

Saco Watershed Collaborative

ACTION PLAN

Sustaining the Saco for Future Generations



Saco Watershed Collaborative Action Plan

Prepared by members of the Saco Watershed Collaborative Steering Committee

Released April 1, 2019

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Sustaining the Saco River Watershed

Source water protection is a priority of the Saco Watershed Collaborative. The Collaborative is a dedicated group of professionals, community members and scientists working to protect the Saco River Watershed. The Saco River provides drinking water for approximately 40,000 people across southern Maine. Forests, shoreland buffers, wetlands, aquifers, small streams, lakes and ponds, and rivers are all part of a system that collects, filters, and stores water. Members of the Collaborative have joined together to protect the irreplaceable water resources and benefits that come from the Saco Watershed.

The University of New England (UNE) was the convening organization for the Collaborative from 2016 through 2018. During that time, UNE facilitated and planned meetings and events to engage interested stakeholders in the development of the Saco Watershed Collaborative.

- In 2017, one of the goals for members of the Collaborative was to discover what work was already being done in the watershed. Field trips and meetings (referenced in Appendices I and II), designed to demonstrate the different types of stewardship in the watershed, helped to build collective knowledge about how the Collaborative could work to accomplish shared goals. A total of thirty-one organizations participated in the field trips and meetings during 2017.
- In 2018, the Collaborative continued to raise awareness of work within the watershed and build on the collective knowledge to achieve shared goals. Thirty-four organizations participated in the field trips and meetings. A Steering Committee (referenced in Appendix III) was convened to explore how the Collaborative could be transitioned from UNE as convening organization to another similar organization in 2019.

Goals of the Saco Watershed Collaborative

- Protect water quality, public health and the ecosystems of the Saco Watershed through coordinated land and water conservation, education, research, planning, and management.
- Develop and sustain mutually beneficial partnerships to accomplish shared goals for clean water.
- Ensure long-term viability and sustainability of the Collaborative

Purpose of the Plan

The actions identified in the plan are aimed at addressing the critical challenges that threaten water quality in the Saco Watershed now and in the future. The intended purposes of this plan are to:

- Improve the coordination and effectiveness of a diverse group of organizations that work to protect clean water within the Saco River watershed.
- Identify the best management practices for watershed management.
- Prioritize the use of technical and financial assistance resources in the most efficient way possible to achieve clean water protection goals.
- Leverage additional private and public investment in water protection actions that provide the greatest benefit for current and future generations of watershed residents and ecosystems.

The need for the Saco Watershed Collaborative Action Plan

The 1,700 square miles of the Saco River Watershed is fed by an ecologically diverse land area shared by the states of Maine and New Hampshire. The river drains into the Saco Bay, a rich coastal ecosystem of regional and national importance.

The main priority of the Collaborative is source water protection. In December 2016, members of fifty-four organizations identified potential benefits to collaboration to protect the Saco Watershed. Collaboration among organizations working in the watershed could result in benefits to thousands of people who depend upon the Saco River for drinking water, livelihoods and recreation. Collaboration is not without challenges to face and barriers to overcome on the path to strong and effective source water protection.

One of the challenges to holistic watershed protection is **inconsistent or insufficient funding** devoted to the suite of science-based approaches needed to characterize the watershed, identify threats, design and implement solutions and monitor success. The Saco Watershed Collaborative Action Plan is a first step to identifying shared goals and priorities of a diverse group of stakeholders whose actions contribute to protecting the watershed. Key stakeholders have volunteered in 2017 to begin this process and continue through 2019. It will be important for the Collaborative Partners to engage in Community Outreach to promote implementation of the Action Plan Strategies. Stakeholder groups identified as important to reach out to include municipal officials, recreational users, farmers and private forested land owners, developers, land trusts, and more. It is especially important to include future generations of watershed stewards such as the school children and youth groups in the watershed.

Overview of State Water Quality Assessment Affecting the Waters in the Saco Watershed

The Clean Water Act (CWA) requires each state to submit two surface water quality documents to the U.S. Environmental Protection Agency (EPA) every two years.

Section 305(b) of the CWA requires submittal of a report called the “303(b) Report” describes the quality of its surface waters and an analysis of the extent to which all such waters provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water.

The Clean Water Act requires states to identify rivers, lakes, and streams that are too polluted to support safe fishing, swimming, drinking water, harvesting shellfish, and habitat for aquatic life and what pollutants are responsible. States must then develop and implement strategies to fix these pollution problems and restore clean water.

