

PROFESSIONAL QUALIFICATIONS FOR CONSULTANT SERVICES

A Town Vision and Values Statement

Town of Falmouth, Maine



One Bridge Street
Plymouth, NH 03264

166 Valley Street
Providence, RI 02909



97A Exchange Street, Suite 305
Portland, ME 04101

170 West Road, Suite 6
Portsmouth, NH 03801

Nathan Poore, Town Manager
Town of Falmouth
271 Falmouth Road
Falmouth, ME 04105

January 21, 2020

Re: Request for Qualifications (RFQ) for Consultant Services



Dear Mr. Poore,

We are pleased to submit this proposal for your consideration. Facilitating the creation of a community vision statement through engaging public dialogue is a critical component of a comprehensive plan update. Your decision to start the updating of the Falmouth Plan with the development of a Town Vision and Values Statement is an important first step in the comprehensive planning process, and we would be very excited to assist you with this project.

Resilience Planning and Design was created to serve communities like Falmouth that are thoughtfully planning for their future and have a genuine interest in engaging the public in the process. We believe our team's extensive experience in natural resource based planning, as well as our abilities to facilitate engaging and effective municipal initiatives, will bring the skills and expertise required to reach your project goals for Phase 1 and Phase 2. For this project, we have teamed up with FB Environmental because of their knowledge of Falmouth, the surrounding region, and many of the critical issues the community will face in the years to come.

We also feel the combined skills and experience of the two firms will provide the Town of Falmouth with the necessary analysis and engagement to reach consensus on an inspiring and achievable Vision. This will be accomplished by creating an engaging process that is easy to follow and participate in. The enclosed proposal will further detail who we are, our experience, and how we would assist you with this project. Thank you for the opportunity to offer our services and I hope we are able to work together in the future!

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Whitman".

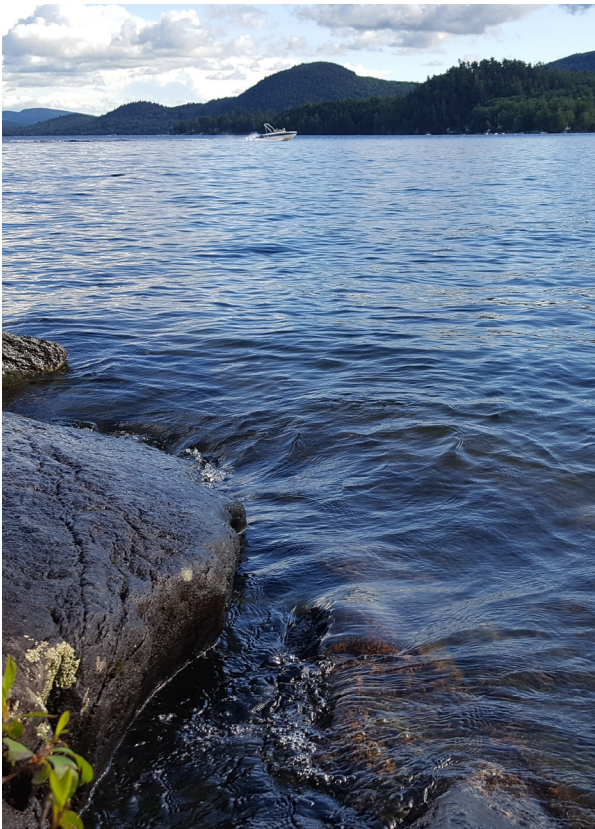
Steve Whitman, EdD, AICP
Founder and Principal
Resilience Planning & Design LLC

1 Bridge Street
Plymouth, NH 03264
603-381-1798

166 Valley Street
Providence, RI 02909
401-400-1735

Firm Profiles

Resilience Planning & Design, LLC (RP&D) provides collaborative planning, design, and education services throughout the Northeast from our offices in Plymouth, New Hampshire and Providence, Rhode Island. Informed by systems thinking, and rooted in helping communities achieve their vision, we are committed to thoughtfully planning for our shared resources. Our firm has extensive experience working on a range of municipal planning projects from the site to regional scale in communities of all sizes. We believe in viewing communities as dynamic systems that provide many services, and we are excited to offer a team with direct experience in land use planning, outreach and engagement, facilitation, mapping and analysis, and graphics and document creation. As a team, we have been working to make the planning process, planning documents, and associated information more accessible and engaging to the public, municipal boards, and other collaborators. Our team has extensive experience communicating with diverse citizen groups and stakeholders. This is most often accomplished by going to stakeholders where they are as much as possible.



FB Environmental (FBE) is a skilled twelve-person firm with offices in Portland, Maine and Portsmouth, New Hampshire. FBE was founded by Forrest Bell in 2001 to help provide expertise in municipal and watershed planning that integrates environmental, social, and economic values. Since then, FBE has become a regional leader in environmental assessments, community development, and conservation planning. We focus on integrating sound environmental and municipal planning practices with the specific needs and desires of the public. Some strategies we have used to incorporate public input into planning processes include public surveys, forums, and collaboration with local groups such as land trusts, advocacy groups, and coalitions. Through our extensive and recent work in southern Maine and the New Hampshire seacoast region, we feel we are uniquely positioned to support the Resilience Planning and Design project team and the Town of Falmouth.

Our Team

The following biographies will provide some background on members of our team. Resumes for each team member are included at the back of this proposal.

STEVEN WHITMAN, EDD, AICP, is a professional planner and educator who has been working in the public, non-profit, and private sectors in New England for twenty-three years. Steve will serve as the project manager and will ensure the project meets the scope and timeline. For the past sixteen years he has successfully partnered with others to create dynamic consulting teams tailored to the client's specific project needs. Steve established Resilience Planning & Design to assist communities on comprehensive planning initiatives and on implementation actions that reinforce their vision and future land use plans. His work includes comprehensive planning projects in small towns and large cities, and regional and watershed scale natural resource planning. He is also actively researching municipal green infrastructure planning initiatives in the United States. Steve is an adjunct faculty member at Plymouth State University and an alternate on the Plymouth, NH Planning Board.



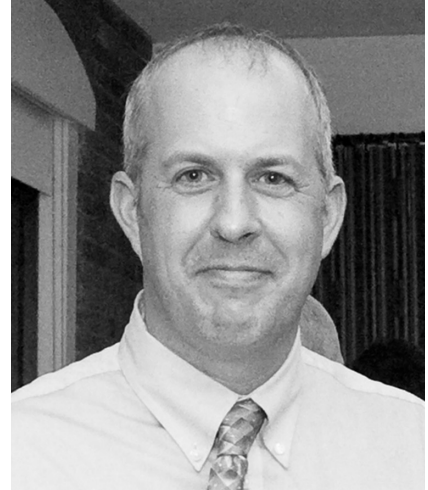
ELIZABETH KELLY of Resilience Planning & Design is a professional planner and designer based in Plymouth, New Hampshire. Liz holds a M.S. in Ecological Design and Planning and has completed a variety of local and regional planning projects for municipalities focused on comprehensive planning, downtown revitalization, placemaking, open space protection, transportation, and sustainability throughout her career. She is formerly the town planner for Bristol, NH, a certified permaculture teacher, and is highly skilled in graphic design, facilitation, policy development, program management, and plan writing. An adjunct faculty member at Plymouth State University, Liz is also currently the Board chair for the Permaculture Association of the Northeast.



