

Saco Watershed Collaborative

ACTION PLAN

Sustaining the Saco for Future Generations



TABLE OF CONTENTS

SECTION I – INTRODUCTION	1
Sustaining the Saco River Watershed	1
Goals of the Saco Watershed Collaborative	1
The Need for the Saco Watershed Collaborative’s Action Plan	1
Purpose of the Action Plan	1
SECTION II – ABOUT THE COLLABORATIVE	2
History of the Saco Watershed Collaborative	2
Timeline for the Collaborative	2
Engaging Stakeholders in the Saco Watershed Collaborative	3
<i>Committees</i>	3
<i>Archived Resources</i>	3
<i>Saco Watershed Collaborative Events</i>	3
<i>Story Maps</i>	4
SECTION III – ABOUT THE WATERSHED	5
Overview of State Water Quality Assessment	5
Assessment Units and Support for Designated Uses	5
Thatcher Brook Restoration Work	5
Assessment of Current Water Quality Monitoring	6
SECTION IV – ABOUT THE ACTION PLAN	7
Four Action Strategies for the Saco Watershed Collaborative	7
<i>Action Strategy 1</i>	8
<i>Action Strategy 2</i>	9
<i>Action Strategy 3</i>	10
<i>Action Strategy 4</i>	11
APPENDIX I – FIELD TRIPS	12
APPENDIX II – STEERING COMMITTEE MEETINGS	13

Saco Watershed Collaborative Action Plan

Prepared by members of the Saco Watershed Collaborative Steering Committee

Released on November 4, 2021

Update prepared by Emily Greene

SECTION I - INTRODUCTION

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 currently provides drinking water for over 40,000 people across southern Maine. Nevertheless, the Saco River has the capacity to provide drinking water for populations in Southern Maine and the New Hampshire Seacoast.

Forests, shoreland buffers, wetlands, aquifers, small streams, lakes and ponds, and rivers are all part of the natural 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.

Goals of the Saco Watershed Collaborative

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

The Need for the Saco Watershed Collaborative's Action Plan

The 1,700 square miles of the Saco River Watershed include an ecologically diverse land area shared by the states of Maine and New Hampshire. The river is fed by the White Mountains National Forest, winds through North Conway, NH crossing into Fryeburg, ME, collecting tributaries from Ossipee, NH through Cornish and Hollis, ME before draining into the Saco Bay, a rich coastal ecosystem of regional and national importance.

Purpose of the Action Plan

The actions identified in this 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.

SECTION II – ABOUT THE COLLABORATIVE

History of the Saco Watershed Collaborative

The main priority of the Collaborative is source water protection. In December 2016, members of fifty-four organizations identified potential benefits of 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 volunteered in 2017 to begin this process and the number of stakeholders engaged has continued to grow through 2020. The Action Plan guides the work of these stakeholders and provides a framework for progress made and efforts in progress. Moving forward, community outreach will promote implementation of the Action Plan. Stakeholder groups identified as important in 2020 include municipal officials, recreational users, farmers and private forested landowners, and land trusts. It is especially important to continue to include future generations of watershed stewards, such as the school children and youth groups.

Timeline for the Collaborative

The University of New England (UNE) has been the convening organization for the Collaborative from 2016 to today. During this 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 determine the best model for sustaining the Collaborative. These discussions continued into 2019, resulting in two staff positions created: Outreach Coordinator and Project Manager.
- In 2019, the Saco Watershed Collaborative grew from thirty-four participating organizations to just over fifty in 2019. The Collaborative established four subcommittees to assist in achieving the goals and strategies of the Action Plan. Priority actions addressed in the Action Plan were identified by partners who attended the Annual Meeting. This direct input from participating organizations, in concert with the framework the Action Plan provides, continues to guide the staff and the direction for the Collaborative each year. Please view these links for a summary of 2019 SWC [Accomplishments](#) and [Committee updates](#).

In 2019, the Saco Watershed Collaborative also became a member of the Regional Conservation Partnership (RCP) [Network](#). Led by the [Highstead Foundation](#), the RCP Network is dedicated to convening organizations looking to create partnerships in their regions for long-term conservation initiatives in New England. Becoming a part of the RCP Network gives the Collaborative and its partners access to hundreds of organizations looking to share conservation knowledge, resources and strategies.