The 303(d) List includes surface waters that are impaired (i.e., do not meet water quality standards) or threatened by a pollutant or pollutant(s). The 303(d) list determines which rivers or lakes require a comprehensive water quality study (i.e., Total Maximum Daily Load) designed to meet water quality standards.

The data for each assessment unit is evaluated based on a state’s Consolidated Assessment and Listing Methodology (CALM). Surface waters are placed into categories that indicate whether they support certain “designated uses” (e.g., fishing, swimming). These categories range from “Attaining all designated uses” (e.g., supports all designated uses and no use is threatened) to “impaired or threatened for one or more designated uses”, and require a TMDL.

Assessment Units and Support for Designated Uses

Assessment Units form the basic unit of record for conducting and reporting water quality assessments for surface waters of the state. Within each unit, surface water quality is classified in terms of whether it supports certain “designated uses” (e.g., swimming, fishing, drinking water). Each assessment unit is assigned one of the following categories related to specific designated uses.

- **Fully Supporting:** A use is “fully supporting” if there is sufficient data or evidence for the core indicators to determine that the use is fully supporting and there is no other data or evidence indicating an impaired or threatened status.
- **Not Supporting:** A use is not supporting (i.e., impaired) if there is sufficient data or evidence to indicate impairment.
- **Insufficient Information:** This option is assigned to any use that has some, but not enough usable data or information to make a final assessment decision.
- **Not Assessed:** This option is assigned to any use which does not have any usable data or information to make the assessment a decision.

WATER QUALITY ASSESSMENT

For more details concerning state water quality assessment methodology and supported use determinations see New Hampshire’s Consolidated Assessment and Listing Methodology (CALM)
<https://www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm>

or the companion report in Maine (Integrated Water Quality Monitoring and Assessment Report)
<http://www.maine.gov/dep/water/monitoring/305b/index.htm>

Thatcher Brook Watershed Restoration in the Saco Watershed

In the Saco Watershed, there is a small seven square mile subwatershed called the Thatcher Brook Watershed. The watershed is located within the municipalities of Biddeford and Arundel, Maine. Thatcher Brook is on Maine’s 303(d) list designated as an “urban impaired stream” by the Maine Department of Environmental Protection (DEP). Stream habitat and biomonitoring assessments completed by DEP found that Thatcher Brook did not support the aquatic macroinvertebrates that should be found in a Class B stream. Thatcher Brook is not yet listed as an Urban Impaired Stream in DEP’s Chapter 502. A stream is considered urban impaired if it fails

to meet state and federal water quality classifications due to the effects of stormwater runoff from impervious surfaces such as rooftops, parking lots and roads (Thatcher Brook Watershed Management Plan 2015).

The City of Biddeford, Biddeford Conservation Commission, the York County Soil and Water Conservation District, and many other partners are currently implementing conservation and water quality improvement goals of the Thatcher Brook Watershed Management Plan. The implementation of these goals is guided by the US Environmental Protection Agency's Clean Water Act, Section 319. Between 2017 and 2018, the Thatcher Brook Watershed Working Group will meet a total of five times to talk about further implementation of goals, present updates on city development, and carry out the education and outreach of conservation in Thatcher Brook Watershed. Through this Working Group, people are helping to restore water quality through implementation of the plan.

Assessment of Current Water Quality Monitoring in the Saco Watershed

As part of the work of the Collaborative for 2017, a watershed-wide assessment identified all of the water quality monitoring currently being conducted in the Saco Watershed. This information was synthesized into a data base posted as a resource on Basecamp. Basecamp is a web-based platform used to archive resources for the Saco Watershed Collaborative. Members of the Collaborative have access to all of the collected resources stored on Basecamp.

Engaging Stakeholders in the Saco Watershed Collaborative

Information exchange and networking are one of the most important aspects of the work of the Saco Watershed Collaborative. Individuals and groups whose work is aligned with the principles and goals of the Action Plan are welcome to join the Collaborative. The University of New England facilitates and supports stakeholder engagement in the Saco Watershed Collaborative using a variety of methods. A database of stakeholder groups working in the watershed has been created. This includes government organizations, land trusts, watershed groups and NGO's whose missions relate to clean water.

Archived resources can be found on Basecamp

UNE maintains a Basecamp site on line to archive documents and resources for all partner organizations. The Collaborative uses Basecamp to upload and view important documents, schedule events, and post ongoing research in the watershed. Partners are encouraged to share their own resources that they find helpful to the Collaborative. The continued development of the Collaborative's Basecamp resources will eventually produce a "one stop shop" resource for other organizations looking to build and expand their knowledge about the watershed and current stewardship activities. Examples of resources available on Basecamp include the database of water quality monitoring and stakeholder database, as well as minutes of all meetings, summary of field trips and photos from Collaborative events. Basecamp is available to all members of the Saco Watershed Collaborative. If you are interested becoming a member of the Saco Watershed Collaborative with access to Basecamp, please contact Emily Greene at egreene@une.edu.

