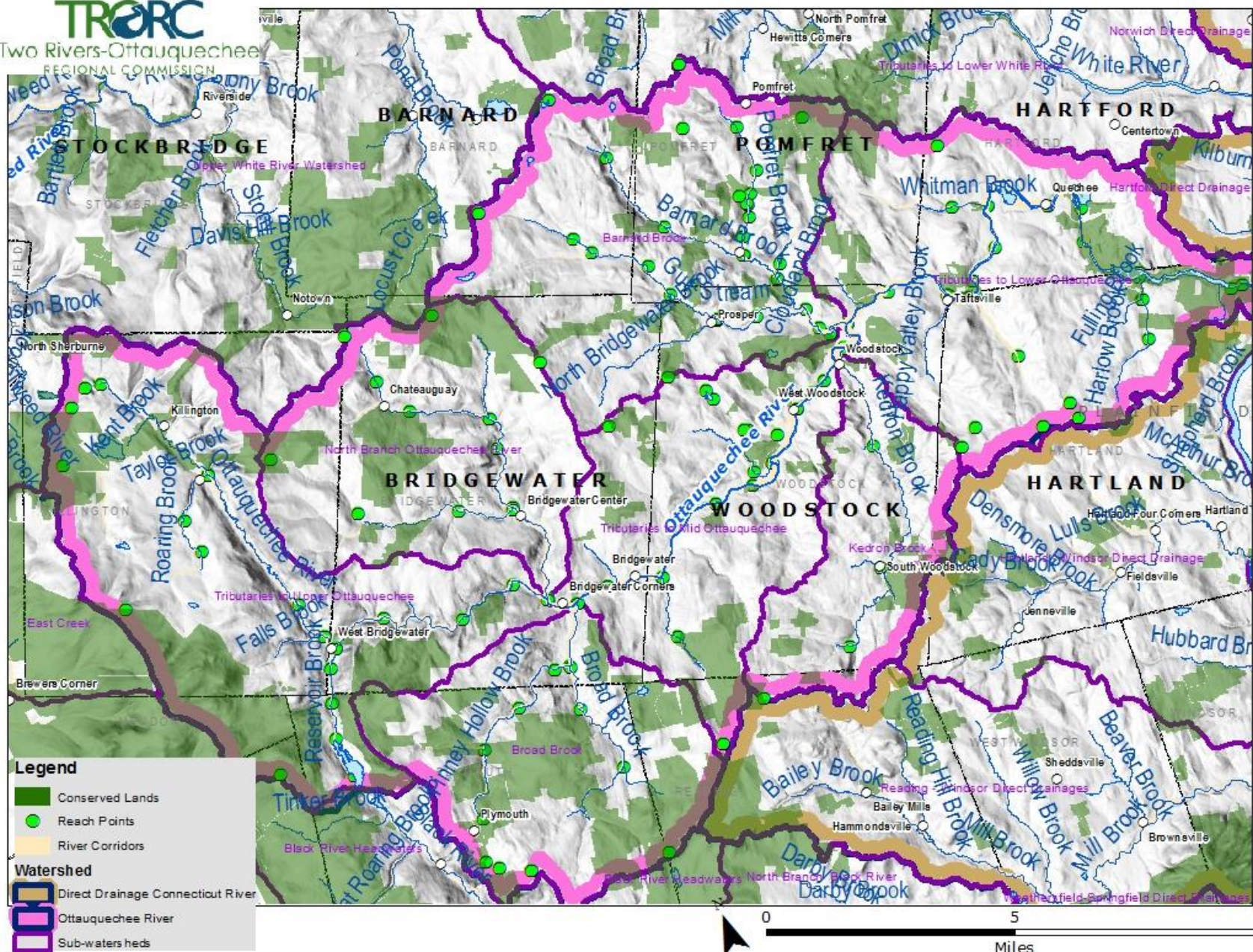
TRORC
Two Rivers-Ottauquechee
REGIONAL COMMISSION

WATERSHED BOUNDARIES: Interpreted from 1:24000 USGS
quadrangles, UVM-SAL, to USDA-NRCS specifications, 1996.