Engaging Stakeholders in the Saco Watershed Collaborative

The Collaborative engages individuals and groups in information exchange and networking by co-hosting field trips, committee and subcommittee meetings, workshops, video and conference calls, and hosting an Annual Meeting to celebrate the accomplishments that occurred throughout the year.

Committees

Individuals and organizations whose work is aligned with the principles and goals of the Action Plan are welcome to join the Collaborative and its committees:

- **Steering Committee** (with standing conditions) includes all convening partners, members, stakeholders, etc. that uphold the goals of the Collaborative and the purposes of the Action Plan. This Committee is synonymous with “the Collaborative.”
- **Data and Analysis Committee** provides recommendations for new, and maintain an inventory of existing, data sets (GIS, water quality, etc.) to properly inform the Collaborative’s Action Strategies and stakeholders.
- **Education and Outreach Committee** develops and compiles consistent messages and branding for the Saco Watershed and the Collaborative.
- **Sustainability Committee** ensures the long-term viability and sustainability of the Collaborative.
- **Stewardship Committee** is being launched in 2020 to build a community consciousness within the Watershed that supports long-term land conservation and management of important natural resources.

A database of stakeholder groups working in the watershed has been created. If interested in learning who our partners are, please contact Emily Greene at egreene@une.edu or visit our [website](#). This includes government organizations, land trusts, watershed groups and NGO’s whose missions relate to clean water. In order to engage and increase stakeholder participation, there are a variety of ways in which the Collaborative accomplishes this:

Archived Resources

UNE maintains a Basecamp site online 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

The Collaborative meets as a large group four times a year, once in each quarter, with the last meeting being the Annual Meeting – usually the first week of December each year. The Committees generally meet as needed to advance the topic-specific efforts in between the quarterly meetings. At least four Field Trips are organized and coordinated at various sites throughout the Watershed each year.

The Collaborative has a social media presence that is connected to the University of New England’s [Facebook](#) page and independent [Instagram](#) account. The Collaborative created a website in 2019 and debuted it in January 2020, please visit the new website at www.sustainthesaco.org.

Storymaps to Help Orient Stakeholder to the Saco 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, two “Storymap” were created for the Saco Watershed Collaborative. The first Storymap 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 Storymap may be accessed [here](#).

The second Storymap created by Xander Vitarelli, a student intern from UNE who worked with the Collaborative in spring of 2021, tells the story of the Saco River, how it was used historically and how it is protected and utilized today. The Storymap may be accessed [here](#).

SECTION III – ABOUT 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 (USEPA) 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 Restoration Work in the Saco Watershed

In the Saco Watershed, there is a small tributary in Biddeford with a seven square mile subwatershed called the Thatcher Brook Watershed. The watershed, located within both Biddeford and Arundel, Maine, is on Maine’s 303(d) list designated as an “urban impaired stream” by the Maine Department of Environmental Protection (DEP) 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). Stream habitat and biomonitoring assessments completed by DEP in 2004 found that Thatcher Brook did not support the aquatic macroinvertebrates that should be found in a Class B stream.

The City of Biddeford, Biddeford Conservation Commission (BCC), the York County Soil and Water Conservation District, and many other partners are currently implementing conservation and water quality improvement goals in the DEP-approved [Thatcher Brook Watershed Management Plan](#). The implementation of these goals is guided by the USEPA's Clean Water Act, Section 319. Between 2017 and 2021, the Thatcher Brook Watershed Working Group held a series of working group meetings to plan further implementation of goals, present updates on City development, and carry out the education and outreach of conservation in Thatcher Brook Watershed. Through this continuing Working Group, people are helping to restore water quality through implementation of the plan and its structural and non-structural best management practices.

Several projects were completed within the Phase I grant from DEP's Non-Point Source (NPS) Program, including habitat restoration projects near Kohl's and Southern Maine Healthcare and a soil filter installation on Morin Street in the Biddeford Industrial Park. The BCC also developed an educational program with high school students where they taught sampling protocols within Thatcher Brook and worked with UNE students to build knowledge and information about the watershed within the Biddeford community. All work performed within Phase I is summarized in the Final Project Report available on the City of Biddeford's [website](#).

Phase II work is focused on the installation of three soil filters along Morin Street in the Biddeford Industrial Park in 2020. After the installation of the soil filters, a field trip with the Saco Watershed Collaborative was planned for 2021 in Industrial Park to highlight the results.