Saco Watershed Collaborative Events are shared on Facebook and Twitter

The Collaborative has a social media presence that is connected to the University of New England's Facebook and independent Twitter account. To view the Saco Watershed Collaborative's pages, please visit

<https://www.facebook.com/UNESacoWatershedCollaborative/> and <https://twitter.com/SacoWC>

The Saco Watershed Collaborative Story Map orients people to the watershed

Stakeholders focusing on one aspect or location within the Saco Watershed can be unfamiliar with the entire 1,700 acre watershed. To orient stakeholders to the watershed a "Story Map" was created for the Saco Watershed Collaborative. Developed by Cassandra Elmer, a recent graduate of UNE, the story map uses a Geographic Information Systems (GIS) platform to educate users about the watershed. This online resource is

user-friendly and provides an excellent orientation to the watershed. This resource includes watershed and sub-watersheds boundaries, counties and towns in the watershed and the locations where water quality data is being collected. GIS resources will continue to be developed to support the work of the Collaborative.

The story map may be accessed through the following link:

<https://www.arcgis.com/apps/MapSeries/index.html?appid=c93060a0e54645d0aa83bc2991a6c4d2>

Four Action Strategies for the Saco Watershed Collaborative

The last section of the Action Plan contains four actions strategies that organize and track the work of the Collaborative. This section is an adaptable living document that organizes the work of the partner organizations, the documents that guide that work and metrics that will be used to track progress on goals. As new organizations join the Collaborative and as projects receive funding these strategies are easily adapted and can be prioritized to reflect initiatives important to members.

The activities of the Saco Watershed Collaborative are organized within four Action Strategies:

1. Engage and inspire governments, organizations and citizens to take action to sustain water in the Saco Watershed.
2. Protect water quality through pollution prevention and restoration of degraded waters in the Saco Watershed.
3. Support land conservation and stewardship to protect water quality in the Saco Watershed.
4. Promote and enforce Low Impact Development (LID) strategies, stormwater and wastewater best management practices (BMPs), and land use development that protects water.

Action strategies include issues being addressed, lead organizations, partners, funding, guiding documents, activities, and mechanisms for measuring progress. The Action Strategies in this plan were developed with input from the 2017 Steering Committee based upon current priorities of each organization.

New members to the Collaborative in 2019 can use these four strategies to identify ways that the work of their organization contributes to the strategies. New members may also identify ways that the work of their organization brings new approaches that helps the Saco Watershed Collaborative accomplish goals for clean water.

The Saco Watershed Collaborative welcomes new members. If you would like to learn more about the Collaborative and how you can become part of the stewardship network active in the watershed contact:

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ACTION STRATEGY - 1

ENGAGE AND INSPIRE GOVERNMENTS, ORGANIZATIONS AND COMMUNITY MEMBERS TO TAKE ACTION TO SUSTAIN WATER IN THE SACO WATERSHED.

Protecting sources of clean and safe drinking water quality is the common goal for the members of the Saco Watershed Collaborative. Effective actions transcend political boundaries and require the work of a diverse group of professionals, organization and citizens. The Saco Watershed Collaborative will continue to share information and pursue opportunities for cooperation and collaboration in support of common goals.

Issues Addressed:

- Stakeholder Engagement
- Watershed Education

Lead Organizations:

- Saco River Corridor Commission
- Maine Water Company
- Natural Resources Conservation Service
- Poland Spring
- University of New England
- York & Cumberland County Soil and Water Conservation Districts
- Wells National Estuarine Research Reserve
- ME Department of Environmental Protection
- NH Department of Environmental Services
- Environmental Protection Agency

Partners:

- Saco Watershed Collaborative members
- Local businesses
- Non-profit organizations
- Water utilities

Funding:

- Individual Organizations
- Grants

Critical Guidance:

- Saco Watershed Collaborative Action Plan
- Maine Land Trust Network <http://www.mltn.org/resources/information-resources.php>
- *Maine and New Hampshire water quality guidelines*
- Saco River Corridor Commission legislation and policies.