ZAK BROHINSKY of Resilience Planning & Design is a skilled GIS technician and has significant experience in GIS analysis and data management. Zak has an understanding of complex environmental and social interactions and has the capacity to convey spatial information effectively to a broad audience. With a background in applied land conservation, Zak has worked with federal and state agencies, private entities, and non-profit organizations. In addition to performing GIS analyses for Resilience Planning & Design, Zak provides mapping and land analysis support to a land trust and develops natural disaster risk assessments for local, state and international clients. Zak is also a GIS instructor at the university level. Zak has served on the advisory committee for Local Foods Plymouth until 2017 and is the current Board President of the Plymouth Area Renewable Energy Initiative.



FORREST BELL is the founder and owner of FBE and in this capacity, he oversees all company operations. As Principal-in-Charge and a Project Manager on FBE projects, Forrest coordinates closely with clients and FBE project and task managers to ensure that the required capacity, optimal staff and associated skill sets, and other resources are available to support successful completion of project tasks. Forrest has led more than 500 land and water conservation projects throughout New England and is well-known for helping bring sound science to inform local and state policy decisions. He has worked to facilitate numerous strategic planning and visioning workshops for several stakeholder groups and he has worked directly with over 50 municipalities across New England.



ANTONIA SOHNS, PHD, is a Project Manager at FB Environmental focused on climate change, resiliency and water resources projects. She has a PhD in Geography from McGill University in Montreal. Her PhD research used qualitative and quantitative methods to examine what factors influence drinking water access in Arctic households. Her fieldwork focused on water security in Alaska. Before starting her doctoral degree, Antonia was a water and energy analyst/consultant at the World Bank in Washington D.C. and an intern at the White House under President Obama. She has an MSc in Water Science, Policy and Management from the University of Oxford where she studied how energy companies recycle produced water in hydraulic fracturing operations on the Pinedale Anticline in Wyoming, and a BS in Earth Systems, Oceans track from Stanford University where she researched cancer clusters along the Mississippi River in Louisiana, and phytoplankton populations aboard the Robert C Seamans in the Pacific Ocean. Her work and research for FB Environmental has focused on climate change impacts, community resiliency and adaptation, and stakeholder engagement at the municipal level. Antonia will serve as the Project Manager for all FBE-related deliverables on this project.



MARGARET MILLS serves as a project manager and hydrologist on projects ranging from water quality monitoring, lake and watershed assessment and restoration, to community and open space planning for municipalities. At FBE, Margaret incorporates GIS analysis and mapping into many FBE products; this has included mapping of natural resources as well as community planning and public survey data. Prior to FBE, Margaret gained experience working with lead scientists on watershed biogeochemistry at the Institute of Arctic and Alpine Research (Boulder, CO) and Hubbard Brook Experimental Forest (Thornton, NH). Margaret has a B.S. from the University of Maine in Ecology and Environmental Science and an M.S. in Geography from the University of Colorado Boulder. Drawing on these experiences, Margaret is comfortable working in a variety of ecosystems and across both the urban and rural interface.



Project Understanding

Our team is excited to assist the Town of Falmouth with the creation of a Town Vision and Values Statement (Phase 1) as an initial step toward updating the Comprehensive Plan (Phase 2). Having worked with many other communities in Northern New England on similar initiatives we understand the importance of having a shared vision to inform and guide the updating of the Falmouth Comprehensive Plan. These types of community conversations require time, data that can inform the process, and a variety of feedback mechanisms for interested stakeholders. While they are hard work for all involved, they can also be enjoyable and provide an opportunity to reinforce the community's social capital which is a critical component of community resilience.



Proposed Scope

Our preference on projects such as this is to craft a detailed scope of work with representatives of the Town. This ensures that our ideas are better informed by the questions and knowledge of the stakeholders in the community. If selected for this project we would propose to do the same with the Town of Falmouth. However, we have provided some initial thoughts related to a scope of work for Phase 1 below which places a heavy emphasis on tasks related to outreach and engagement with stakeholders within the community.

PRE-PROJECT PLANNING WITH STAFF

We have found that it is best to create an outreach and engagement plan at the very beginning of a project such as this. The purpose of developing an outreach and engagement plan is to carefully outline how the project will unfold, the appropriate combination of outreach techniques to be used, and the timing of each considering other factors known to representatives of the Town. This ensures a range of engagement techniques are identified, documented, and coordinated so that substantial community feedback will inform the drafting of the Vision and Values Statement.

DATA AND MAPPING ANALYSIS

Once an outreach and engagement plan has been drafted to serve as a working document for this initiative, we would suggest identifying the initial data and map products needed. These items are intended to be in support of the identified outreach and engagement process. This information and the graphics created will inform the participants, our Team, and the conversations related to Falmouth in 2020 and beyond.

OUTREACH AND ENGAGEMENT ACTIVITIES

When selecting which outreach and engagement techniques to use during this project, we recommend using a variety of techniques to engage the broadest array of stakeholders possible in the ways they are most

comfortable. This typically includes a combination of on-line and in-person feedback opportunities throughout the project. More specifically, this can include online feedback forms or surveys, interactive maps that collect place-based feedback, interviews and focus groups, and community forums.

We have had tremendous success with the world café format for community forums and would be excited to provide examples. A world café format is a simple and effective way to bring together a large group of stakeholders without allowing any one person or group to dominate the discussion. The basic format is a brief welcome from representatives of the community, a short presentation by the meeting facilitator, and then the majority of the meeting is spent with participants engaging with each other and providing feedback at a series of interactive stations around the room. Maps, infographics, and questions are used to prompt and inform discussion and feedback, but ultimately the event is in the hands of the participants. We have found that the step into this role easily and provide detailed feedback and questions. It is possible to structure and event like this as an open house with several sessions, or to host a repeat event at a different day and time to increase participation. Providing childcare is another strategy that can increase participation in some communities.

DELIVERY OF THE FALMOUTH VISION AND VALUES STATEMENT

At the conclusion of this Visioning process, we will deliver a statement that helps residents and property owners visualize the future of Falmouth and motivates them to take action. The resulting Vision should clearly state the desired future community character. This Vision can then be used as an inspiration for branding the comprehensive planning process, generating a logo and name recognition for this initiative, and engaging the public for the entirety of Phase 2. As Phase 1 is completed we would suggest that the final task include developing a scope of work for Phase 2.



Project Examples & References

The following pages provide samples of our team's work related to comprehensive and regional planning in both Maine and New Hampshire. We are also able to provide additional work products available upon request.



