

## What is a Tactical Basin Plan?

Tactical basin planning is carried out for the Agency of Natural Resources (VANR) by the Watershed Management Division's Monitoring, Assessment, and Planning Program (MAPP) in coordination with watershed partners. Tactical basin plans (TBPs) are developed in accordance with the [Vermont Surface Water Management Strategy](#) (VSWMS) and the [Vermont Water Quality Standards](#) (VWQS) to protect, maintain, enhance, and restore the biological, chemical, and physical integrity of Vermont's water resources. The basin-specific water quality goals, objectives, strategies, and actions described in the TBPs aim to protect public health and safety and ensure public use and enjoyment of VT waters and their ecological health.

The TBP process allows for the issuance of plans for Vermont's fifteen basins every five years, as required by statute 10 V.S.A. § 1253. The plans incorporate the U.S Environmental Protection Agency's (EPA) 9-element framework for watershed plans (USEPA, 2008) and meet obligations of the Vermont Clean Water Act. Updating a basin plan includes: 1. Monitoring water quality and summarizing existing information, 2. Assessing and analyzing water quality data, 3. Identifying strategies and projects to protect and restore waters, 4. Seeking public comment and finalizing plan, and 5. Plan implementation and tracking which is ongoing throughout the planning cycle.

Tactical basin plans can be considered a strategic guidebook for protecting and restoring VT surface waters for ANR and watershed partners. They identify causes and sources of pollution, opportunities for protecting waters through outstanding resource water designation and reclassification. Plans identify reductions needed to restore water quality including those necessary to meet Total Maximum Daily Load targets, and plans contain implementation tables (Chapter 5) that list strategies to foster education and outreach, and targeted restoration actions that are eligible for federal and State funding. The Plan's strategies, described in Chapter 5's implementation table, target individual projects that are tracked via its online counterpart, the [Watershed Projects Database](#) (WPD). The WPD is continuously updated to capture project information from the TBP process, on the ground assessments and emerging projects due to natural and/or anthropogenic events. The 2014 Basin 15 Report Card located in Appendix B provides status and update information on each of the objectives identified in the previous basin plan available [here](#).

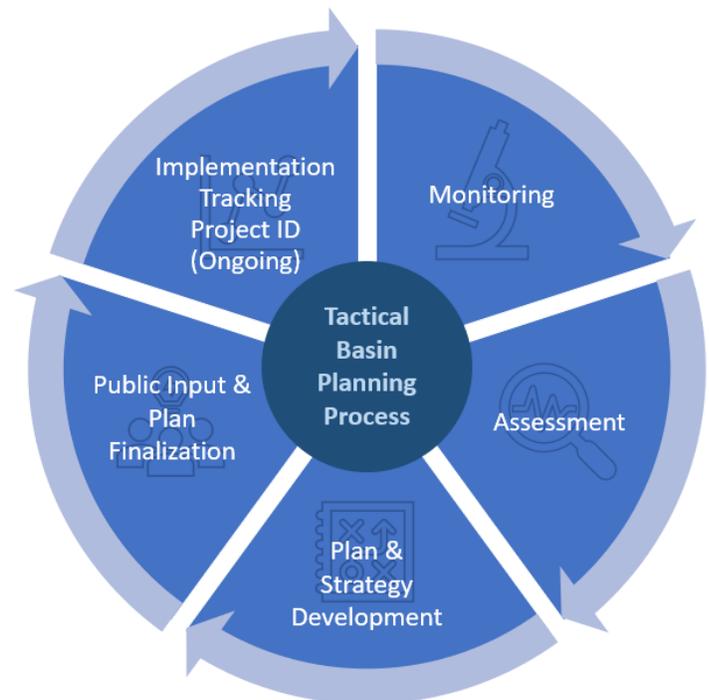
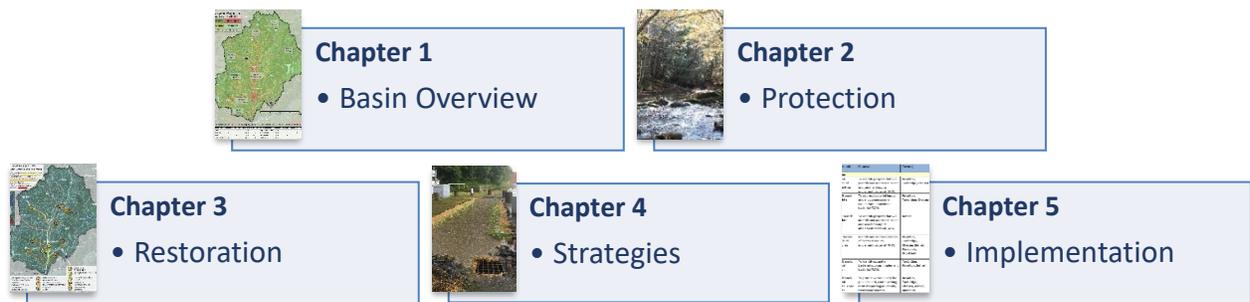