ACTIVITIES

- 1) Identify and share approaches for watershed stewardship that are effective and efficient.
- 2) Distribute water quality monitoring data from the headwaters to the sea.
 - Collect and publish information about water quality and quantity.
 - Establish standard monitoring guidelines for water quality.
 - Develop strategies for sharing water quality results and trends.
- 3) Engage municipalities, youth conservation organizations, and other stakeholder groups in data collection and distribution of results.
 - Link active community conservation and engagement to a healthy watershed
- 4) Recognize and support economic activity and watershed livelihoods dependent upon clean water.
 - Agriculture, canoe liveries, breweries, local businesses, water utilities, academic institutions, federal, state, nonprofit organizations, and increase awareness of the connection between clean water and job investments in communities.
- 5) Develop a clean water score/report card/green certification program that synthesizes key elements into a community-specific assessment demonstrating the condition of the watershed.
- 6) Provide education for customers of public water systems to develop knowledge of the value of protecting the Saco Watershed.

MEASURING PROGRESS

Outputs

- Monitoring reports on water quality and quantity.
- Trainings and workshops provided by Saco Watershed Collaborative volunteers or partner organizations.
- Website and other sources of social media as a public resources.
- Organize partnership outreach workshops to advance water protection goals in the Saco Watershed.
- Develop a shared clean water marketing message.
- E-newsletter.

Outcomes

- Increased collaboration among groups, organizations and towns within the Saco Watershed.
- Expanded knowledge about healthy watersheds and source water protection in the Saco Watershed.
- Program Assistance to protect water quality increases in the Saco Watershed.

Implementation Metrics

- Number of outreach events/workshops presented each year.
- Water Quality Data communicated to residents and community leaders.

ACTION STRATEGY - 2

PROTECT WATER QUALITY THROUGH POLLUTION PREVENTION AND RESTORATION OF DEGRADED WATERS IN THE SACO WATERSHED.

Public drinking water sources are vulnerable to contamination by easily identifiable “point” source pollution (for example, landfills, junkyards, waste storage lagoons, leaking underground storage tanks) as well as “non-point” source (NPS) pollution such as runoff from parking lots, roads, fertilized lawns, and farms. Potential contamination source inventories are often conducted to assess potential threats from point sources. These inventories serve as critical element of a source water protection plan. Additional land-use analysis and field surveys can identify additional point and NPS areas that may contribute to pollution to drinking water sources.

Issues Addressed:

- Stakeholder Engagement
- Groundwater and Surface water protection
- Pollution Prevention
- Habitat Restoration
- Source Water Protection
- Stormwater Management
- Wastewater Treatment

Lead Organizations:

- Maine CDC Drinking Water Program
- ME Department of Environmental Protection
- NH Department of Environmental Services
- Natural Resources Conservation Services
- Biddeford Conservation Commission
- Environmental Protection Agency
- US Forest Service
- North Conway Water Precinct
- Poland Spring
- Wells National Estuarine Research Reserve
- York & Cumberland County Soil and Water Conservation Districts

Partners:

- Biddeford High School
- Municipalities
- Water utilities
- Water extractors

Funding:

- Individual organizations
- Grant funding for special projects
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Critical Guidance:

- Saco River Drinking Resiliency Project by Southern Maine Planning and Development Commission <http://www.smpdc.org/index.php/17-map/183-saco-river-drinking-water-resiliency-project>

ACTIVITIES

- 1) Pursue cleanup activities at identified contamination sites to prevent degradation of groundwater and surface water.
- 2) Conduct watershed surveys to document and assess sources and potential sources of contamination and illicit discharges to groundwater or surface water.
- 3) Reduce and mitigate nonpoint source pollution.
 - Prioritize sites for restoration
 - Improve watershed habitat and biodiversity.
- 4) Identify, conserve and restore aquatic habitat in the Saco Watershed.
- 5) Provide information to private land owners through technical assistance on Best Management Practices and sustainable forestry and farming.
- 6) Collect and distribute high quality monitoring data from the headwaters to the sea.
 - Collect and publish information about water quality and quantity
- 7) Conduct floodplain vulnerability assessment to guide restoration and conservation of riparian areas vulnerable to increased frequency and intensity of floods

MEASURING PROGRESS

Outputs

- Identification and prioritization of existing sources and potential sources of surface water and groundwater contamination/illicit discharges.
- Identification and prioritization of existing erosion areas within the Saco Watershed.
- Mapping and prioritization of floodplain vulnerability and conservation strategies to protect communities and water.
- Education and outreach programs to prevent pollution.
- Inventory of culverts and flood risk assessments done by towns.

Outcomes

- Nonpoint source pollution reduction and mitigation demonstration projects in source water protection areas.
- Provide adequate supply of safe drinking water to communities in southern Maine and the Saco Watershed.
- Reduction of erosion and flood damage.
- Policy changes.