MASTER PLAN CHAPTER UPDATES

DOVER, NH

Resilience Planning and Design (RP&D) assisted with the development of a whole systems approach to planning for stewardship in Dover, NH. The Stewardship of Resources chapter incorporates topics that were previously addressed in other chapters of the Master Plan as well as new topics that were not yet addressed in the Plan. Its purpose was to illustrate how the network of resources within the community are interconnected. The topics span a range of “resources” and are critical components in making Dover a unique place to live in New Hampshire. Specifically, the Stewardship of Resources chapter addresses the following topics: Energy, Natural Resources, Historic and Cultural Resources, Coastal Management, Natural Hazards and Social Capital. RP&D also wrote the City’s Land Use chapter as well.

To view the master plan chapters completed, please visit: <https://www.dover.nh.gov/government/city-operations/planning/master-plan/index.html>

CLIENT REFERENCE

Christopher Parker, AICP,
Assistant City Manager &
Planning Director
288 Central Ave.
Dover, NH 03820
p: 603.516.6008
e: c.parker@dover.nh.gov



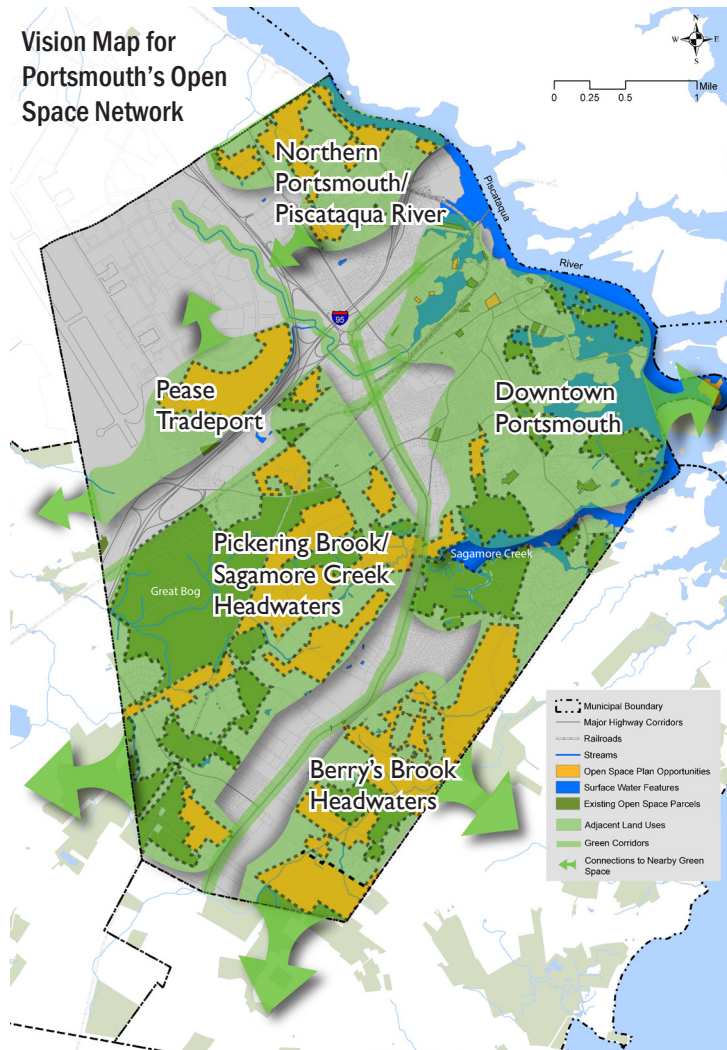
MASTER PLAN UPDATE

WOLFEBORO, NH

The Town of Wolfeboro is located in the Lakes Region of NH, bordering Lake Winnepesaukee. Resilience Planning and Design (RP&D) assisted the Town of Wolfeboro in the update of their municipal Master Plan which included updating chapters such as transportation, arts and culture, housing, economic development, and others. As part of the update, RP&D worked with master plan chapter subcommittees to guide the document's development, coordinated community engagement and outreach activities, developed maps and other graphics for visual content, and provided assistant to the town in creating a planning document truly guided by the vision of the community members. Extensive GIS analysis resulted in the creation of maps and data related to development constraints, natural resources, population, housing, and other land use topics.

CLIENT REFERENCE

Matt Sullivan, Director of Planning & Development,
84 South Main St
Wolfeboro, NH 03894
p: (603) 569-2246
e: planningdirector@wolfeboronh.us



OPEN SPACE PLAN PORTSMOUTH, NH

In late 2018, Resilience Planning & Design (RP&D) began partnering with the City of Portsmouth, NH to create a municipal Open Space Plan. The purpose of the Plan is to improve public access to, increase use and stewardship of, and improve connectivity between open space assets city-wide and in neighboring communities. Throughout the planning process, RP&D worked with the City and the public to prioritize undeveloped land for acquisition/protection, create open space stewardship and management guidelines, enhance outdoor recreation facilities and programming, and identify opportunities to improve connectivity between open spaces, trails, and neighborhoods. Additionally, RP&D also identified key areas for open space amenities within the highly developed areas of the city and are identifying opportunities to protect or regenerate critical ecosystem services. The adoption of this Plan is scheduled for February, 2020.

CLIENT REFERENCE

Juliet Walker, Planning
Director
1 Junkins Ave, 3rd Floor
Portsmouth, NH 03801
p: (603) 610-7296
e: jthwalker@
cityofportsmouth.com



OPEN SPACE PLAN

SOUTH PORTLAND, ME

From 2018 to 2019, FBE worked with assistance from Terry J DeWan and Associates to create a comprehensive Open Space Plan for the City of South Portland. FBE implemented a public city-wide survey of open space needs and executed public forums to provide the community with a structured opportunity to contribute their vision and suggestions for open space planning. All ideas were recorded on maps that were digitized and incorporated into the final Open Space Plan. FBE then worked with a project steering committee to compile and synthesize the public input into a succinct open space plan for the City. This plan was accepted with accolades from the South Portland City Council and was formally adopted as an amendment to the Comprehensive Plan in August of 2019.

To view the full plan, please visit: <https://www.southportland.org/our-city/board-and-committees/open-space-committee/>.

CLIENT REFERENCE

Barbara Dee, City
of South Portland
Conservation Commission,
25 Cottage Rd.
South Portland, ME 04106
p: (207) 317-0975
e: catzrul1@live.com



MUNICIPAL CONSERVATION LAND VISIONING

UPPER SACO VALLEY LAND TRUST

From 2013 - 2016, FBE assisted the Upper Saco Valley Land Trust with a large-scale regional conservation planning project. The main project task involved organizing and attending multiple visioning meetings with elected decision makers for the thirteen municipalities in the USVLT service area (nine in New Hampshire and four in Maine). Additional tasks included developing a build-out analysis for Conway and Eaton, New Hampshire, GIS mapping of conservation focus areas, and hosting a multi-stakeholder meeting to develop future goals for the region. FBE continues to work actively in this region on follow-up work from this wide-reaching project and has helped to lead recent efforts (2018 – present) to provide technical and facilitation services for the Saco Headwaters Alliance.

