The Saco Watershed Collaborative: Working to Sustain the Saco

Maine Water and Sustainability Conference
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Collaborative Learning to build watershed partnerships

2003-2018

Sustainability Science to Link Social and Ecological Systems

2009 - 2015

Stakeholder Engagement to Develop the Saco Watershed Collaborative

2016 - 2018

Saco Watershed

Applying the Collaborative Learning Approach with Community Based Ecosystem Management to Southern Maine Watersheds

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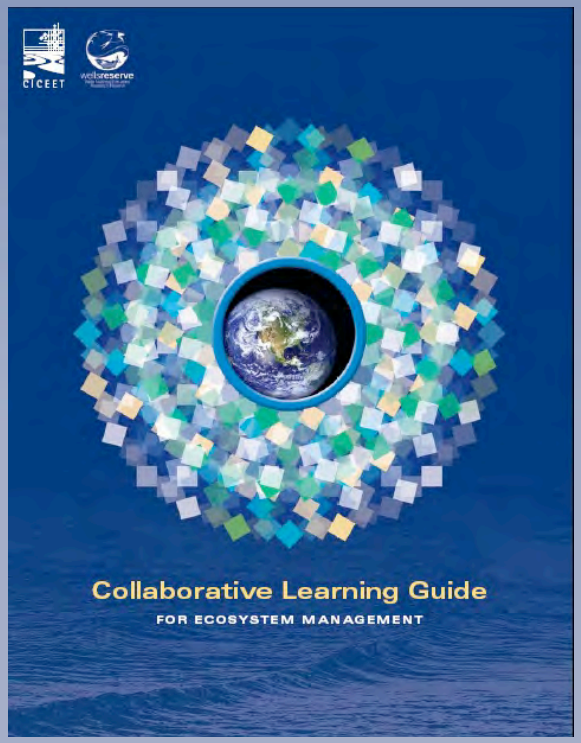
What is Collaborative Learning?

Working Through Environmental Conflict, The Collaborative Learning Approach
By Steven E. Daniels and Gregg B. Walker (2001)

"A framework and set of techniques intended for multiparty decision situations… A means of designing and implementing a series of events to promote:

Creative thought,
Constructive debate and the
Effective implementation of proposals that the stakeholders generate."

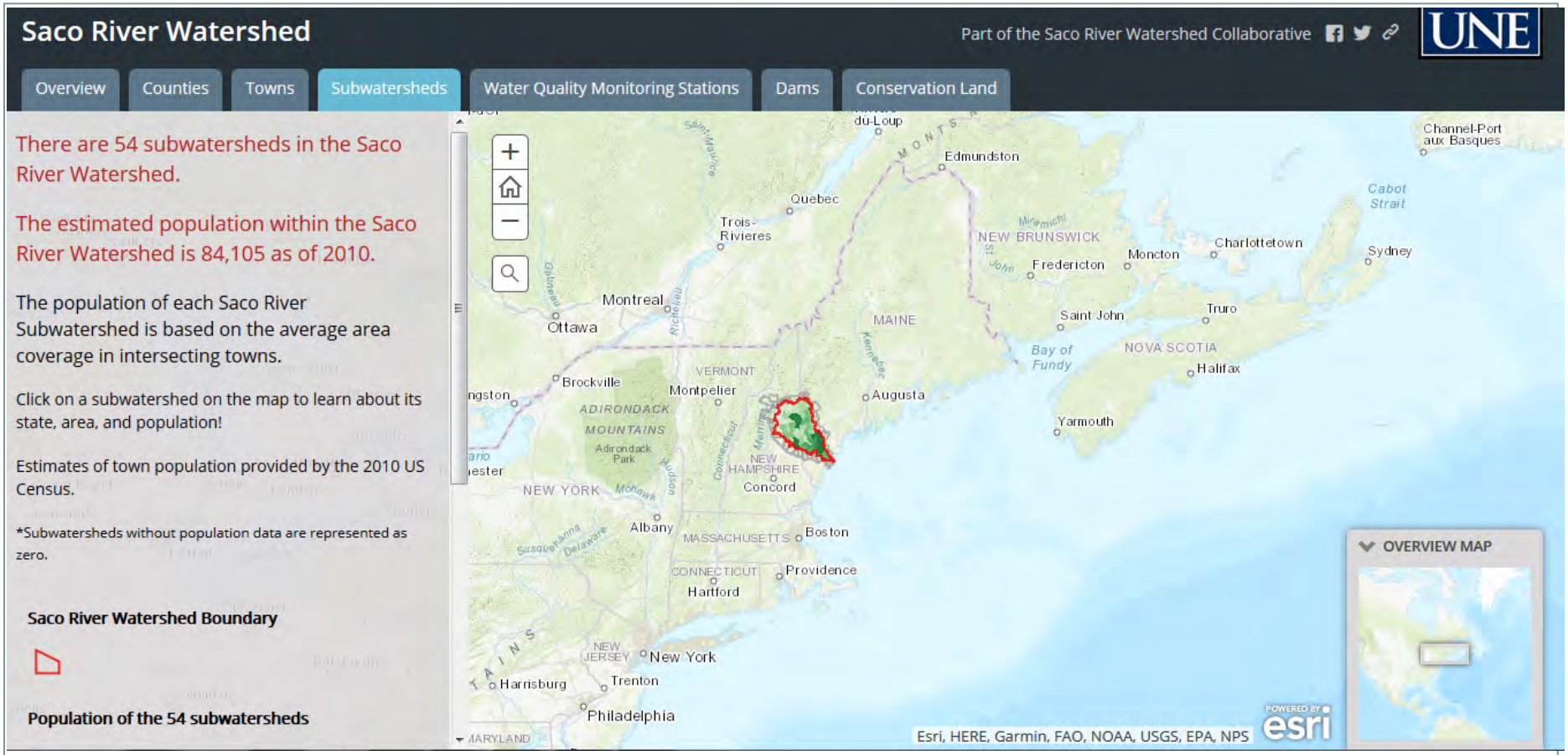
Theoretical Grounding: Systems Thinking, Conflict Resolution, Adult Learning