Implementation Metrics

- Annual water quality monitoring by Saco River Corridor Commission.
- Progress made in Thatcher Brook Watershed—how it has changed.

ACTION STRATEGY - 3

SUPPORT LAND CONSERVATION AND STEWARDSHIP TO PROTECT WATER QUALITY IN THE SACO WATERSHED

The Saco Watershed Collaborative supports the conservation and stewardship of land that produces clean and safe drinking water.

Issues Addressed:

- Land Protection
- Source Water Protection
- Stakeholder Engagement

Lead Organizations:

- Maine CDC Drinking Water Program
- ME Department of Environmental Protection
- Maine Water Company
- Natural Resources Conservation Service
- NH Department of Environmental Services
- Poland Spring
- Saco River Corridor Commission
- Environmental Protection Agency
- York & Cumberland County Soil and Water Conservation Districts
- US Fish and Wildlife
- US Forest Service

Partners:

- Land Owners
- Land Trusts
- Municipalities
- Nonprofit organizations
- Water Suppliers

Funding:

- Individual organizations
- Grants (USFS, NRCS)

Critical Guidance:

- Maine Land Trust Network <http://www.mltn.org/documents/mchtconsoptions.pdf>

ACTIVITIES

1) Create and implement source water protection plans for public water systems and other significant water withdrawals

2) Identify source water protection areas for public drinking water supplies and significant springs as priority areas to protect and sustain through land conservation.

3) Identify critical habitat or species protection areas that overlap with source water protection.

4) Promote voluntary BMPs with private working land conservation, sustainable forestry and agricultural practices with landowners.

5) Publicize and celebrate significant land conservation activities in the Saco watershed. Centralize web resources.

6) Deliver United States Department of Agriculture (USDA) conservation programs by implementing on the ground conservation practices to improve soil and water quality.

- Provide farm bill programs that protect wetlands, tributaries, uplands, and wildlife that use private lands.
- Mapping land trusts in watershed.

7) Provide outreach and technical assistance to municipalities to help them adopt local regulations that maintain substantial buffers of natural vegetation along streams and waterways.

8) Conduct floodplain vulnerability assessment to guide restoration and conservation of riparian areas vulnerable to increased frequency and intensity of floods.

MEASURING PROGRESS

Outputs

- Priority land protection areas integrated into land trust, water suppliers, and municipal conservation plans.
- Outreach to local decision-makers through workshop ambassadors that focuses on the highest priority conservation and maintenance areas.
- NH DES GIS data to add?

Outcomes

- Protection and/or maintenance of lands that incorporates highest priority drinking water source protection areas with local and regional conservation priorities.
- Well-managed sustainable forests.
- Recognition that the Saco as a shared resource with multiple and compatible uses.
- Funding for land conservation groups within the Saco Watershed.
- Sustain the environmental, recreational and economic stability of our region as related to water quality.
- Private landowners engage in conservation programs and activities.
- Target forestry programs to educate and promote landowner participation in the Saco Watershed.

Implementation Metrics

- Source water protection areas that are protected through land ownership, conservation easement or ordinance.
- Municipalities that have adopted a groundwater protection ordinance.
- Number of residents, agencies, groups, non-governmental organizations and units of government in Saco Watershed that participate in outreach workshops.
- Conservation practices and activities on the ground that enhance and improve natural resource protection across the Saco Watershed.

ACTION STRATEGY - 4

PROMOTE AND ENFORCE LOW IMPACT DEVELOPMENT (LID) STRATEGIES, STORMWATER AND WASTEWATER BEST MANAGEMENT PRACTICES (BMPs), AND LAND USE DEVELOPMENT THAT PROTECT WATER.

As population and development increase in the region, the adoption of LID technologies, stormwater and wastewater BMP's will help protect the quality and quantity of drinking water by reducing the volume of stormwater and pollution leaving a given site. There are on-going efforts with the Saco Watershed to promote and install LID technologies, stormwater and wastewater BMP's as the current standard of practice for new development and re-development projects. Improved local land-use development regulations that require and incentivize LID practices are a top priority for preventing water pollution as the region becomes more developed.