CLIENT REFERENCE

Tom Gross, Board Member,
Upper Saco Valley Land
Trust
PO Box 424, North
Conway, NH 03860
p: (603) 447-5048
e: thomasfgross@gmail.com



FLOOD RESILIENCE PLANNING

SOUTHERN MAINE PLANNING AND DEVELOPMENT COMMISSION

Climate impacts such as warmer temperatures, increased precipitation, more extreme precipitation, and rising sea level are contributing to coastal and riverine flooding that are placing infrastructure and communities at risk. To prepare the Town of Wells for increased coastal flooding, FBE is working with the Southern Maine Planning and Development Commission (SMPDC) to help the town complete the flood resilience checklist from the Maine Geological Survey. This work immediately helps the town identify areas where they can prioritize funds and attention in order to mitigate the threats from flooding. The work evaluates risks in the five main sections of the checklist: 1) risk and vulnerability, 2) critical infrastructure and facilities, 3) community planning, 4) social and economic vulnerability, and 5) natural environment. Through this process, the town will be able to determine where they should be strengthening community capacity and allocating funds in order to mitigate potential damage to infrastructure, impacts on freshwater supplies and water treatment facilities. By completing the checklist, Wells advanced their efforts to increase local resilience, and build a strong foundation for future work.

CLIENT REFERENCE

Abbie Sherwin, Senior/
Coastal Planner, Southern
Maine Planning &
Development Commission
110 Main Street, Suite
1400; Saco, ME 04072
p: (207) 517-7065
e: asherwin@smpdc.org



DATA COLLECTION & WATER PROTECTION PLANNING

PRESUMPCOT RIVER WATCH

FB Environmental led efforts to monitor and protect the Presumpscot River from 2005 – 2015. FBE worked with project partners including the Casco Bay Estuary Partnership, Presumpscot River Watch, the Maine Department of Environmental Protection, and watershed municipalities. Several projects were initiated in Falmouth including watershed surveys of the East and West branches of the Piscataqua River, baseline river monitoring at several locations, clam surveys in the Presumpscot River Estuary, and an innovative project working with Falmouth golf courses on environmental stewardship.

CLIENT REFERENCE

Fred Dillon, former President of Presumpscot River Watch and current Stormwater Program Coordinator
South Portland Water Resource Protection Department
PO Box 9422
South Portland, ME 04116
p: (20) 347-413
e: fdillon@southportland.org

Availability for Interviewing

Members of our team are available for an interview in early February (3rd-7th), and would welcome this opportunity to meet with representatives of the Town of Falmouth.

Resumes

The following pages include our team's professional resumes.



STEVE WHITMAN, EdD, AICP

Professional Planner, Designer, & Educator



P: 603.381.1798

E: steve@resilienceplanning.net

VOLUNTEER ACTIVITIES

Board of Directors, Root to Rise;
January 2018 – Present

Alternate, Plymouth Planning
Board; January 2015 – Present

Member, Plymouth Energy
Commission; July 2007 – 2017

Board of Directors, Plymouth
Area Renewable Energy
Initiative; August 2006 – 2017

Board Member,
Permaculture Association of the
Northeast; March 2016 - 2018

Founding Member,
American Planning Association
Sustainable Community Planning
Group;
2008 - Present

Planner of the Year,
New Hampshire Planners
Association; 2012

Eagle Scout, Boy Scouts of
America

EDUCATION

EdD Learning, Leadership and Community.
Plymouth State University, Plymouth, NH; December 2018

M.S. Regional Planning. Concentration: Environmental Policy and Planning
University of Massachusetts, Amherst, MA; May 1998

B.A. Marine Affairs. Concentration: Coastal Zone Management. Minor: Zoology
University of Rhode Island, Kingston, RI; May 1995

Associates Degree: Liberal Arts. Concentration: Math and Science
Dean College, Franklin, MA; May 1993

CERTIFICATIONS

Permaculture Teacher Certification
Central Rocky Mountain Permaculture Institute, Basalt, CO; September 2009

Permaculture Design Certificate
Crystal Waters Ecovillage, Queensland, Australia; May 2008

PROFESSIONAL EXPERIENCE

Planning Consultant. Resilience Planning and Design LLC, Plymouth, NH; January 2014 – Present
Founder and Principal of this New Hampshire based planning, ecological design and education firm providing a range of services to clients with a commitment to a more resilient future.

Sustainability Programs Coordinator & Teaching Lecturer. Plymouth State University, Plymouth, NH; January 2004 – Present

Contract staff for the Office of Environmental Sustainability. Currently teaching courses in Environmental Planning, Community Planning, Permaculture and Sustainability in the Social Science Department at the University. Developed and currently offering international field study courses focused on sustainability and permaculture.

Adjunct Professor. Colby Sawyer College, New London, NH; January 2011 – January 2018
Developed and co-taught the College's first Permaculture Design Course. Participants in these courses include Colby students, faculty, and members of the general public. Currently assisting the College with the development of a Community Based Sustainability major, and collaboration on projects in Franklin, NH.

Senior Planner. Jeffrey H. Taylor and Associates, Concord, NH; April 2003 – December 2013
Planning consultant offering facilitation and long range planning services. Projects included design charrettes, climate/energy projects, community and watershed scale master planning, policy audits, and natural resource based planning projects.

Principal Planner. Office of State Planning, Concord, NH; August 1999 – December 2003
Responsibilities included coordination and/or participation in major studies and projects dealing with smart growth land use issues in New Hampshire. Responsibilities also included planning the annual conference and other workshop opportunities for planners in New Hampshire; providing technical advice to municipalities and regional planning staff on land use planning related topics; preparing and coordinating the publication and distribution of technical bulletins; writing, administering, and coordinating contracts.

Regional Planner. Lakes Region Planning Commission, Meredith, NH; December 1997–August 1999
Provided technical planning assistance and workshops to Lakes Region Municipalities and other interested parties. Provided Circuit Rider Planning Assistance to the Town of Northfield, NH on a part-time basis.



ELIZABETH KELLY

Ecological Designer & Planner



P: 860.573.6458

E: liz@resilienceplanning.net

VOLUNTEER ACTIVITIES

President of Board of Directors. Permaculture Association of the Northeast
2017 - Present

Design Team Member.
GALA's (Global Awareness Local Action) Community MakerSpace Design Subcommittee. 2017 - Present

Secretary. Plymouth Community Garden. Sept. 2019 - Present.

EDUCATION

M.S. Ecological Design. Conway School of Landscape Design. Conway MA. June 2014.

Coursework included whole systems site design and engineering, land use planning, landscape ecology, public speaking, & digital mapping.

B.S. Interdisciplinary Studies: Sustainability and Ecological Design. Plymouth State University. Plymouth NH. May 2013
Received Most Outstanding Interdisciplinary Studies Student award.

ADDITIONAL TRAINING

Fundamentals of AutoCAD. CAD Institute. Murray KY. Dec 2014.
Advanced Permaculture Landscape Design Training. New London NH. Oct 2014.
Permaculture Design Teacher Training. Dorchester NH. Aug 2014.
Permaculture Design Certification. Plymouth NH. May 2012.