0 5 10
Miles

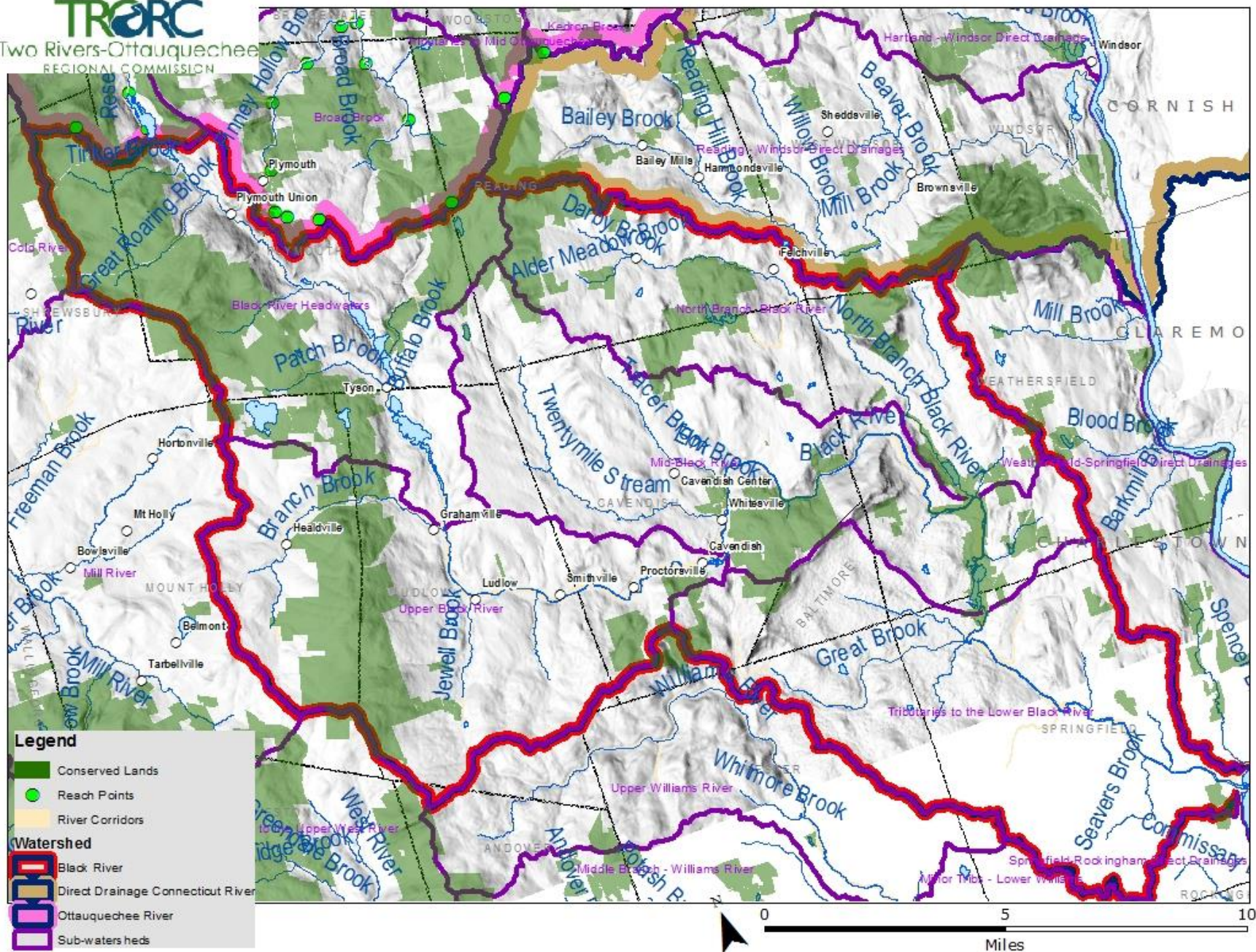
Ottauquechee River: Municipalities

- Barnard
- Bridgewater
- Hartford
- Hartland
- Killington
- Plymouth
- Pomfret
- Reading
- Shrewsbury
- Woodstock
- Stockbridge
- Mendon