Following Phase II work into 2021, to increase awareness of the Brook and the ongoing water quality improvement efforts, the project team also intends to distribute educational brochures that address ordinance changes taking place in Biddeford as a result of this work, collaborate with UNE environmental students to create a video project promoting the work, and make a presentation at an upcoming Biddeford Planning Board meeting. A Phase III grant application was submitted and approved to DEP's NPS Program in 2021.

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 web-enabled Storymap resource on Basecamp, and more recently on the Collaborative's [website](#). 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, and much of this data is also available on the website under the *RESOURCES* tab.

Working with the Data and Analysis Committee using the information from 2017, USEPA dedicated hundreds of hours merging available water quality data from Maine and New Hampshire. Over ninety thousand lines of data have been compiled to create a comprehensive database of water quality monitoring locations, as well as parameters from these monitored sites in Maine and New Hampshire. Please contact Emily Greene for more information on this water quality database at egreene@une.edu.

SECTION IV – ABOUT THE ACTION PLAN

Four Action Strategies for the Saco Watershed Collaborative

The last section of the Action Plan contains four actions strategies that are used to organize and track the work of the Collaborative. This section is an adaptable living document that organizes the work of the partner organizations, the framework 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.

New members to the Collaborative 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 partner organizations. 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:

Project Manager

Robyn Saunders
Principal / Owner
ATTAINING: sustainable solutions
robyn@attaining.me
207-233-6305

Program Managers

Drs. Christine Feurt & Pam Morgan
Dept. of Environmental Studies
University of New England
cfeurt@une.edu 207-602-2834
pmorgan@une.edu 207-602-2227

Outreach Coordinator

Emily Greene
University of New England
egreene@une.edu
207-330-0604

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:

- 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*

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

Critical Guidance:

- Saco River Drinking Resiliency Project by Southern Maine Planning and Development Commission <http://www.smrpc.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

- 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
- 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/mchtconsolutions.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
- 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

Stakeholder Engagement Field Trips in 2021

*Field trips were mostly located in southern Maine due to COVID travel restrictions and staff availability.

Field trips are conducted to demonstrate the types of conservation work that is being done throughout the Saco River Watershed. From wildlife conservation, habitat restoration, drinking water and stormwater management, managing recreation, ecological education, and more, people are encouraged to join the field trips to learn about what is happening and how they can be a part of these efforts.

The Ecology School Tour at River Bend Farm in Saco, ME

The newly finished campus of the Ecology school. The Ecology School has been working to achieve the Living Community Standards. For more information on how they accomplished their goal, please visit their [website](#).



Saco Estuary Boat Tour in Biddeford and Saco, ME

Every year, the University of New England hosts a boat tour that travels the five-mile estuary starting at UNE, reaching Cataract Dam in Biddeford and Saco, and ending back at UNE. Guest speakers typically range from anadromous fish restoration, stormwater management and current research that is going on at UNE with students and professors.



Thatcher Brook Watershed: Site Walk to Morin Street Soil Filters in Biddeford, ME

Earlier in 2020 and 2021, soil filters were installed in Industrial Park of Biddeford, Maine. These soil filters are meant to help maintain and increase water quality of Thatcher Brook Watershed, a smaller tributary of the Saco River Watershed, by catching stormwater runoff that might contain contaminants or chemicals.



Maine Water Company Tour in Biddeford, ME

Though this tour is offered periodically, new members, UNE professors, and folks from the Saco Salmon Restoration Alliance and Hatchery toured the facility. The main purpose of this tour was to see if the old (current) treatment facility would be a good fit for a larger hatchery operation in addition to having projects that UNE students and professors could station at the facility. The construction of the new drinking water treatment facility should be finished and fully operational by 2023.



Saco River Community Walk in Saco, ME

Community members from the Saco Watershed were encouraged to learn how the City of Biddeford and Saco have been working together to bridge efforts in sustainable economic development (affordable housing, creating the Saco River Walk for residents, demonstrating the benefits of responsible recreation on the Saco River, and more).



Saco Lake in North Conway, NH

After the Steering Committee Meeting in September in the White Mountains, attendees were able to go on a field trip to the headwaters at Saco Lake. Folks learned about the trail maintenance and how the US Forest Service managed over-recreation during the pandemic.



APPENDIX II – STEERING COMMITTEE MEETINGS

Steering Committee Meetings in 2021

To see a full list of virtual Steering Committee meetings and minutes in 2021, please visit our [website](#).