PROFESSIONAL EXPERIENCE

Project Planner. Resilience Planning & Design LLC. Plymouth, NH. July 2017 - Present.
Provides community planning and ecological design services to municipalities, organizations, and property owners. Project experience includes preparing municipal master planning documents, urban design guidelines, housing studies, site-level master plans, and open space planning documents.

Teaching Lecturer. Plymouth State University. Plymouth, NH. February 2018 - Present.
Develops curriculum and teaches courses in land use planning, ecological design, and sustainability.

Planner. Town of Bristol. NH. July 2017 - May 2018.
Conducted plan review for site plans, subdivisions, etc. Provided technical assistance and support to local land use boards. Drafted land use regulations. Communicated planning processes to the public and applicants.

Planning Technician. Southwest Regional Planning Commission. Keene NH. January 2016 - June 2017.
Designed and authored regional and municipal planning documents and policy language. Managed all aspects of a grant funded regional free bike rack program including outreach, budget management, and fostering relationships with funding recipients. Produced graphics, maps, promotional materials, plans, and publications for a variety of projects.

Apprentice. Radical Roots Organic Farm and Plant Nursery. Keezletown VA. March 2015 - October 2015.
Engaged in all aspects of crop production of five-acre organic permaculture farm and nursery including soil fertility maintenance, sowing, planting, harvesting, weeding, fertilizing, irrigating, cover cropping, and greenhouse maintenance.

Sustainable Agriculture Internship. North Carolina State University. Goldsboro NC. June - August 2013.
Performed general farm duties on 30-acre organic vegetable farm. Collected and synthesized field data for soil ecology and entomology research projects. Prepared and co-taught hands on gardening lessons to elementary and middle school students.

Women's Leadership Development Crew Leader. Vermont Youth Conservation Corps. Richmond VT. May - August 2012
Co-managed an all women's leadership development conservation crew (ages 18-22) and supervised environmental restoration and trail maintenance projects throughout VT. Facilitated outdoor leadership program which included lessons in backcountry living, conflict resolution, and group management and cohesion.



ZAK BROHINSKY

GIS Technician



P: 860.559.1488

E: zak@resilienceplanning.net

VOLUNTEER ACTIVITIES

President of Board of Directors. Plymouth Area Renewable Energy. Mar. 2019 - Present.

Member of Board of Directors. Plymouth Area Renewable Energy Initiatives. Jan. 2015 - Present.

Advisory Committee. Local Foods Plymouth. May 2013 - Present.

EDUCATION

M.S. Conservation Biology & Planning. University of Massachusetts. Amherst, MA. 2011.

B.S. Cultural Ecology & Sustainability. Plymouth State University. Plymouth, NH. 2009.

ADDITIONAL TRAINING

Professional Certificate. Hazus-MH for Flood. FEMA Software. Emmitsburg, MD. April 2018.

CURRENT EMPLOYMENT

GIS Technician. Resilience Planning & Design LLC. Plymouth NH. June 2019 - Present.

Provide GIS and technical support for planning projects with state, municipal, private and non-profit partners. Prepare maps and imagery, collect, process and analyze project data, and assist with facilitation of GIS and data-related topics during stakeholder engagement.

Adjunct Faculty. Plymouth State University. Plymouth NH. January 2013 - Present.

Develops and teaches undergraduate curriculum in GIS foundations and advanced topics with focus in applied land protection and environmental research projects.

Conservation Mapping & Field Specialist. Squam Lakes Conservation Society. Holderness, NH. July 2013 - Present.

Prepares baseline documents, maps, and all spatial needs related to land conservation transactions and maintains the geographic database for the Squam Lake Watershed.

GIS Specialist. Sobis, Inc. January 2017 - Present.

Provides geospatial and GIS expertise in the field of natural disaster risk management for domestic and international clients.

Contractor. Geolink. Rumney, NH. May 2015 - Present.

Prepares baseline documentation reports as part of land conservation transactions for regional conservation groups in the northeast. Prepare required maps and conduct data collection and field work for certified forestry operations in VT and NH.

Program Coordinator. Plymouth Area Renewable Energy Initiative. September 2011- 2014.

Organized, implemented, and marketed energy efficiency workshops throughout New Hampshire on behalf of state utilities. Acted as liaison between utilities to prioritize workshop locations.

Extension Research Assistant. NH Fish & Game Department. January 2011 - May 2011.

Assisted with the federally endangered Karner blue butterfly recovery plan by prioritizing properties and landowners to focus future conservation efforts.



FORREST BELL | PRINCIPAL, SENIOR SCIENTIST



Forrest is the founder and owner of FB Environmental Associates, a regional leader in managing environmental assessment and restoration projects. With over 29 years of experience, Forrest has directed more than 500 successful environmental planning, assessment, monitoring, and restoration projects for a diverse array of clients, including federal and state natural resource agencies, municipalities, and non-profit organizations. Forrest is a skilled presenter and facilitator, embracing the challenge of presenting the complexities of land and water resources to New England's communities. Forrest received his BS in Geography from the University of Southern Maine and completed his Master's coursework at the University of New Hampshire in the Natural Resources Management program.

TECHNICAL EXPERTISE

- BMP Design & Implementation
- Community Development
- Conservation & Land Use Planning
- Lake, River, & Stream Assessment
- Marine Fisheries Management
- Natural Resource Evaluations
- Watershed Management
- Water Quality Monitoring

EDUCATION

- M.S. coursework completed, Natural Resource Administration & Management, University of New Hampshire, Durham (1999-2002)
- B.S., Geography & Land Use Planning, University of Southern Maine (1991)

VOLUNTEER BOARDS

- Executive Board Member, Piscataqua Regional Estuaries Partnership (2014-present)
- Executive Board Member, Saco Headwaters Alliance (2019 – present)



PROFESSIONAL HIGHLIGHTS

- Proven record of success working for clients such as US Environmental Protection Agency, US Army Corps of Engineers, Maine Department of Marine Resources, New Hampshire Department of Environmental Services, Rhode Island Department of Environmental Management, Piscataqua Regional Estuaries Partnership, Spruce Creek Association, the Casco Bay Estuary Partnership, numerous private companies, and more than 50 municipalities in Maine and New Hampshire.
- Technical training in geomorphic processes, river and stream restoration, water quality monitoring, BMP design, and pollutant load modeling.
- Worked face-to-face with more than 5,000 landowners and fishing and agriculture industry employees to develop conservation strategies for various projects.
- Advises nonprofit organizations, government, municipalities, and professional associations regarding compliance with environmental programs and laws.
- Delivered more than 100 formal presentations at numerous national, state, regional, and local water resource, watershed management, and land management conferences.
- Secured over \$10 million in environmental project funds between 1995 and 2019 for several organizations to help improve and protect water resources.

SELECT PROJECTS

Large-Scale Projects

Maine Department of Marine Resources (2018-present). Co-PI for a 3-year, \$550,000 NOAA-funded study of vertical line strength as it relates to North Atlantic right whale entanglements. Tasks include survey design, implementation, and analysis; rope breaking analysis, and load cell deployment to test breaking strengths at sea. Working collaboratively with the Maine Department of Marine Resources, the Maine Lobstermen's Association, the University of Maine Chen Lab, and the other New England coastal states.

