

# **REQUEST FOR QUALIFICATIONS**

**Issued by the Lake Winnepesaukee Association  
for  
Moultonborough Bay and Winter Harbor  
Watershed Management Plan Development**

**December 20, 2017**



Winter Harbor, Lake Winnepesaukee  
Photo courtesy: Sue Wingate

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# REQUEST FOR QUALIFICATIONS

## Moultonborough Bay and Winter Harbor Watershed Management Plan Development

December 20, 2017

### I. REQUIRED QUALIFICATIONS SUBMISSIONS

Each consultant will submit a qualifications package to the **Lake Winnepesaukee Association (LWA)** that will include the following components as described in detail below:

- Cover letter indicating a primary contact for the qualifications package and that person's title, address, phone number, and email address. The cover letter should include relevant professional certifications (e.g., Professional Engineer, Certified Wetland Scientist, etc.)
- Description of the respondent's general approach (i.e., "philosophy") to watershed planning, skills and specialties for which the respondent is qualified, and a summary of directly-relevant work experience of the respondent. Responses must address how the respondent meets the desired qualifications; please consult Section V - SELECTION CRITERIA (below) for additional guidance.
- List of references including names, titles, contact information. These will preferably be clients for whom similar work has been performed within the past five (5) years.
- The project team, including project team organization, team member qualifications and the anticipated level of involvement of key team members in each phase of the project as described in the project approach and scope of work.
- A technical proposal that describes the team's project approach and scope of work (do not include budget, fee schedule, or any type of cost estimate).
- A proposed project schedule.

***Complete and timely submittal of all required documents is mandatory for the qualifications package to be considered.***

Each consultant will submit the qualifications package via dropbox using <https://form.jotform.com/73524502285151> by close of business on January 31, 2017. The form can also be found on LWA's website at: <http://www.winnepesaukee.org/2013/06/04/projects/>

Representatives from the LWA, Town of Tuftonboro, and the New Hampshire Department of Environmental Services (NHDES) will review qualification packages. After the qualifications-based ranking is complete, the top two to three ranked consultants may be invited for an interview if desired by the review committee. After the interview process, the top ranked consultant will be asked to provide a task based cost proposal, and the LWA will proceed with contract negotiations with that consultant. If these negotiations are not successful, the LWA will negotiate with the second ranked consultant, etc. until a contract has been successfully negotiated.

## **II. PROJECT TEAM AND LEVEL OF PARTICIPATION**

The qualifications package will identify the individuals responsible for managing the project and conducting specific project tasks. The qualifications package will also include an estimate for the expected level of participation in the project tasks and in the overall project. An organization chart showing lines of communication and decision-making hierarchy will be included in the qualifications package.

## **III. PROJECT APPROACH/SCOPE OF WORK**

Attachment I provides Scope of Work Guidance to assist in the development of the project approach, scope of work, and demonstration of qualifications. It must be clear how EPA elements ‘a – i’ will be addressed and also how public participation and interaction with the various stakeholders will occur.

## **IV. PROJECT SCHEDULE**

The respondents will provide a schedule to conduct and complete the project. The schedule will include project tasks as identified in the Scope of Work. Project tasks will be laid out in a flow chart identifying the anticipated dates to complete each task and the interrelationship of conducting and completing these tasks. It is expected that this project will be completed by October 31, 2019.

## **V. SELECTION CRITERIA**

Selection will be based on the qualifications package. Respondents will be assessed based on the following criteria.

### ***1. Specialized Experience of the Project Team (30 Percent)***

The respondent will be rated on:

- (a) overall experience directly related to the successful implementation of similar projects that include planning, data analysis, watershed modeling, engineering, outreach, and working with diverse stakeholders to achieve project goals
- (b) direct experience incorporating the U.S. Environmental Protection Agency (EPA) nine key elements (a-i) to develop watershed management and/or restoration plans
- (c) demonstrated ability to work with municipal government (town boards, public works officials, etc.), state government (NHDES, etc.), local residents, nonprofit groups, universities, and other stakeholders in New Hampshire
- (d) experience and willingness to work with existing data, such as from municipal GIS layers, LIDAR, UNH, PSU, and DES water quality data, LoVoTECS, etc.
- (e) demonstrated ability to complete the work within the required schedule
- (f) demonstrated ability to effectively solicit, assess, and use comments and suggestions from stakeholders during project development
- (g) demonstrated success in developing and implementing innovative approaches to facilitating public and project team meetings

- (h) experience in lake quality and environmental monitoring, modeling and data interpretation
- (i) demonstrated ability to conduct watershed modeling to achieve project goals (including build-out analyses and water quality goal setting)
- (j) experience interpreting and applying New Hampshire water quality standards
- (k) demonstrated ability to identify structural and non-structural Best Management Practices (BMPs) and generate pollutant load and cost/benefit analyses for BMPs
- (l) proven ability to evaluate and propose solutions to address pollution from septic systems
- (m) experience designing and providing construction oversight for stormwater BMPs
- (n) experience working with municipal officials and stakeholders on public policy review and recommendations
- (o) demonstrated ability to conduct effective public outreach and generate measurable results

**2. Project Personnel (30 Percent)**

The respondent will be rated on the principal team member's role and participation level, project management effectiveness, and the qualifications and experience of key personnel, their communication abilities, and availability during the project.

- Project Manager 20 Percent
- Task Managers 10 Percent

**3. Project Approach (20 Percent)**

The respondent will be rated on the approach to the project scope outlined in this RFQ, the understanding of the project scope and schedule of work and the interfacing of tasks.