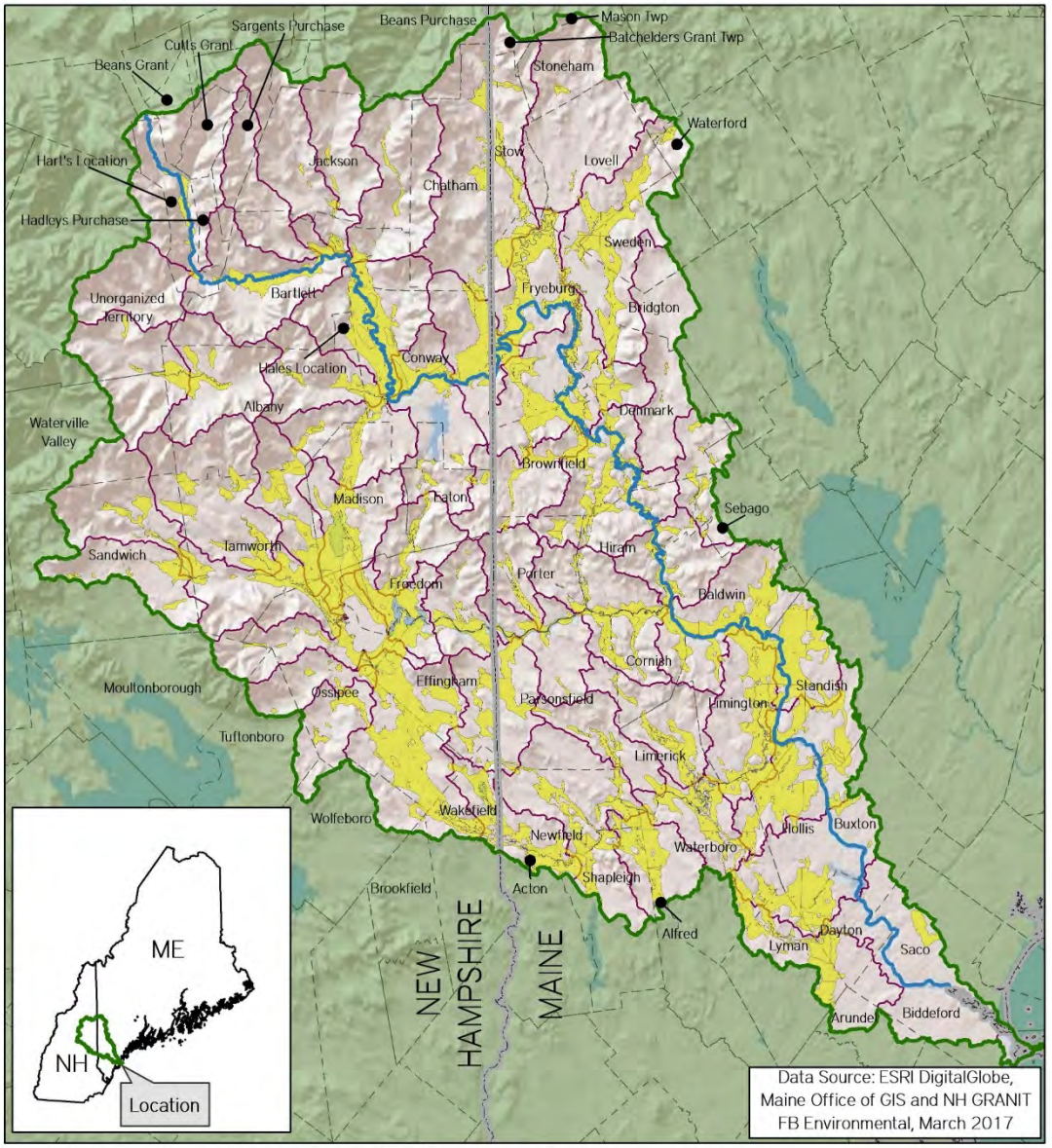
Collaborative Learning guide
www.wellsreserve.org
http://dune.une.edu/env_facpubs/5/