US Environmental Protection Agency Region 1 BPA (2008-2013). Principal scientist and senior project manager for a five-year, 1.6 million-dollar contract focusing on providing detailed assessments of impaired waterbodies in all six New England states. Tasks included directing staff, technical writing, river and stream mapping, impervious cover analysis, pollutant load modeling, and water quality monitoring for multiple parameters. Forrest successfully led eleven individual large-scale projects under this contract.

Select Watershed Management Projects

Saco Headwaters Alliance Technical Assistance (2018- present). Helped local stakeholders develop the Saco Headwaters Alliance which will oversee decades of groundwater and surface water assessment, management, and restoration in conjunction with several conservation organizations, federal and state agencies, and municipalities. Overseeing multiple projects in the Saco River Watershed focusing on water quality management, groundwater protection, floodplain mapping, and climate change resiliency.

Multiple Watershed Plans, Lake Winnepesaukee Association and New Hampshire Department of Environmental Services (2014-present). Lead contractor for multiple comprehensive watershed management planning projects in the Lake Winnepesaukee watershed in central New Hampshire. Project tasks include field BMP survey, land use modeling, pollutant load modeling, stakeholder participation, community forum facilitation, and technical report writing.

FORREST BELL | PRINCIPAL, SENIOR SCIENTIST

Select Watershed Management Projects (continued)

Long Creek Watershed Management District (2011 – 2018). Project manager for the development of the US EPA merit award-winning, Long Creek Watershed Management Plan. Project tasks included developing a detailed stormwater retrofit inventory, including detailed cost estimates, developing a long-term monitoring plan, and leading a large technical advisory committee. FB Environmental also developed the initial Quality Assurance Project Plan and managed the comprehensive water quality monitoring program for several years.

Casco Bay Estuary Partnership, Presumpscot River Drainage Basin (2003-2007). Co-managed a regional watershed management planning and assessment project for the Presumpscot River Watershed. Accomplishments include the authoring of an EPA-funded \$740,000 Targeted Watershed Initiative grant proposal and designing a comprehensive monitoring plan for the river, including the establishment of quality assurance guidelines and the installation of continuous monitoring devices.

Land Conservation Planning and Management

Multiple Maine and New Hampshire Land Trusts (2012-present). Principal-in-Charge for multiple projects for Maine and New Hampshire land trusts. Efforts include the development of Natural Resources Inventories, conservation planning, easement monitoring, buildout studies, invasive species management, GIS mapping, and wildlife surveys.

Upper Saco Valley Land Trust (2013-2015). Project Manager and Lead Scientist for a regional Conservation Planning project. Project tasks included interpreting regional co-occurrence modeling, leading presentations to eleven municipalities, modeling future development patterns, hosting a community forum, and engaging communities in land protection efforts.

RECENT PROFESSIONAL PRESENTATIONS

- 2019 Maine Stormwater Conference, Portland, ME: Innovative Restoration Efforts on Dole Brook and Riverside Golf Course
- 2019 Implementing the Merrymeeting River and Merrymeeting Lake Watershed Management Plan, Alton, New Hampshire
- 2018 – Green Mountain Conservation Group: Multiple Public Presentations for the Ossipee Lake Watershed Plan
- 2017 Maine Rural Water Association, Bangor, ME: Bacteria Source Tracking Methods in Maine and New Hampshire
- 2017 Lake Winnepesaukee Association: Multiple Public Presentations for Lake Winnepesaukee Watershed Plan Development
- 2016 New Hampshire Lakes Conference, Meredith, NH: Watershed Plan Development
- 2016 Penobscot River Watershed Conference, Northport, ME: Culvert Assessment for Climate Change Adaptation
- 2015 Maine Lakes Conference, Sebago, ME: Local Climate Change Monitoring and Culvert Assessment
- 2015 International Oyster Symposium, Woods Hole, MA: Using Canine Tracking for Bacteria Impaired Waters
- 2015 New England NPS Conference, Freeport, ME: Restoring Bacteria Impaired Waters in Kittery, Maine and Rye, New Hampshire
- 2015 Maine Beaches Conference, South Portland, ME: Bacteria Source Tracking and Implementation
- 2015 Northern New England Planners Association Annual Meeting, Portland ME: Local Climate Change Monitoring and Adaptation
- 2015 NH Saving Special Places Conference: Climate Change Monitoring and Build-Out Analyses
- 2015 Joint NEAEB/NH Water & Watershed Conference: Innovative Bacteria Source Tracking
- 2015: New England Association of Aquatic Biologists Conference: Restoring New England's Impaired Waters
- 2014 Northeast Region Planners Association Conference, Stowe, VT: Topsham Fair Mall Stream Assessment Project

ANTONIA SOHNS | PROJECT MANAGER, CLIMATE CHANGE LEAD



Antonia joined FB Environmental in 2019 as the Climate Change and Resiliency Division co-lead and project manager. Her PhD research at McGill University used qualitative and quantitative methods to examine what factors influence drinking water access in Arctic households. Her fieldwork focused on water security in Alaska. Before her doctoral degree, Antonia was a water and energy analyst/consultant at the World Bank in Washington D.C. and an intern at the White House under President Obama. She has an MSc in Water Science, Policy and Management from the University of Oxford where she studied how energy companies recycle produced water in hydraulic fracturing operations on the Pinedale Anticline in Wyoming, and a BS in Earth Systems, Oceans track from Stanford University where she researched cancer clusters along the Mississippi River in Louisiana, and phytoplankton populations aboard the *Robert C Seamans* in the Pacific Ocean. Her work and research have focused on climate change impacts, community resiliency and adaptation, and stakeholder engagement.

TECHNICAL EXPERTISE

- Climate change adaptation strategies
- Resilience planning
- Vulnerability assessment
- Environmental policy
- Watershed management
- Scientific/Technical Report Writing

EDUCATION

Ph.D., Geography, McGill University (2019)

M.Sc., Water Science, Policy and Management, University of Oxford (2011)

B.S., Earth Systems, Oceans Track, Stanford University (2010)



Climate Change Adaptation & Resilience Planning

Flood Resilience Checklist (August 2019-present). Working with Wells to complete the Maine Flood Resilience Checklist. This process enhances local government and community capacity, shares information between municipal departments, and identifies short and long-term planning needs that require attention. The facilitated process highlights the existing gaps where Wells should prioritize planning and resiliency resources and develops adaptation strategies that address those identified needs.

Climate Change Observatory Network on Maine Land Trusts (August 2019-present). Developing a Climate Change Observatory (CCO) network pilot project and CCO App tool to be used across coastal land trusts to observe, measure, and analyze long-term climate change trends, with a focus on sea level rise and coastal erosion. The CCO App will serve as a tool that not only collects important climate observations and data, but also connects people with the local environment and teaches them about climate science.