Figure 1. Steps in the tactical basin planning process.

# Passumpsic Tactical Basin Plan DRAFT Summary

The Passumpsic Tactical Basin Plan (TBP) provides an assessment of watershed condition and identifies current and future strategies to protect high quality waters and restore impaired water resources (see [Vermont Surface Water Management Strategy](#) (VSWMS)).

The five chapters in this plan provide a framework for understanding the Passumpsic River basin (Basin 15), including its unique characteristics and water quality issues, and where and how to carry out priority actions to protect, maintain, enhance, and restore water quality in the basin.



The Passumpsic River basin drains 507 square miles covering the majority of Caledonia County and minor portions of Essex, Orleans and Washington counties. Many waters in the basin are of high quality and so the basin plan recommends the reclassification of two waters for A(1) for aquatic biota and five for B(1) aquatic biota use and 12 waters are recommended for reclassification for B(1) fishing use. Five abandoned drinking water supplies are recommended for reclassification as B(1) or B(2) waters. Finally, Victory Basin Wetlands Complex is highlighted as a candidate for reclassification as a Class 1 wetland. [Figure 2](#) includes a map of these waters.

Table 1. Vermont surface water classifications.

Use	A1	B1	B2
<b>Aquatic Biota</b>	Excellent - Natural Condition	Very Good - minor change	Good - moderate change
<b>Aquatic Habitat</b>	Natural Condition	Very Good - minor change	Good - moderate change
<b>Aesthetics</b>	Natural Condition	Very Good	Good
<b>Boating</b>	Excellent - maximum extent without degradation	Very Good - maximum extent with no more than minor degradation	Good - meets hydrological criteria
<b>Fishing</b>	Salmonid population in Natural Condition	Salmonid population in Very Good Condition	Salmonid population in Good Condition
<b>Public Water Supply</b>	(A2) Uniformly excellent character, highly suitable	---	Suitable with treatment
<b>Swimming</b>	Excellent	---	Good