The Kaleidoscope of Expertise

Multiple lenses of professional practice with a core of shared values = Collaborative Potential



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



SACO RIVER WATERSHED: Aquifer Map DRAFT

- Saco River
- Aquifer*
- HUC12 Subwatershed
- HUC8 Watershed Boundary
- Town Border
- State Border

0 125 250 Miles

N

Aquifers in New Hampshire represent "Stratified Drift Aquifers". Aquifers in Maine represent "Significant Sand and Gravel" and can further be represented by their production capacity.

FB environmental

Sustaining Quality of Place and Ecosystem Health in the Saco River Estuary 2009 - 2015

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MAINE EPSCoR

NSF

i'm meSSi!
maine's sustainability solutions initiative

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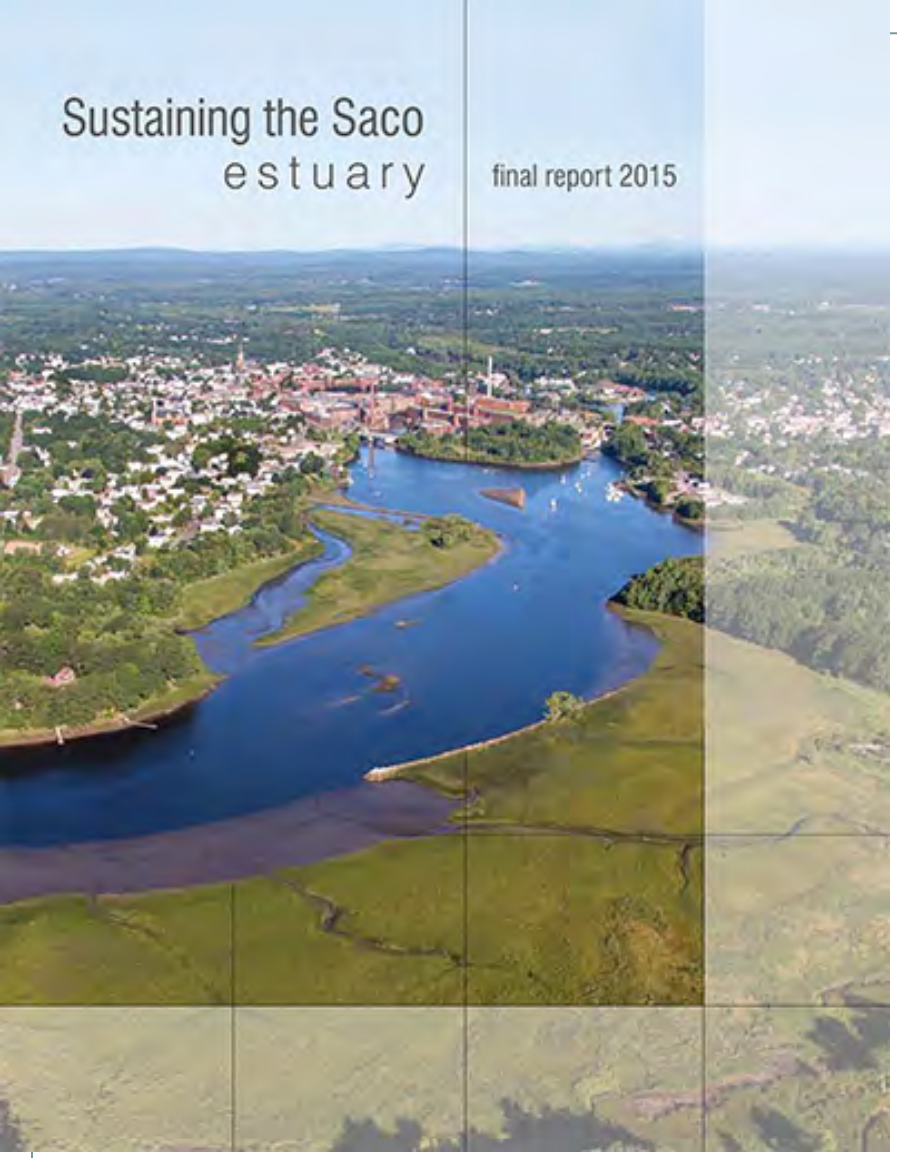
Collaborative Learning plays a role in "Sustainability Science"