Issues Addressed:

- Low Impact Development (LID)
- Nutrient pollution
- Pollution Prevention
- Stormwater Management
- Drinking Water
- Source Water Protection
- Land Protection for water quality
- Stakeholder Engagement
- Groundwater Protection

Lead Organizations:

- City of Biddeford
- York & Cumberland County Soil and Water Conservation Districts
- Brookfield Energy
- Maine Water Company
- Municipalities
- Land owners
- North Conway Water Precinct
- Saco River Corridor Commission
- Waste water treatment plants

Partners:

- Developers
- Forestry operators
- Farmers
- Land owners

Funding:

- Individual organizations

Critical Guidance:

- Saco River Corridor Act <http://www.mainelegislature.org/legis/statutes/38/title38ch6sec0.html>
- *Maine Shoreland Zoning*
- *Source Water protection regulations in Maine and NH*

ACTIVITIES

- 1) Conduct and sponsor field trips and trainings to showcase examples of LID and stormwater and waste water BMPs in the Saco River Watershed.
- 2) Develop and communicate LID model ordinances and regulations.
- 3) Support public water systems on projects to build and renovate infrastructure, and implement source protection activities.
- 4) Maintain and enhance fisheries and water quality.
- 5) Promote and enforce land use regulations that maintain and protect water quality.
- 6) Promote BMPs and innovation in stormwater management.
- 7) Promote BMPs and innovation in wastewater treatment.

MEASURING PROGRESS

Outputs

- Outreach campaign to municipal staff, boards and developers on adopting LID technologies and stormwater BMPs.
- Stormwater utility feasibility studies.
- List of LID practitioners that work within the watershed.
- Outreach and technical assistance to local decision-makers and communities in the watershed on adopting regulations/ordinances for drinking water protection.

Outcomes

- Prevention of pollution loading into the Saco River Watershed.
- Adoption of LID technologies and stormwater BMPs in each municipality.
- Improved local development regulations that require and incentivize the use of LID and best stormwater management practices.
- Land being developed with minimal impact to water quality.
- Local government adoption of regulations for drinking water protection and protection of healthy stream corridors.

Implementation Metrics

- Partners identify and share measurable units and report to collaborative milestones database.

Appendix I.

Field Trips in 2017

Discover the Headwaters Success Stories Tour May 8

This field trip started in the upper reaches of the Saco River headwaters. Participants had the opportunity to see and hear the success stories from projects undertaken by the Upper Saco Valley Land Trust and the North Conway Water Precinct.

Saco Fish and Dam Passage Tour July 27

Participants got to see a few other dams located along the Saco between Biddeford and Saco, Maine. Our hosts from Brookfield Energy and US Fish and Wildlife demonstrated how they have worked together to continue increasing fish passage at dams along the Saco River.

Saco Estuary Boat Tour August 7

Starting at the mouth of the Saco River near UNE, participants learned what the different development and conservation plans were for the Saco River.

Poland Spring Tour August 25

Participants traveled to a few different spring sites to learn about how Poland Spring was conserving land and taking care of the springs for purpose of drinking water.

Natural Resources Conservation Service (NRCS) Tour September 22

NRCS hosted a tour that demonstrated how voluntary land conservation programs can work well between land owners and organizations such as NRCS and the Environmental Protection Agency.

Maine Water Company Tour November 2

Rick Knowlton, president of Maine Water Company, gave participants a tour of the Maine Water's drinking water treatment facility. With 40,000 customers, we learned how the Company is able to meet the needs of each resident and business.

White Mountains National Forest (WMNF) Headwaters Tour December 6

Jim Innes, Saco District Ranger for the WMNF led a tour showcasing watershed management issues including recent flood damage and floodplain impacts within the National Forest and in adjacent communities.

Field Trips in 2018

River Bend Farm Tour April 30

Drew Dumsch, Founder of The Ecology School talked about the sustainability challenges and achievements in the renovation of TES's new location at River Bend Farm in Saco, Maine. TES is currently going through the most rigorous environmentally-friendly building standards for sustainability and will be featured as a living laboratory for students.

Massabesic Experimental Forest (MEF) Tour June 12

Karl Honkonen and staff from the Forest Service led participants on a tour of the MEF in Lyman, Maine, and the different forest management plans they have done after 40% of the forest was lost in 1947, and in the early 2000's when a small group of Forest Service staff revitalized the MEF management efforts.

Silver Maple Forests Floodplain July 13

Justin Schwalin from the Maine Natural Areas Program (MNAP) led participants on a 5.5-mile round-trip hike into the silver maple floodplain of the Saco River in Fryeburg, Maine. Conservation and management strategies for the silver maple forest and other flora were discussed as well as challenges to management strategies.

Saco Estuary Boat Tour August 14

Still one of the most popular field trips, participants were led on a 5-mile estuary boat tour of the Saco River from the mouth of the river to the dam that sits between the twin cities of Biddeford and Saco, Maine. Tour guides addressed the importance of the Saco River and the estuary for wildlife, vegetation, aesthetic value, development on the river, research opportunities with students of UNE and more.