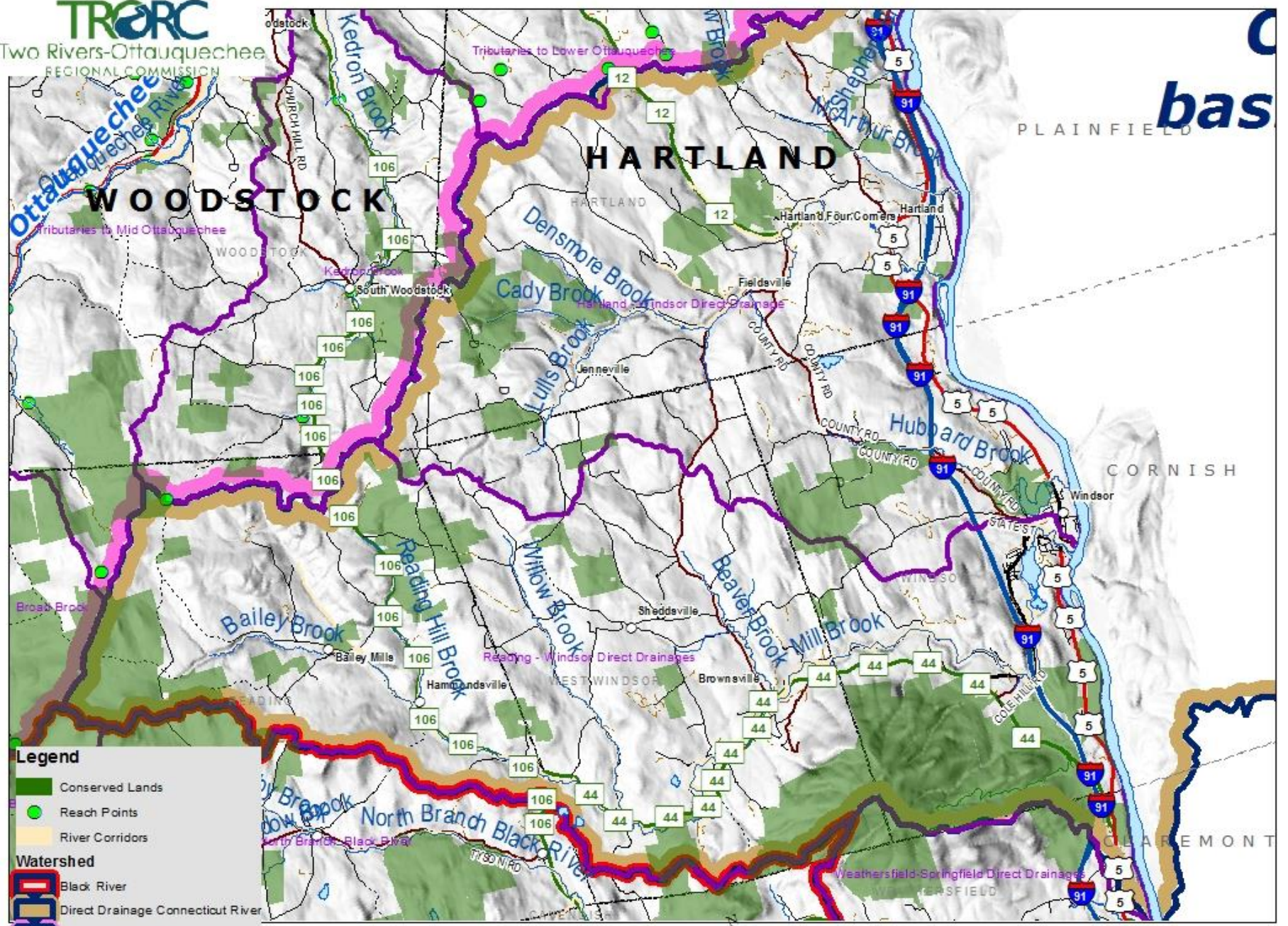
Black River Municipalities

- Andover
- Baltimore
- Cavendish
- Chester
- Ludlow
- Mount Holly
- Plymouth
- Reading
- Shrewsbury
- Springfield
- Weathersfield
- West Windsor