1. Knowledge is created collaboratively
2. Considers linked social-ecological systems (SES)
3. Motivated by a sense of urgency
4. Engages non-scientists and local knowledge
5. Integrates natural and social science
6. Cares about knowledge to action

Kates R W PNAS 2011;108:19449-19450


Saco River Corridor Commission
Biddeford-Saco Chamber of Commerce and Industry
Town of Saco: Planning Board, Conservation Commission
Saco Valley Land Trust
SACO
Saco School District
Saco Spirit
Rumery's Boat Yard
BIDDEFORD
Heart of Biddeford
Biddeford School District
Blandings Park Wildlife Sanctuary
Marston's Marina
A Stewardship Network Sustains the Saco Estuary
60 Fish Species
The Saco River estuary has the highest number of fish species --including adult and larval fish caught in the river and bay -- recorded in any Maine estuary.
About the Stewardship Network
Many people care for the Saco Estuary. Together they form a Stewardship Network protecting water, wildlife and habitats. Residents, visitors and businesses benefit from the efforts of the Stewardship Network. The surprisingly diverse collection of plants, birds and fish discovered by UNE and Wells Reserve researchers is a consequence of the cumulative actions taken by these people to sustain the Saco Estuary and the values most important to the people who live work and play in the region.
133 Bird Species
Nearly half of all bird species in Maine have been observed using the Saco River estuary. Many of the species are not commonly associated with estuaries.
360 Acres of Tidal Marsh
Three types of tidal marshes --salt, brackish, and freshwater-- occur here. These marshes improve water quality and provide habitat for many kinds of wildlife.
10 Rare Plants
A surprising diversity of plants live in these marshes, including ten species that are rare in Maine and/or nationally.
Saco Bay Tackle
Camp Ellis
University of New England
This research is part of Maine's Sustainability Solutions Initiative, a program of the Senator George J. Mitchell Center, which is supported by National Science Foundation award EPS-0904155 to Maine EPSCoR at the University of Maine.
MollyMaps 2014
Town of Biddeford: Planning Board, Open Space Committee, Conservation Commission, Shellfish Conservation Committee
Saco River Salmon Club
Biddeford Saco Water
Coastal Waters Commission
Biddeford Pool Land Trust
State of Maine: DEP, DMR, DIFW
Wells National Estuarine Research Reserve
Rachel Carson National Wildlife Refuge
Friends of Wood Island Lighthouse



