

Winooski Tactical Basin Planning Update



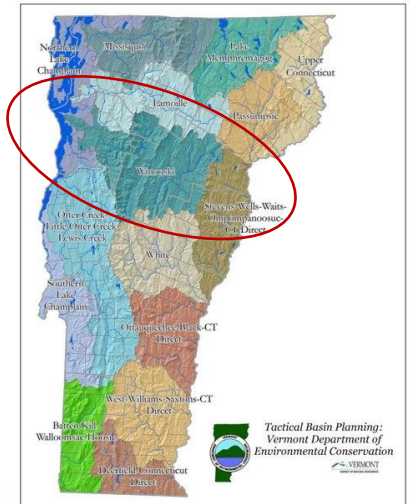
Winooski BWQC Meeting 12/15/2022
DEC Water Investment Division Planners:
Keith Fritschie (keith.fritschie@vermont.gov) and Karen Bates (karen.bates@vermont.gov)

Outline

- Tactical Basin Plan Purpose and Relevance to BWQC
- 2023 Tactical Basin Planning Timeline
- Current Strategy Development
- BWQC Assistance: Community Knowledge and Survey Distribution

General Tactical Basin Plan Purpose and Approach

- Surface water management plan required by the VT Clean Water Act
- Identifies geographically-explicit actions (strategies) to address water quality degradation and track implementation (WPD)
- 15 basins, 5-year planning cycle
- Major pollutants/stressors may include nutrients (N,P), toxins, pathogens, invasive species, altered flows, temperature...



General strategies for key land use/land cover sectors

AGRICULTURE
Agriculture

- Conservation practices that reduce sources of pollution from farm production areas and farm fields.

DEVELOPED LANDS
Developed Lands--Stormwater

- Practices that reduce or treat polluted stormwater runoff from developed lands, such as parking lots, sidewalks, and rooftops.

ROADS
Developed Lands--Roads

- Stormwater and roadside erosion control practices that prevent erosion and treat road-related sources of pollution.

WASTEWATER
Wastewater

- Improvements to municipal wastewater infrastructure that decrease pollution from municipal wastewater systems through treatment upgrades, combined sewer overflow (CSO) abatement, and refurbishment of aging infrastructure.

NATURAL RESOURCES
Natural Resource Restoration

- Restoration of "natural infrastructure" functions that prevent and abate pollution. Natural infrastructure includes: floodplains, river channels, lakeshores, wetlands, and forest lands.