Connecticut River Direct Tributaries

- Hartford
- Hartland
- Reading
- Springfield
- Weathersfield
- West Windsor
- Windsor



Legend

- Conserved Lands
- Reach Points
- River Corridors

Watershed

- Black River
- Direct Drainage Connecticut River
- Ottawa-Quechee River
- Sub-watersheds

Watershed Projects Database

<https://anrweb.vt.gov/DEC/IWIS/ARK/ProjectSearch.aspx>

- Types of projects:
 - Water quality restoration projects
 - Stream Assessments
 - Stormwater Mitigation Projects
 - Riparian Plantings
 - River Corridor Easements
 - Hazard Mitigation Projects

Project Prioritization: Bang for \$\$

- DEC and Watershed Coordinators: Water Stressors
 - Stream Channel Erosion
 - Floodplain Encroachment
 - Flow Alteration
 - Invasive Species
 - Land Erosion
 - Non-erosion nutrient loading (phosphorous and nitrogen)
 - Thermal Stress
 - Toxic Substances

RPC Prioritization: (out of 33)

- Hazard Mitigation Benefit
- Transportation Benefit
- Socio-Economic Benefit
- Implements municipal capital plan or asset management plan
- Addresses a permit requirement
 - Municipal Roads General Permit
 - Flow Restoration Plan
 - Phosphorous Control Plan
 - 3-acre impervious surface
 - Wetland
- Community Support
- Part of a multi-faceted approach
- Bonus Criteria

Criteria Scoring For discussion who scores projects (RPC staff; + RPC subcommittee?; + some non-RPC reviewers?)	Score (Variable, 0-3)	Weighting (Fixed, 1 or 2)	Score
Hazard Mitigation Benefit (reduces vulnerabilities): 1 point: Identified in municipal Hazard Mitigation Plan 2 points: Same as above plus has significant hazard mitigation benefits and/or addresses repetitive damage concern 3 points: Same as above plus has FEMA BCA ratio greater >1		2	Max 6
Transportation Benefit 1 point: Improves transportation efficiency, capacity, and/or reduces ongoing maintenance of facilities/infrastructure 2 points: Same as above plus supported by the Region's long-range transportation plan (e.g. TIP, Regional Plan, etc.) listed as "candidate" in TIP/STIP or VTRANS Capital Plan (or prioritized by County TAC) 3 points: same as above plus in TIP/STIP/Capital Plan and identified for project implementation within next 2 upcoming years		2	Max 6
Socio-Economic Benefit 1 point: Improves or protects existing community social/economic asset 2 points: Creates new community social/economic asset 3 points: Either of above plus has public demonstration benefit		2	Max 6
Implements municipal capital plan or similar asset management plan 1 point: Identified in capital plan or asset management plan 2 points: identified in Plan but beyond 2 year window 3 points: identified as Capital Plan item in next year or following year		1	Max 3
Addresses a Permit Requirement: MRGP, FRP, PCP, 3-acre, wetland, lakeshore 1 point: Identified but not ranked to be done in next 5 years 2 points: identified in next 5-year Plan but not top 3 project 3 points: Identified in next 5-year Plan and in top 3 projects		1	Max 3
Community Support 1 point: Identified in existing community planning effort (Comprehensive Plan; Open Space Plan; Natural Resources Inventory; etc.) 2 points: Same as above plus identified in Regional Plan 3 points: either of above plus involves major local partner		1	Max 3
Part of multi-faceted initiative 1 point: A project that addresses surface water stressors and is part of a larger effort (e.g. several culverts upsized on one stream; ; brownfields; streetscape or bike-pedestrian improvements; 2 same as above but has significant non-municipal staff support.....etc. E.g. 3-points if same as above and also multi-town project, etc.)		1	Max 3
Bonus points for other criteria not captured above 1-3 points [this must be clearly defined; be used sparingly and be equally available/applicable to all the municipalities within your RPC)		1	Max 3
		Score>>	
		MAX	33