Saco River Canoe and Paddle Tour September 14

Allison Foran and Gene Bergoffen from the Lovewell Pond Association, in partnership with Deanna Morris formerly with the Saco River Recreation Council, led a Saco River tour starting in Fryeburg, Maine. The guides discussed the work that they are doing related to invasive species identification and removal, challenges to managing recreation, cleanup efforts on the river, and outreach and education throughout their area of the watershed.

White Mountains National Forest Tour October 12

The last field trip of the year was in the White Mountains National Forest in New Hampshire. Jim Innes, our guide from the Forest Service led us through the White Mountains discussing management plans for flooding and recreation, debris removal, infrastructure repairs to roads and bridges, and outreach and education in the community.

Appendix II.

Steering Committee Meetings in 2017

Planning Meeting at Saco River Corridor Commission June 14

Participants discussed goals of the Collaborative how a steering committee would benefit the Collaborative.

1st Steering Committee Meeting at UNE July 7

The first of three steering committee meetings, participants identified what they wanted to achieve for the first year of the Collaborative.

2nd Steering Committee Meeting at Saco River Corridor Commission August 24

Participants discussed the results of two subcommittee calls. The first one was about how the Collaborative will continue to make decisions as a group, and the second one was about how criteria for membership in the Collaborative might be determined.

3rd Steering Committee Meeting at North Conway Water Precinct September 27

Participants provided input on the draft action plan at the last steering committee meeting for 2017.

Healthy Watershed Grant Application Meeting at UNE December 14

Participants discussed the Healthy Watershed Funding opportunity as a way to secure resources to implement the Saco Watershed Collaborative Action Plan.

Steering Committee Meetings in 2018

Meeting at River Bend Farm April 30

The kick off meeting for 2018 welcomed Dalyn Houser, the new Executive Director for the Saco River Corridor Commission. At this meeting, water quality data and the monitoring of water quality sites and the creation of a steering committee for 2018 were discussed. Participants heard about the work that the Natural Resources Conservation Service (NRCS) and the City of Saco were doing in the watershed, as well as an update on the activities with the York County Soil and Water Conservation District.

1st Steering Committee Meeting at UNE July 18

Recap of the 2018 progress on the Action Plan and recommendations from the *Collaborative Assessment* that was done by the University of Michigan Master's students. What roles can organizations play in the Collaborative based on the recommendations of the *Collaborative Assessment*? The creation of subcommittees to focus on priorities to sustain the Saco Watershed Collaborative.

2nd Steering Committee Meeting at UNE August 20

Discussion of the sustainability of the Collaborative after December 1st. The budget to support the Collaborative was discussed, other grant opportunities and which organization would be the agent for the Collaborative for 2019 as Christine Feurt is resuming her normal teaching course load for 2019.

3rd Steering Committee Meeting at Saco River Corridor Commission September 27

Overview of current SRCC work and challenges. Special presentation by Drew Dumsch, Founder of The Ecology, on updates to River Bend Farm renovations. Updates from partners on work in the watershed. Discussions of grant opportunities, Drinking Water Resilience Project study done by Southern Maine Planning and Development Commission and the update from the second steering committee meeting on the sustainability of the Collaborative after December 1st.

Appendix III.

Membership of the Saco Watershed Collaborative Steering Committee (2017)

City of Biddeford	Retired Head of Maine CDC Water Program
Cumberland County Soil and Water Conservation District	Saco River Corridor Commission
Environmental Protection Agency	University of New England
FB Environmental	Upper Saco Valley Land Trust (<i>through August 22nd</i>)
Maine CDC Control Drinking Water Program	US Forest Service
Maine Water Company	US Fish and Wildlife Service
New Hampshire Department of Environmental Services	USDA Natural Resources Conservation Service, Maine
North Conway Water Precinct	Wells National Estuarine Research Reserve
Poland Spring	York County Soil and Water Conservation District

Membership of the Saco Watershed Collaborative Steering Committee (2018)

City of Saco	The Ecology School
Cumberland County Soil and Water Conservation District	University of New England
Maine CDC Drinking Water Program	US EPA – Region 1
Maine Water Company	US Forest Service
Poland Spring	US Senator Angus King's Office
Retired Head of Drinking Water Program	USDA Natural Resources Conservation Service
Saco River Corridor Commission	Wells National Estuarine Research Reserve

Appendix IV.

Idea Catcher from the Annual Meeting November 30, 2018.

Each row and their corresponding column represent responses from one individual. These ideas were captured during the Annual Meeting on November 30, 2018 and will help guide the Collaborative in setting new goals and coming up with strategic ways in which to reach those goals in 2019.