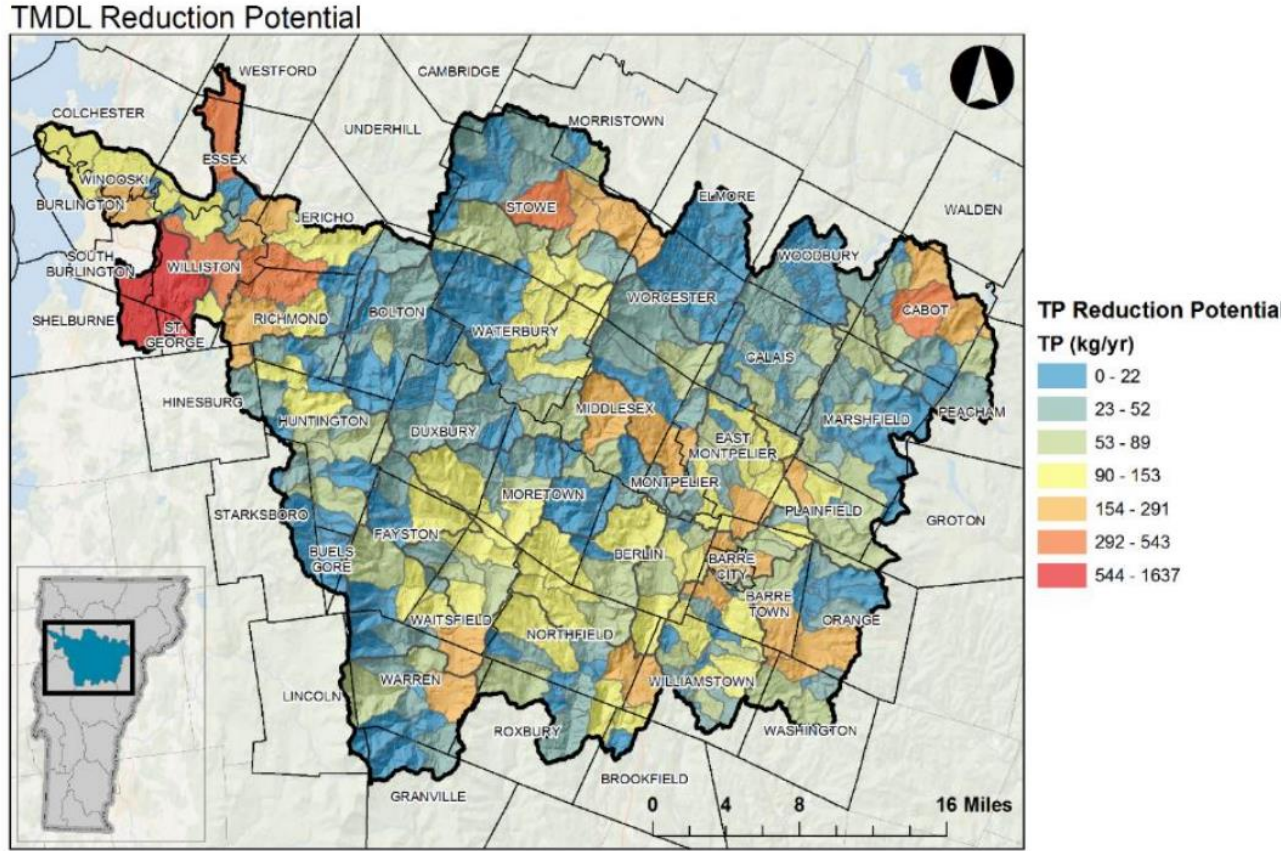


This Photo by Unknown Author is licensed under CC BY-SA



Key goal of Winooski TBP: Address sediment/phosphorus

- Winooski TBP addresses LC P TMDL
- TBP strategy development may aid BWQC by increase funding, technical assistance, and outreach to increase pool of available, P-efficient projects
- Likewise, BWQC process of identifying and implementing more specific projects can be supported as TBP strategy



General approach to strategy development



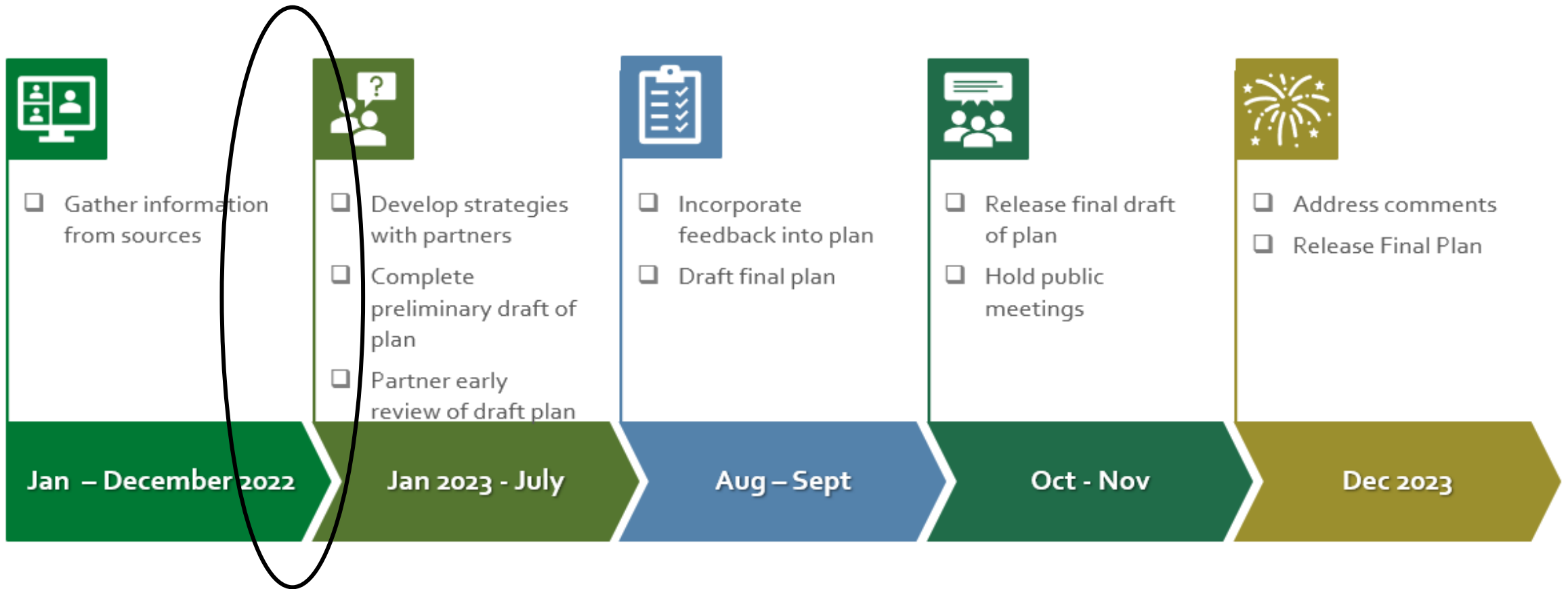
- How have we done addressing pollutants from a specific sector/source over the past 5 years?
 - Previous plan, data, models, and stakeholder input
- How can we/partners increase adoption of practices relevant to pollutant/sector/source?
 - Barriers and incentives to implementation
 - Identifying funding, technical assistance, community outreach needs
- What partners can take on steps to alleviate barriers and leverage incentives?