Resource Management

Household water vulnerability in Alaska (September 2016-August 2019). Conducted participatory modeling to identify policy pathways that would improve drinking water access in remote Alaskan households. Worked with policy stakeholders and government officials to develop collaborative strategies to manage water resources, mitigate vulnerability, and increase community resiliency.

Thirsty Energy Initiative (January 2013- July 2016). Helped create and launch the Thirsty Energy Initiative at the World Bank in Washington, D.C. Thirsty Energy incorporates water variables into countries' energy development plans. Provided clients with technical advice on water and energy management frameworks and identified risks of proposed projects. Wrote policy papers and participated in international conferences and workshops to share Thirsty Energy's messages for integrated planning and optimizing resiliency through sound investments and infrastructure.

Stakeholder Engagement & Facilitation

NOAA Recreational Fishery Workshops (July 2019-present). Working with NOAA to facilitate recreational fishery workshops for feedback regarding management measures. The workshops provide an opportunity for stakeholder input on developing potential short- and long-term management approaches for the recreational fishing community.

Maine Department of Marine Resources (DMR) Vertical Line Project (August 2019-present). Working with DMR to develop new regulatory measures for fixed gear fisheries aimed at reducing the rate of serious injuries and mortalities due to entanglements of North Atlantic Right Whales. Co-managing data collection from online and phone surveys and analyzing the functional breaking strengths of rope samples of whole vertical

lines donated by fishermen. The next phase of the project includes a facilitated workshop to discuss gear modifications and prototypes being designed to meet regulatory measures.

PUBLICATIONS

- Sohns, Antonia, Ford, J., Riva, M., Adamowski, J., and Robinson, B. 2019. "Participatory Modeling of Water Vulnerability in Remote Alaskan Households Using Causal Loop Diagrams." Manuscript submitted to *Water Resources Research* for publication and is under review.
- Sohns, Antonia, Ford, J., Robinson, B., & Adamowski, J. 2019. What conditions are associated with household water vulnerability in the Arctic? *Environmental Science and Policy*, 97, 95–105. <https://doi.org/10.1016/j.envsci.2019.04.008>
- Sohns, Antonia, Ford, J., Riva, M., Robinson, B., & Adamowski, J. 2019. Water Vulnerability in Arctic Households: A Literature-based Analysis. *Arctic*, Vol 72 No 3, 215-335. <https://doi.org/10.14430/arctic68884>
- Sohns, Antonia. 2018. Water Security in the Barents Region. In K. Hossain & D. Cambou (Eds.), *Society, Environment and Human Security in the Arctic Barents Region* (1st ed., p. 238). London: Routledge.
- World Bank. 2017. *Modeling the water-energy nexus: how do water constraints affect energy planning in South Africa?* Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/706861489168821945/Modeling-the-water-energy-nexus-how-do-water-constraints-affect-energy-planning-in-South-Africa>
- Rodriguez, D., A.D. Martin, and A. Sohns. 2016. Chapter 13: "The Challenge of Climate Change in the Energy-Water Nexus" in "Adding to Complexity: Climate Change in the Energy-Water Nexus. The Water, Food, Energy and Climate Nexus: Challenges and an Agenda for Action." *Routeledge*. doi:10.4324/9781315640716.
- Sohns, A. A., Rodriguez, D. J., and Delgado, A. 2016. "Thirsty Energy (II): The Importance of Water for Oil and Gas Extraction." *World Bank Group*.
- Rodriguez, D., A.D. Martin, and A. Sohns. 2015. Chapter 6: "Cross-Cutting Issues of Energy" in the "Progress Towards Sustainable Energy 2015: Global Tracking Framework Report." *World Bank Group and the International Energy Agency*.
- Delgado, A., Rodriguez, D., and Sohns, A. 2015. "Thirsty Energy: Understanding the Linkages between Energy and Water." *World Bank*.
- Rodriguez, D., and A. Sohns. 2014. "Will water constrain our energy future?" *Water Monographies: Water & Energy*: 14-23.
- Sohns, A. "What China and Other Nations Can Learn from US Shale Gas Hydraulic Fracturing Experience." *POWER Magazine*. <http://www.powermag.com/blog/what-china-and-other-nations-can-learn-from-u-s-shale-gas-fracking-experience/>
- Sohns, A., & Crowder, L. (2014). Sustainable fisheries and seas: Preventing ecological collapse. In *State of the World 2013: Is Sustainability Still Possible?* https://doi.org/10.5822/978-1-61091-458-1_6
- Rodriguez, Diego J., A. Delgado, P. DeLaquil, and A. Sohns. 2013. "Thirsty Energy." *World Bank Group*.
- Sohns, Antonia. 2009. "Human Rights in Indonesia: The Consequences of Discrepancies in Domestic versus International Law." *Cornell International Affairs Review* II (2): 55–64.

MARGARET MILLS (BURNS) | PROJECT MANAGER, HYDROLOGIST & GIS SPECIALIST



Margaret serves as a project manager, hydrologist, and GIS-specialist on projects ranging from water quality monitoring, lake and watershed assessment and restoration to public engagement and planning. At FBE, Margaret works with private entities, federal and state agencies, lake and watershed associations, and municipalities to assess their natural resources and incorporate natural resources into planning and development. Prior to FBE, Margaret gained experience working with lead scientists on watershed biogeochemistry at the Institute of Arctic and Alpine Research (Boulder, CO) and Hubbard Brook Experimental Forest (Thornton, NH). Drawing on these experiences, Margaret is comfortable working in a variety of ecosystems from pristine alpine settings to urban high-density watersheds and coastal ecosystems.

TECHNICAL EXPERTISE

- GIS Spatial Analysis
- Watershed Management Planning
- Community Planning and Leadership
- Hydrology and Biogeochemistry
- Stormwater Hydrology
- Surface Water Chemistry and Nutrient Cycling
- Programming in R and MATLAB
- Data Synthesis and Analysis

EDUCATION

- M.A. Geography, University of Colorado Boulder in collaboration with the Institute of Arctic and Alpine Research (2014)
- B.S., Ecology & Environmental Science, University of Maine, Orono (2012)

MEMBERSHIPS

- Maine GIS User Group (Jan 2019 – Present)
- Presumpscot Regional Land Trust, Community Engagement Committee (2016 – 2017)
- American Geophysical Union (2014 – 2016)



PROFESSIONAL EXPERIENCE & SELECT PROJECTS

Municipal Conservation Planning & Resource Protection

City of South Portland Open Space Plan Development (Spring 2018 – July 2019). Actively worked with the City of South Portland to develop an Open Space Plan. Compiled and built on the existing data held by the City to create a comprehensive, and up-to-date GIS database of all open space. Additionally, operated as lead in creating all GIS mapping and data visualization and provided assistance with the project Steering Committee and the public forum.

Topsham Fair Mall 319 Implementation Project, Topsham, ME (2015). Served as lead field technician and was responsible for maintenance, calibration, and deployment of a YSI 600 OMS sonde. Performed proper QA/QC of sonde data as well as Maine DEP data from Onset® HOBO loggers. Also conducted grab sampling for chloride for development of the conductivity-chloride relationship at the site. Lead the implementation of a salt management plan in the Topsham Fair Mall watershed, which includes communicating with landowners, creating a salt budget, and organizing workshops and fliers for community engagement. Also assisted in the implementation of best management practices (BMPs) in the watershed to reduce stormwater runoff to the stream.