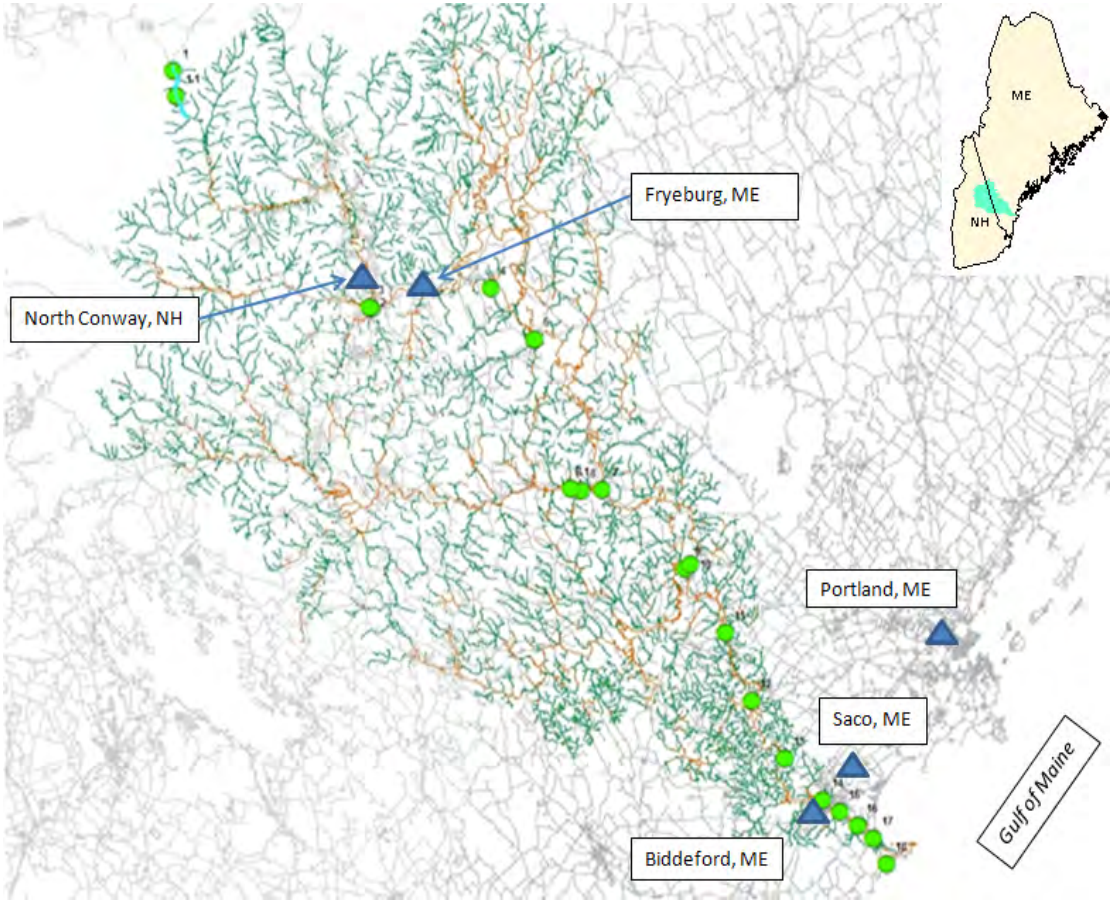
- Sustaining the Saco Estuary Final Report
  - Chapter 1 Introduction
  - Chapter 2 Stewardship
  - Chapter 3 Plants
  - Chapter 4 Invertebrates
  - Chapter 5 Fish
  - Chapter 6 Birds
  - Chapter 7 Foodweb
  - Chapter 8 Landuse
  - Chapter 9 Sea Level Rise
  - Chapter 10 Water Quality
  - Saco Watercolor Map

https://www.wellsreserve.org/blog/saco-river-estuary-project
http://www.une.edu/sacoriver/events/saco-science-symposium

Sustaining the Saco estuary | final report 2015

WATER QUALITY IN THE SACO RIVER. . .

by Stephan I. Zeeman and Tyler Spillane



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INNOVATION FOR A HEALTHIER PLANET

The Saco Watershed Collaborative

2016-2018

Membership of the Saco Watershed Collaborative Steering Committee (2017)

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

Collaborative Learning events build partnerships to form the Collaborative and develop the Saco Watershed Collaborative Action Plan

1. Monthly Conference Calls
2. Facilitated Team Communications/*Basecamp* archives
3. Quarterly Face to Face/Steering Committee Meetings
4. Field Based Skills Trainings
5. Annual Conference
6. Development of Action Plan *a living document*
7. Professional, peer to peer and community outreach
8. Members share with their networks & continue existing professional practice