Strategy (Implementation) Table

| Priority Subbasin | And/or | Priority Towns/catchments ²⁹ | Strategies | Source ³⁰ | Stressor addressed | Partners ³¹ | Funding (see also VSWMS Appendix D) |
|---|--------|--|---|----------------------|--|---|--|
| Mad River | | | Develop and provide support for equine specific programing including support for installing horse manure compost bins and making pasture improvements | | Land erosion, nutrients, pathogens | UVM extension, WNRCD, | ACAP, EQIP, VAAFM BMP |
| Upper Winooski | | Phase II priority catchments for agricultural land Table 17 | Provide technical and financial resources to farms below the threshold for VAAFM Small Farm Operations | | Land erosion, nutrients, pathogens | WNRCD, watershed groups | |
| | | Phase II priority catchments for agricultural land Table 17 | Complete targeted water quality sampling on 3 farms to help identify source areas and evaluate nutrient reductions achieved through BMP implementation. | | Land erosion, nutrients, pathogens | Watershed groups, WNRCD, VDEC | VDEC LaRosa Partnership |
| STORMWATER: Reduce pollutants and volume | | | | | | | |
| Lower Winooski | | MS4 entities | Support the development and implementation of Phosphorus Control Plans and implementation of the Flow Restoration Plans. | TMDL Phase I | Land erosion, nutrients, pathogens | VDEC, CCRPC | CWIP |
| See next column | | Waterbury, Williamstown, Stowe | Provide technical assistance to identify and prioritize stormwater management projects. Use stormwater plan template developed by VDEC | TMDL Phase I | Land Erosion, Channel erosion, pathogens | VDEC, CVRPC, | CWIP |
| Multiple | | See Appendix C | Support implementation of high priority projects in stormwater master Plans and 2015 Smugglers' Notch Parking Feasibility Study | TMDL Phase I | Land Erosion, Channel erosion, pathogens | VDEC, CCRPC, CVRPC, LCPC | CWIP |
| Basin wide | | See top 10 prioritized road projects in town road erosion inventories as well as Phase II priority catchments for roads (Tables 23 and 24) | Help municipalities control runoff from gravel and paved roads to meet the Municipal Roads General Permit: implement road assessment protocol to assist with prioritization; provide technical and financial resources to assist with implementation, including projects within 250 feet of lakes. | TMDL Phase I | Land Erosion | CCRPC, CVRPC, LCPC, NVDA, VTrans, WNRCD, VDEC, Municipalities | CWIP |

2018 plan: 50+ strategies, hundreds of new and ongoing projects in Watershed Projects Database

2023 Winooski Tactical Basin Planning Timeline



Example strategies in the works

- Stormwater
 - Gap: Regulatory requirements alone will not achieve Winooski's developed lands TMDL goal
 - Need: Identify P-efficient non-regulatory stormwater projects, willing landowners, and the partners/practitioners to do this work
 - Strategies: Support CVRPC's stormwater project database, identify funding to support sustained partner outreach in local communities...
 - Outcome: Address need

Example strategies in the works

- Riparian Buffers
 - Gap: Buffers can be very P-efficient practices, but invasives reduce their success
 - Need: Partner-wide understanding of where/when invasives reduce effectiveness of buffer project
 - Strategy: Support the development of guidance/technical assistance (e.g., mapping tools or partner information networks to identify best planting locations/practices)
 - Outcomes: Installation of more effective, durable buffers over the long run

- Gap: Buffers can be very P-efficient practices, but tree stock is often limited
- Need: More stable, abundant source of location-appropriate planting stock
- Strategy: Support outreach about emerging opportunities/planting techniques, identify funding sources or other barriers to increasing available stock
- Outcomes: Reduced barriers to cost-efficient, P-benefitting planting projects

Example strategies in the works

- Agriculture
 - Gap: Farmers/practitioners sometimes unaware of other practices/opportunities relevant to their land
 - Need: More streamlined network of information sharing
 - Strategy: Establish “farm teams” that funnel site-specific conservation program information to a landowner/farmer through a single trusted partner liaison
 - Outcomes: Increase restoration/protection complementarity on individual parcels

Example strategies in the works

- Monitoring/Assessment
 - Gap: Shelburne Pond nutrient and algae loads have been trending upwards
 - Need: More data to identify potential nutrient sources in the watershed
 - Strategy: Identify monitoring location and support volunteer water quality monitoring efforts
 - Outcomes: Identify sources of nutrient pollution to support outreach and potential P-reducing project implementation

BWQC member Requests

- Public Survey Distribution
 - Information-gathering and sharing process to identify specific waterbodies/issues where locals may identify concerns overlooked by available data/models
 - Distribute through your list-servs, FPF, etc.
 - Tell Keith or Karen how you distributed the survey
- Review 2018 strategies table and email Keith/Karen:
 - are there strategies that your town/organization has input on?
 - are there gaps relevant to your town/organization that are unaddressed by the plan?