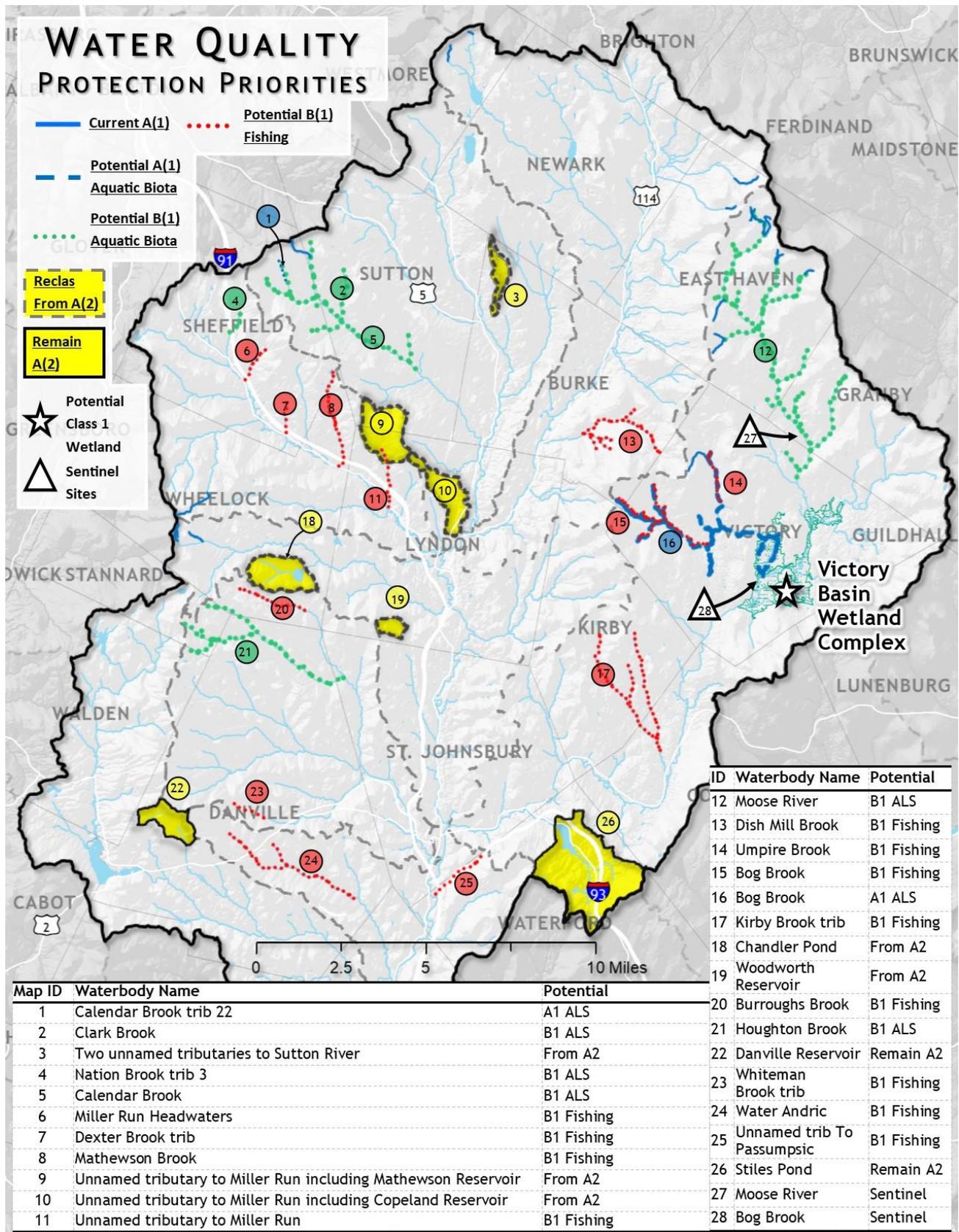


Figure 2. Recommended and existing high-quality waters of the Passumpscic River basin.

There are no impaired lakes or ponds in the watershed but eight are identified by the lake score card as having reduced or poor shoreland conditions due to development, three have elevated or increasing levels of nutrients, two are stressed due to acid precipitation, and one pond is stressed for sedimentation as shown in [Figure 3](#). The only impaired waters in the Passumpsic River basin are the Passumpsic and Sleepers River which are listed as due to elevated *E. coli* levels from the St Johnsbury combined waste and stormwater system overflowing. Several other rivers and streams are listed as stressed due to sediment, *E. coli*, nutrients and metals and Oil and Nickle as shown in [Figure 4](#).