Project Scoring

- Score= 3: Berm removal, Abutment removal, stormwater mitigation projects, incision restoration, Riparian Buffer Plantings, and RCE
 - Socio-economic benefit and Multi-faceted approach
- Many times Transportation benefit will also address MRGP permit requirement
- Score=11: Vermont Economic Resilience Initiative

Reclassification Opportunities: B1

- Ottauquechee River:
upstream of
Bridgewater Hill Road



North Branch Ottauquechee River



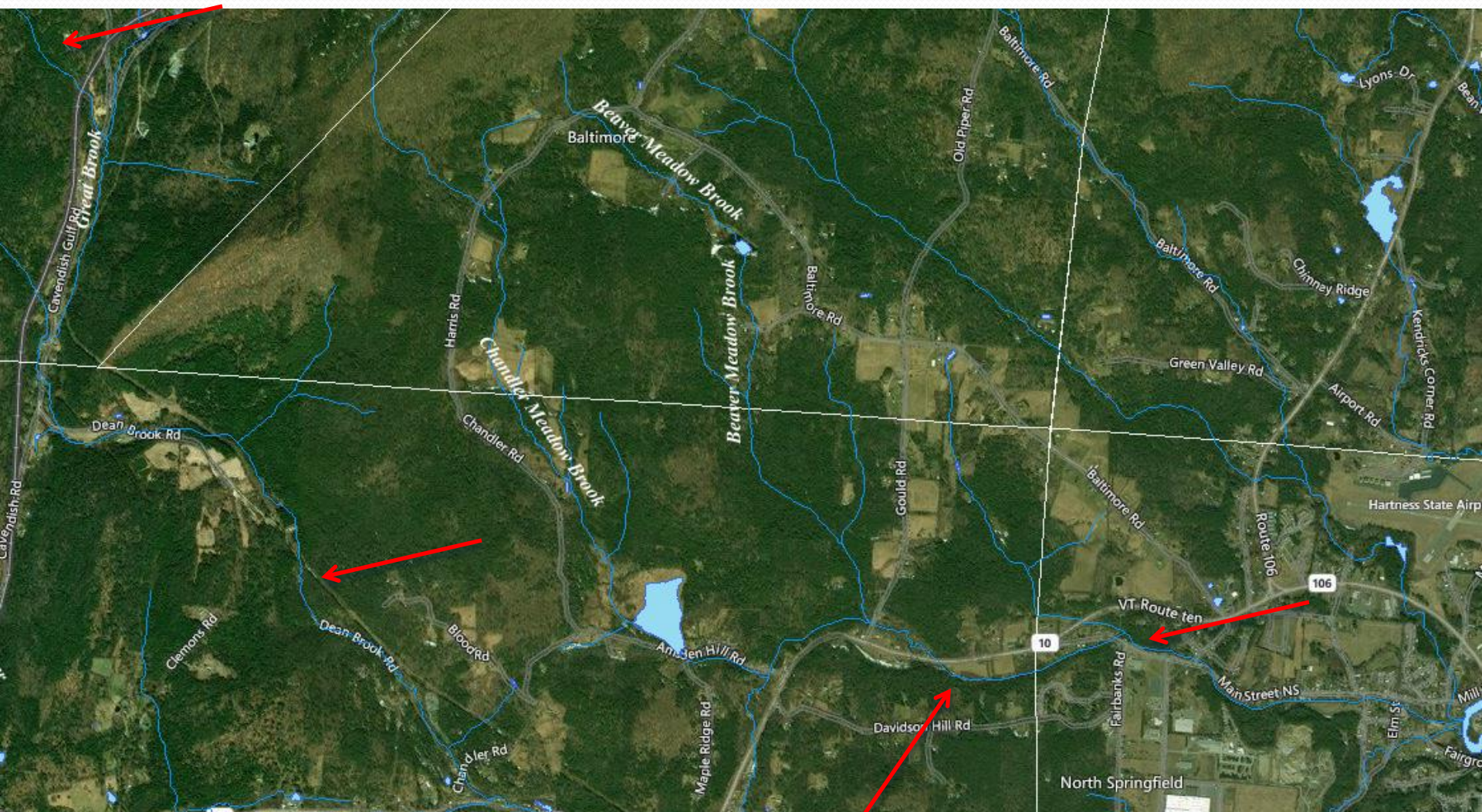
Lulls Brook (Hartland)