2017 Saco Watershed Collaborative Field Trips
Develop shared understanding of issues

Discover the Headwaters Success Stories Tour	May 8
Saco Fish and Dam Passage Tour	July 27
Saco Estuary Boat Tour	August 7
Poland Springs Tour	August 25
Natural Resources Conservation Service Tour	September 22
Maine Water Company Tour	November 2
White Mountains National Forest Headwaters Tour	December 6

Water Quality Objectives for 2017-2018

1. Identify sources of water quality data in the Saco River Watershed

2. Map water quality monitoring sites

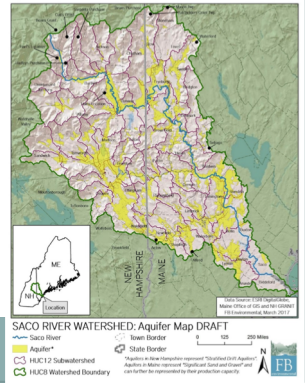
3. Map additional information about parameters surveyed, frequency and duration of sampling

4. Facilitate the integration of water quality monitoring and data analysis among groups working the Saco Watershed.


Ken

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.



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

1. ENGAGEMENT: Engage and inspire governments, organizations and citizens to take action to sustain water in the Saco Watershed.

2. WATER QUALITY: Protect water quality through pollution prevention and restoration of degraded waters in the Saco Watershed.

3. CONSERVATION; Support land conservation and stewardship to protect water quality in the Saco Watershed.

4. BMPs: Promote and enforce Low Impact Development (LID) strategies, stormwater and wastewater best management practices (BMPs), and land use development that protects water.

52 Interviewees from 30 Organizations

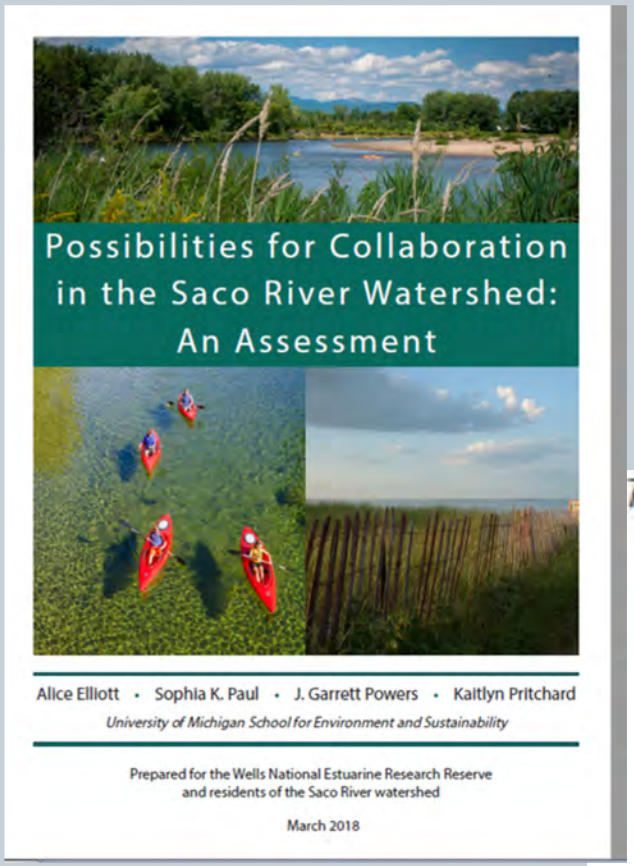


Table 9.1 What Interviewees Value about the Saco River Watershed

Value	Percent Interviewees Mentioning
Recreation	58%
Clean water	42%
Biophysical attributes	42%
Aesthetic qualities	38%
High quality water for drinking and irrigation	33%

National Estuarine Research Reserve System Science Collaborative

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Wells National Estuarine Research Reserve

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College of Arts and Sciences

Maine EPSCoR

NSF

Acknowledging support and collaboration

Dr. Christine Feurt cfeurt@une.edu

https://www.wellsreserve.org/project/the-saco-watershed-collaborative-safeguarding-the-future-of-the-saco-river

Contact Emily Greene egreene@une.edu to be added to mailing list