Chapter 4 of the plan lays out the plan of action for the next five years to address pollution contributing to these water quality issues in addition to addressing nitrogen loading to Long Island Sound and for protecting high quality waters which are all summarized in [Table 2](#). Information from assessments in the watershed and derived from public input have been pulled together to guide the development of strategies for the agricultural sector, developed lands sector focused on

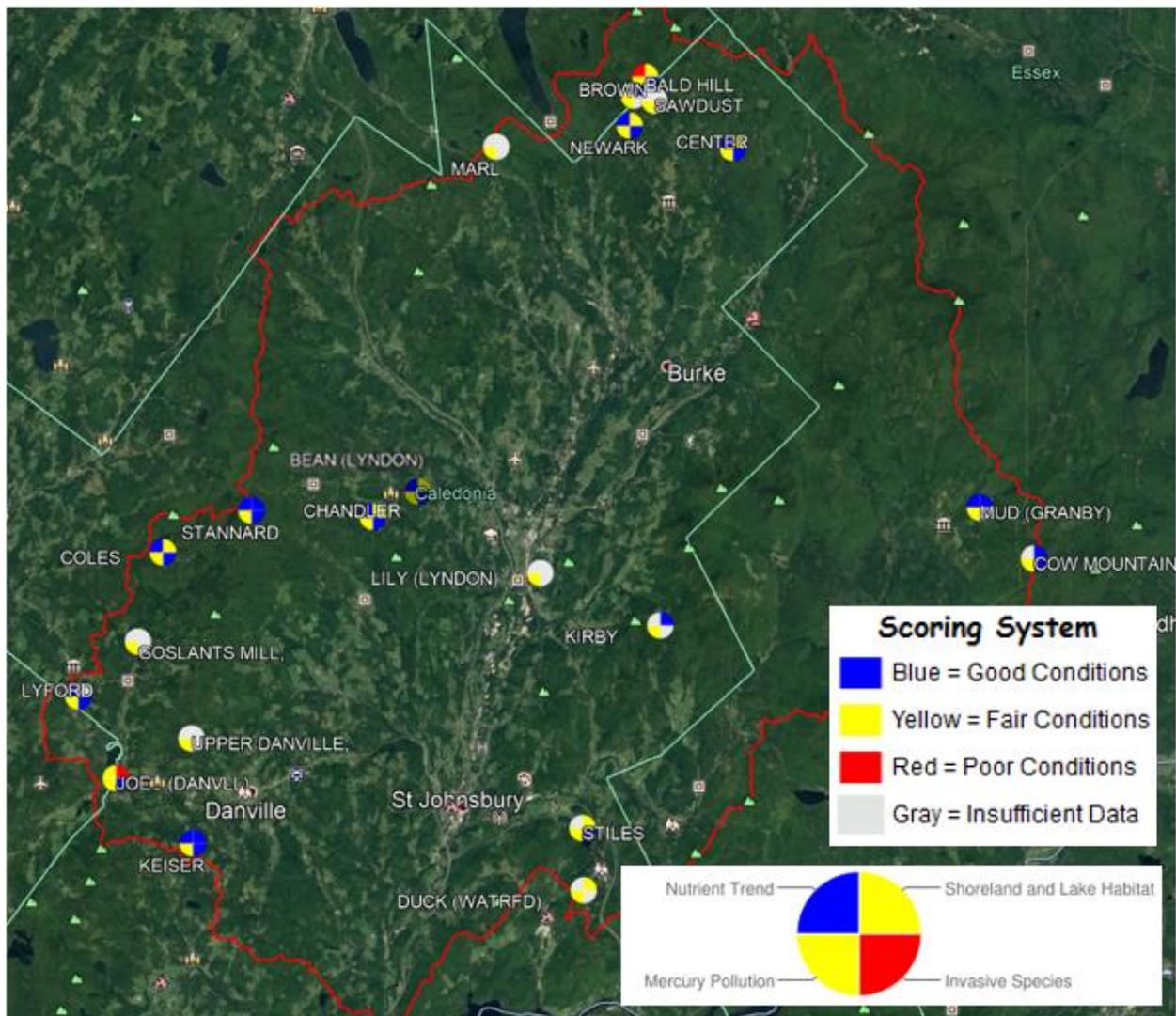


Figure 3. Lake Scorecard results for lakes in the Passumpsic River Basin

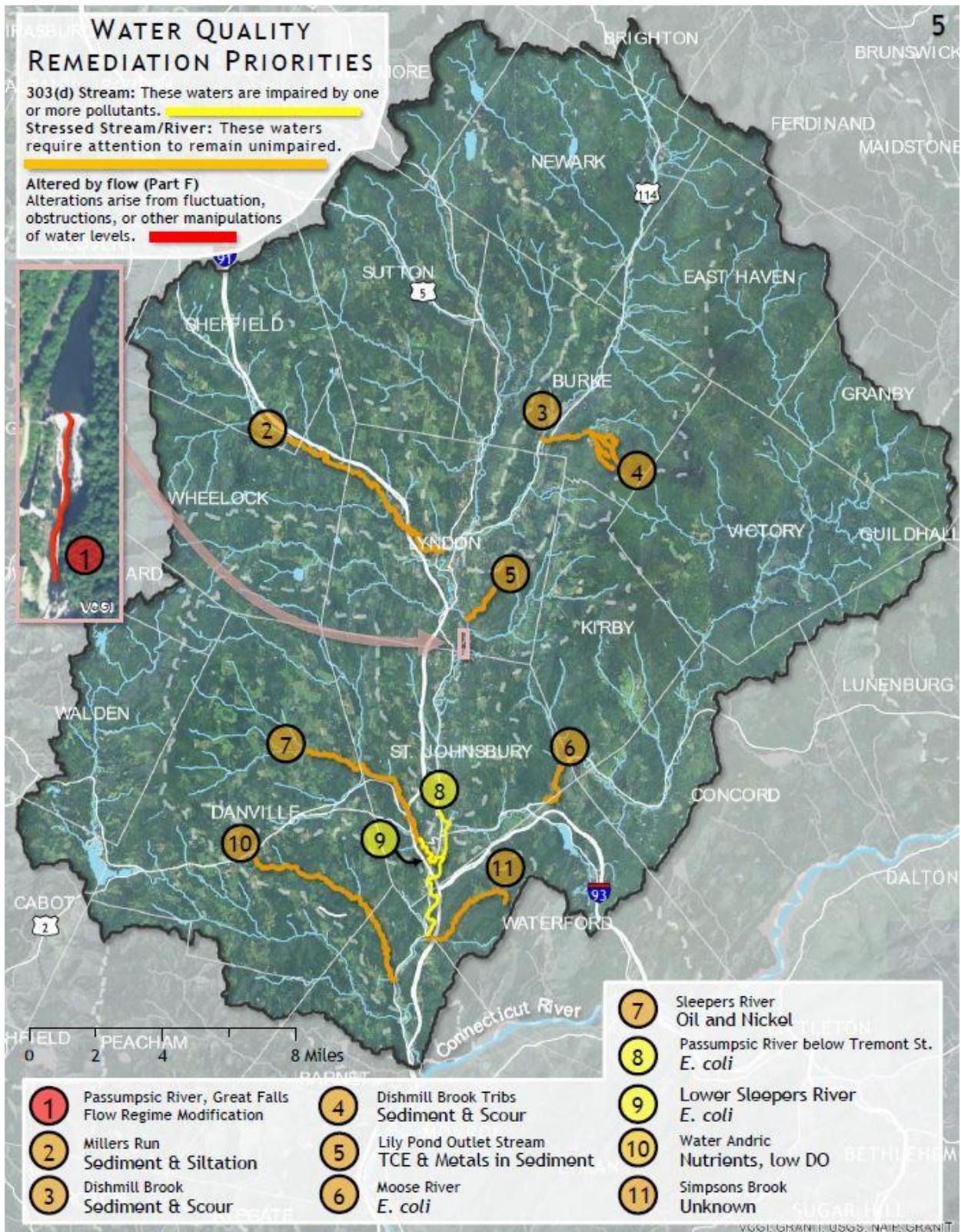


Figure 4. Map of stressed or impaired rivers in the Passumpic River watershed

stormwater roads and wastewater treatment facilities, and restoration of forest lands and natural lands along or lakes and streams. A total of 42 strategies are listed in Chapter 5 in the implementation table as summarized in Table 2 and 73 stream segments or ponds have been identified for additional water quality monitoring in a monitoring priorities table. Specific implementation projects are listed in the watershed project database.

Table 2. Focus areas for implementation of water quality projects by sector in the Passumpsic River Basin

Sector	Focus Areas	Strategies