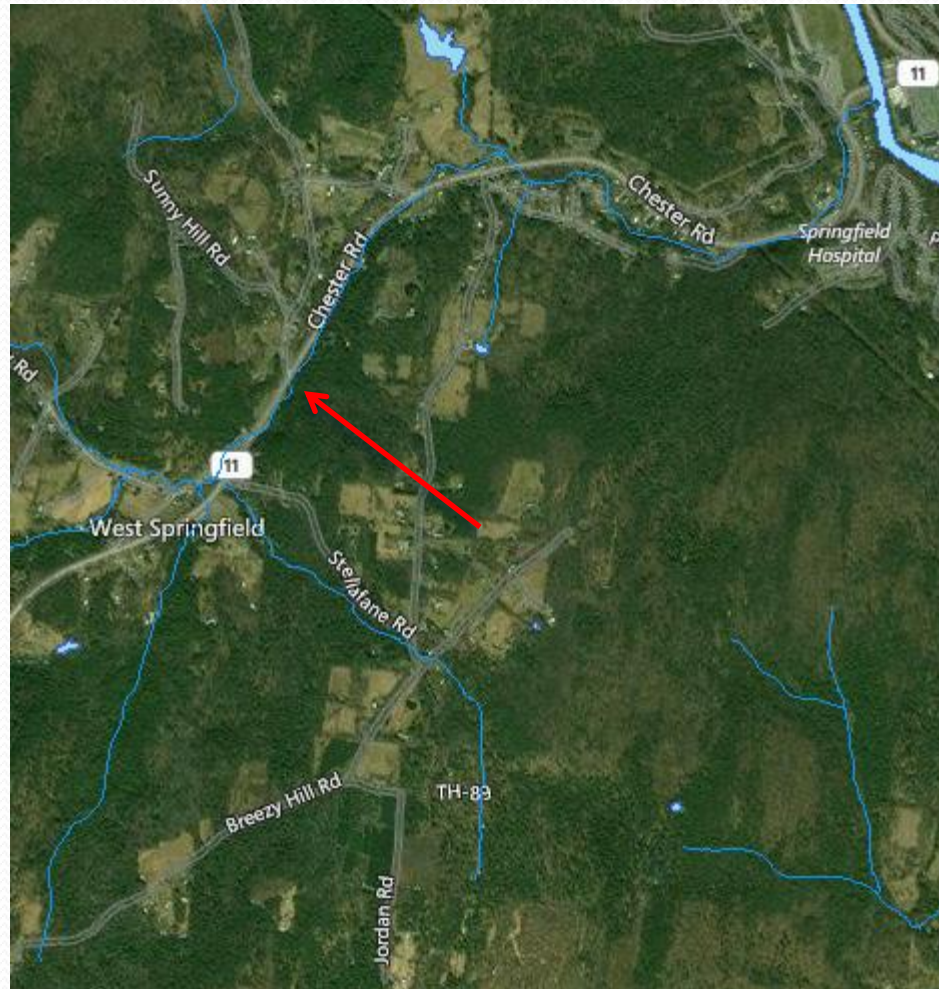
Great Roaring Brook (Plymouth)



Great Brook (Springfield, Cavendish, Chester)