Mare Brook Watershed Assessment & Community Engagement Project, Brunswick, ME (2015 – 2016). Served as support staff for the assessment of Mare Brook in Brunswick, ME. Mare Brook runs through both residential and commercial development, as well as through the former Brunswick Naval Air Station before it empties into Harpswell Cove. Assessment of the stream involved basic water quality parameters (dissolved oxygen, temperature, conductivity, bacteria, etc.) as well as parameters such as metals and toxic pollutants. Was responsible for the organization of historical documentation and water quality monitoring for input into a stressor analysis to provide the Town with monitoring and restoration recommendations.

Phinney Road Closed Municipal Landfill, Corinna, ME (2015-Present). Project manager for monitoring of the closed municipal landfill on Phinney Road in Corinna, ME. Conduct low-flow sampling of six deep groundwater monitoring wells following the protocol outlined in the Maine Chapter 405 Water Quality Monitoring, Leachate Monitoring, and Waste Characterization. Coordinate with town officials to sample residential wells to assess for groundwater contamination. Complete QA/QC and analysis of data and summarizes results for the Town and Maine DEP. Parameters analyzed include but are not limited to, volatile organic compounds, semi-volatile organic compounds, metals, toxics, cations, and anions.

Watershed Planning

Upper Saco Valley Land Trust (2017). Task lead for the completion of a potential contamination source (PCS) survey following New Hampshire RSA 485-C:7 II Statute and Env-Wq-401: Best Management Practices for Groundwater. Through a NH Drinking Water Grant, FBE assisted the land trust in synthesizing and expanding the PCS database in areas overlaying the stratified drift aquifer and within the land trust jurisdiction. Organized existing data, survey methods, and trained/led volunteers during a two-day survey of the coverage area.

Medomak River Watershed Management Plan Development (October 2017-December 2019). Served as project manager for a project in Waldoboro, ME to develop a nine-element watershed management plan for the Medomak River. The Medomak River is one of the leading soft-shell clam producers in Maine, but has suffered from seasonal and conditional harvesting closures due to elevated bacteria. Was responsible for coordinating communication between the Department of Marine Resource, the Department of Environmental Protection, Town officials, and commercial

clammers. Served as lead in synthesis of existing data from state agencies, environmental monitoring, and future planning for database management, monitoring, and restoration efforts.

Goosefare Brook Watershed Management Plan, Saco and Old Orchard Beach, ME (2015-2016). Co-led the development and writing of the watershed management plan for Goosefare Brook for the City of Saco and the Town of Old Orchard Beach. Plan development and writing included the synthesis of past water quality monitoring, a retrofit reconnaissance inventory to identify existing best management practices (BMPs) for stormwater and provide BMP recommendations for the watershed. The overall project plan includes prioritization of both structural and non-structural recommendations for improving stormwater runoff to the stream. This project included close coordination with both municipalities, state agencies, and local conservation groups.

Research Experience

Dissolved Organic Matter Transport and Chemical Transformation (2012 – 2014). Completed a research-focused masters thesis at the Institute of Alpine and Arctic Research in Boulder Colorado investigating the changes in fluorescent properties of dissolved organic matter (DOM) transport through an alpine, headwater stream. Performed fluorescence spectroscopy on daily samples from lysimeters, piezometers, and streams coupled with a MATLAB parallel factor model (PARAFAC) to trace changes in chemical composition through the soil profile.

Investigation of the Hydrological and Geochemical Role of the C Horizon in a Glacial Till Mantled Headwater Catchment (2011 – 2012). Through an NSF-funded REU internship, studied the role of the C horizon on vertical and lateral podzolization and water movement at the Hubbard Brook Experimental Forest in New Hampshire. Continued working with the Forest Service following the completion of my internship to write an undergraduate honors thesis at the University of Maine. Returned to Hubbard Brook on a related project as a field technician in 2015.

PRESENTATIONS

- Mills MA & P Ruck. (12/3/2019). Maine Stormwater Conference, Portland ME. *Identifying Candidate Sites for Low Impact Development Retrofits in Kennedy Brook, Presque Isle ME.*
- **Burns (Mills) MA** & AG Gavin. (3/28/2019). Maine Sustainability & Waters Conference, Augusta ME. *Watchic Lake: Observations of Physical Parameters from Continuous Monitoring*
- **Burns (Mills) MA** & J Kimball. (1/22/2019). City Council Workshop, City of South Portland ME. *South Portland Open Space Planning.*
- **Burns (Mills) MA** & P Ruck (11/29/2018). City Council Presentation, City of Presque Isle ME. *Kennedy Brook & Mantle Lake Watershed-Based Plan.*
- Bell F & **MA Burns (Mills)** (7/11/2017). Public Forum, University of Maine at Presque Isle, City of Presque Isle ME. *Kennedy & Mantle Lake Watershed-Based Plan.*
- **Burns (Mills), MA** & L Bizzari. (3/30/2017). Maine Sustainability & Waters Conference, Augusta ME. *Intensive Sampling during Storm Events to Identify Land-Based Sources of Fecal Contamination to a Coastal Estuary.*
- **Burns (Mills), MA.** 2014. Hubbard Brook Cooperators Meeting, Thornton NH. *Biogeochemical Hotspots for Carbon and Nitrogen Cycling in Watershed 3.*
- **Burns (Mills), MA.** 2014. Hydrologic Sciences Symposium, Boulder CO. *Variability of Hillslope Dissolved Organic Matter Transport and Transformation in a Semi-arid Catchment.*
- **Burns (Mills), MA.** (12/9/2013 – 12/13/2013). American Geophysical Union, San Francisco CA. *Transport and Transformation of Dissolved Organic Matter in Soil Interstitial Water Across Forested, Montane Hillslopes.* Poster presentation.

PUBLICATIONS

Berryman, EM, HR Barnard, HR Adams, **MA Burns (Mills)**, PD Brooks. 2015. Complex terrain alters temperature and moisture limitations of forest soil respiration across a semi-arid to subalpine gradient. *Journal of Geophysical Research: Biogeosciences*, 120(4), 707-723.

Burns (Mills), MA, HR Barnard, DM McKnight, and RS Gabor. 2016. Dissolved organic matter transport reflects hillslope to stream connectivity during snowmelt in a montane catchment. *Water Resources Research*, 52(6), 4905-4923.

Gabor, RS, **MA Burns (Mills)**, RH Lee, JB Elg, CJ Kemper, HR Barnard and DM McKnight. 2015. Influence of leaching solution and catchment location on the fluorescence of water-soluble organic matter. *Environmental Science & Technology*, 40(7), 4425-4432.

PROFESSIONAL TRAININGS

University of New Hampshire. Stormwater Hydrology Certificate. Durham, NH. Completed April 2019.