<b>Agriculture</b>	Joes Pond, Water Andric, Chesterfield Valley, Millers Run, Cropland areas	<ul style="list-style-type: none"> <li>• Support regional agricultural working group</li> <li>• Hold annual soil health, BMP and/or RAP workshops for farmers</li> <li>• Support farmers in developing and implementing Nutrient Management Plans (NMPs)</li> <li>• Initiate a regional equipment sharing program</li> <li>• Increased buffers, river corridor and wetland restoration outreach and implementation</li> <li>• Water quality monitoring to understand nitrogen source areas</li> </ul>
<b>Developed Lands - Stormwater</b>	St Johnsbury CSO watersheds, Water Andric, Joes Pond, Stiles Pond, Dish Mill Brook	<ul style="list-style-type: none"> <li>• Implement GSI in St. Johnsbury CSO watersheds</li> <li>• Implement priority practices from Stormwater Master Plans</li> <li>• Develop and implement GSI practices at local schools</li> <li>• Support brownfields restoration efforts</li> <li>• Identify stormwater treatment practices in Danville</li> </ul>
<b>Developed Lands - Roads</b>	Water Andric, Dish Mill Brook, Joes Pond, Center Pond, Stiles Pond	<ul style="list-style-type: none"> <li>• Complete REI's and provide technical support for towns to use.</li> <li>• Support for towns in applying for funding to target WQ issues</li> <li>• Address Class 4 WQ issues with support from NWSC</li> <li>• Host Workshops and Peer to Peer sharing on BMP's</li> <li>• Shared Lyndon/Burke and Sutton/Sheffield Hydro seeder</li> </ul>