Idea Catcher for 2019		
Describe how your work or the work of your organization contribute to any of the action strategies for the Saco Watershed.	What are your priority issues for 2019 that could benefit from collaborating with partners in the SWC?	Are there issues in the Saco Watershed that would benefit from collaborative action that seem to be missing from the Action Plan?
1) View my role as working to move legislation including agency budgets to support organization activities.	NA	NA
2) Action strategies 1 through 3: Assisting private land owners to improve resources on their land.	Always working on outreach – getting more people to voluntarily improve conservation	NA
3) Everything we do is related to the action plan.	Watershed restoration work. We could benefit from partnerships with state and federal agencies. Also project work with nonprofits such as Trout Unlimited.	NA
4) One UNE class talks about the importance of clean water and how stormwater run off contributes to pollution and ways to help slow/stop the pollution.	Seeing if wildlife get stuck in the stormwater drains, and they do, how to prevent that.	NA
5) DEP regulatory programs, construction permits- stormwater, natural resource impacts and industrial stormwater/MS4 programs, watershed programs, assisting with surveys, 319 grants, etc.	Resilience planning, work with towns to start adaptation planning to protect infrastructure from climate change impacts (Stream Smart). Also local planning for conservation water quality outreach to watershed communities, sharing info, hear about town priorities.	NA
6) Education about conservation: learning to fish gives people a reason to care about habitat.	Hiram Dam: fish passage at minimum, removal if possible, education on all levels. There are many river obstructions on the Saco.	NA
7) Work with local municipalities, volunteers to enforce the SRCC Act, shoreland	Conservation through resource protection districts, 100-year floodplain. Stormwater/erosion	NA

zoning and provide information to the towns to make informed decisions on development that may impact us. We work with citizen volunteers who work to represent the interests of their towns. Water quality monitoring program, and BMPs/regulation of septic systems, etc.	and sediment BMPs, Low Impact Development (LID) strategies/restrictions of size of structure in shoreland zone rules and regulations, etc. Analysis of our water quality data over 18 years. Through rules, regulations and standards.	
8) Engagement: our work includes identifying, funding and gathering ideas and feedback on specific watershed projects. We directly purchase and control land use directly around drinking water supplies (conservation).	Identifying key watershed issues, public education and conservation/watershed protection.	NA
9) Forest management=water quality protection, increase private land owners that have forest management plans.	Raise awareness of Saco Watershed issues, canoe trip like Source to Sea. Increase collaboration with new partners who are not engaged. Showcase BMP success stories and who is doing what.	Need press/media presence.
10) Engaging municipalities to take action through raising awareness/outreach, and changing land use management strategies and regulations, and stormwater pollution prevention.	Identifying/facilitate transition to new “backbone” organization.	“Sustaining the Collaborative” fundraising goals and building realistic budget to achieve activities.
11) US EPA Clean Water Act, Section 319 Nonpoint Source Pollution grant to Thatcher Brook in Biddeford. Phase 1, grant to fund through 2020. Phase 2, grant to begin this winter. Thatcher Brook is an impaired stream.	NA	Analysis of river water quality data to look for trends and hotspots. Sharing of results in future year, in a public accessible way.
12) Not currently involved with watershed issues, but my experience working on river and watershed issues in Maine are relevant and I’d be interested in becoming more informed and involved.	NA	Habitat connectivity, maybe habitat restoration. Climate resiliency.
13) BMP inspections (I.e. potential contamination source inventory and management. Contributes to action strategy 4.	Conduct BMP inspections and perform targeted BMP training in “vulnerable” areas. Could build on FB Environmental’s	Mitigate the potential impacts of heavy recreational use.

Land conservation to protect drinking water sources. Our program offers grants to conserve land to protect drinking water sources.	work by providing training and assistance to volunteers in the area regarding conducting inspections. Conway commercial/industrial development.	
14) I'm a community advocate for river health in Buxton, ME.	Recreation plan, stormwater management, community involvement (land trusts especially).	NA
15) Kezar Lake Watershed Association monitoring (online). Upper Saco Valley Land Trust aquifer protection.	Drinking water protection, land conservation funding sources and partners. Lake water quality monitoring and protection.	Engaging the business community. Golf courses, private foresters, other businesses that manage land are often open to opportunities to better protect water quality.
16) Monitoring water quality and data collection, use.	Better understanding of water quality data integration and reporting. Identifying water quality serious gaps and problem areas.	The issues are not missing, but a sense of key priorities. What are our most pressing problem? How do we find them (create a dashboard)? How can we focus on resources to attack the problem? How can we organize members to join the focused attack? Try to avoid being a mile wide and an inch deep.