Black River Tributary #9

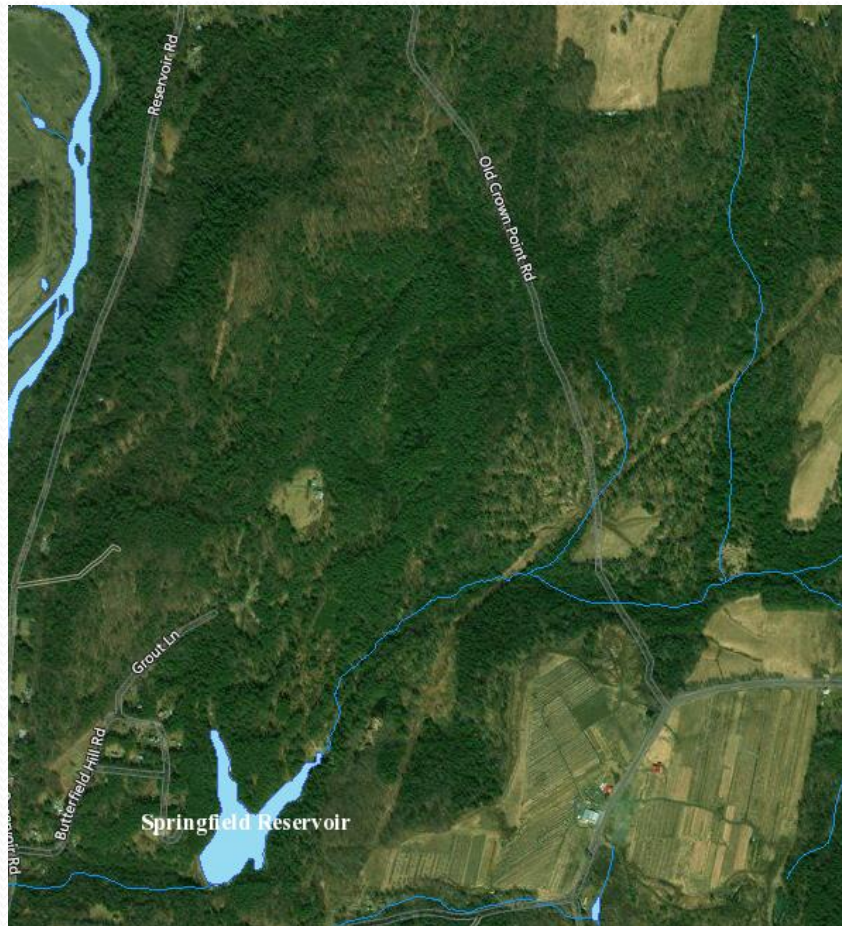


Reclassification Opportunities: A1

- Tiny Pond and Tiny Pond Stream



Springfield Reservoir and Springfield Reservoir Brook



Regulatory Impacts of Class A1: Ecological Waters

- Meet management objectives to achieve and maintain waters in a natural condition
 - Aquatic biota, wildlife, aquatic habitat
 - Aesthetics
 - Swimming and contact recreation
 - Boating, fishing, and other recreation
- Sivicultural Practices: Accepted Management Practices
 - Compliance with Water Quality Standards

Regulatory Implications (continued)

- Wetlands Permits for Class A1
 - Development projects that will affected wetlands or buffer zones (that require a Permit): consideration is given to wetland's contribution to Class A1 surface water
- Discharge Permit for Class A1
 - Discharge of wastes other than nonpolluting wastes and stormwater runoff is prohibited (regardless of treatment)
 - No Mixing zones
 - No Waste management zones
 - Minimal deviation from natural flow regime
 - No manipulation of water levels in lakes, ponds, or reservoirs

Wastewater and Potable Water Supply discharge permits

- Shall not exceed 1,000 gallons per day
- No more than one soil-based disposal system per lot

Reclassification: Class 2 Wetland

- Eshqua Bog (Hartland)
- Totman Hill Fen (Pomfret)

Clean Water Fund: Funding Sources

http://www.trorc.org/wp/wp-content/uploads/2017/06/20170616_MunicipalWQGrants.pdf

- Better Roads: \$3 million
- Municipal Highway & Stormwater Mitigation: \$5.9 M
- Transportation Alternative Program: \$2.2 million
- Municipal Roads Grants-in-Aid: \$2.1 million
- Ecosystem Restoration Grant Program: \$3 million
- Clean Water Block Grant: \$1.5 million
- Clean Water State Revolving Loan Fund: \$87 million

Funding Opportunities

- Identifying projects from the database
- Partnership Opportunities:
 - TRORC, WNRCD, ONRCD, WRP