<b>Natural Resources Restoration – Forestland</b>	Bald Hill Pond, A(1) and B(1) watersheds	<ul style="list-style-type: none"> <li>• Support forestland conservation and skidder bridge program</li> <li>• Promote AMPS, implementation of Voluntary Harvesting Guidelines and restoration projects on state lands</li> </ul>
<b>Natural Resources Restoration – Lakeshore</b>	Joes, Bald Hill, Center, Chandler, Coles, Duck, Newark Ponds	<ul style="list-style-type: none"> <li>• Support Lake Wise planning, assessment and implementation</li> <li>• Support Aquatic Invasive Species spread prevention efforts</li> </ul>
<b>Natural Resources Restoration – River Connectivity</b>	Water Andric, Millers Run, East Branch Passumpsic,	<ul style="list-style-type: none"> <li>• Develop and implement projects from river corridor plans</li> <li>• Restore floodplain access and stream stability through active projects or river corridor easements &amp; buffer planting projects</li> <li>• Remove obsolete dams and discuss removal of USGS weirs</li> <li>• Strategic wood additions in the upper Moose River tributaries and other locations where this is identified by VFW.</li> <li>• Provide outreach to communities on floodplain and river corridor protections</li> </ul>
<b>Natural Resources Restoration – Wetlands</b>	Victory Basin Wetlands Complex	<ul style="list-style-type: none"> <li>• Wetland reclassification</li> </ul>