**4. Qualifications for BMP Design Services (20 percent)**

The consultant will be rated on their qualifications and experience regarding ability to provide design of structural stormwater BMPs as described in Attachment I – Scope of Work Guidance, Section IV.

**VI. REQUEST FOR QUALIFICATIONS (RFQ) INQUIRIES**

The LWA will not respond to telephone inquiries about the RFQ. Questions concerning this RFQ must be submitted via email to LWA at: [ptarpey@winnepesaukee.org](mailto:ptarpey@winnepesaukee.org) (Pat Tarpey)

Questions must be submitted by 5:00pm ET on January 10, 2018, and must have the Subject Line: "Moultonborough Bay and Winter Harbor RFQ Question". If you have a question, please follow this procedure so as to ensure consistency of answers. Any information obtained by speaking one-on-one with a project partner is not considered an official response for the purposes of this process.

A digest version of all questions and answers will be emailed to everyone that submits a question. Additional persons wishing to receive the digest version of all questions and answers should request a copy via email by contacting Pat Tarpey, [ptarpey@winnepesaukee.org](mailto:ptarpey@winnepesaukee.org) (Subject: "Moultonborough Bay and Winter Harbor RFQ Digest Request"). The LWA shall distribute the Q&A Digest by January 17, 2018.

Upon completion of ranking qualifications packages, the LWA, in consultation with the project team will negotiate with the top-ranked firm for contract scope and price. The negotiated contract will be based on fair and reasonable compensation for the services required.

**VII. TIME LINE**

December 20, 2017	RFQ Release
January 10, 2018	Deadline for submittal of questions on RFQ (5:00pm ET)
January 17, 2018	Q&A Digest emailed to those requesting a copy
January 31, 2018	Deadline for receipt of proposals to RFQ (5:00pm ET)
February 28, 2018	Final selection of contractor and notification (anticipated) to all firms

**VIII. DISCLAIMER**

This Request for Qualifications does not commit the Lake Winnepesaukee Association (LWA) to award a contract or pay any costs incurred during the preparation of the qualifications package. The LWA reserves the right to reject any or all of the proposals for completing this work for any reason allowable by law. The LWA also reserves the right to eliminate the need for the selected firm to complete one or more tasks, pending the outcome of preceding related tasks or issues.

To participate in the project and receive payment, the selected firm will be required to enter into a contract which stipulates that the contractor is eligible to receive federal funding, and certifies compliance with State and Federal rules related to grant funded projects.

## **ATTACHMENT I - SCOPE OF WORK GUIDANCE**

# **Moultonborough Bay and Winter Harbor Watershed Management Plan Development**

**December 20, 2017**

### **INTRODUCTION**

The Moultonborough Bay and Winter Harbor Watershed Management Plan Development project builds on six years of effort by the Lake Winnepesaukee Association to develop a comprehensive lake-wide management plan for Winnepesaukee, and is a continuation of a community-based watershed planning effort to improve and protect all of the water resources within the lake's watershed.

Lake Winnepesaukee, NHLAK700020110-02-19, is currently listed on the 2016 303(d) list of threatened or impaired waters for primary contact recreation use due to the occurrence of cyanobacteria (source unknown). Despite its impaired status, lake wide, the water quality is considered good. For the 2009-2013 period, the median total phosphorus concentration for Lake Winnepesaukee is 6.4 µg/L and the mean chlorophyll-a concentration is 1.9 µg/L; well below the State of NH's nutrient criteria standards for an oligotrophic waterbody. As a major economic asset and natural resource for the local communities as well as the State of NH, it is extremely important that the lake's health be protected from further degradation.

The Moultonborough Bay and Winter Harbor subwatersheds are predominantly forested exhibiting good stream and lake quality. Development of an EPA nine key element watershed management plan for the MB subwatershed will result in the identification of sources of pollutants and the actions necessary to correct them that will improve existing lake quality, aquatic habitat, and result in the removal of water bodies from the State's 305(b)/303(d) list.

Representatives from the communities of Moultonborough, Tuftonboro, and Wolfeboro, the Lake Winnepesaukee Association, and other stakeholders will work together to develop an action plan of strategies that will protect the value, uses, and health of the lake for generations.

### **BACKGROUND**

The Moultonborough Bay subwatershed (MB) lies within the communities of Moultonborough, Tuftonboro, and Wolfeboro with an area of approximately 29,778 ac. Four major stream complexes contribute water inflow to the lake, Melvin River, Wingate Brook, Twentymile Brook, and Nineteenmile Brook; however, the major volume of water to Moultonborough Bay is from Moultonborough Bay Inlet, which lies upstream from the sub-basin. A watershed restoration plan has been developed for Moultonborough Bay Inlet, which has historically exhibited excessive levels of in-lake total phosphorus.

Two public areas within the MB sub-watershed are currently on the 303(d)/305 b list for a severe impairment for primary contact recreation use due to elevated concentrations of E. coli bacteria, with TMDLs scheduled to occur by 2021.

Melvin Village Lake – Town Pier  
Public Beach, Tuftonboro

A major concern and potential threat to the lake's health is the Rapid Infiltration Wastewater Disposal System (RIWDS) located in Wolfeboro just over the Tuftonboro/Wolfeboro town line. A seven-mile stretch of Nineteenmile Brook lies down gradient of the RIWDS. The RIWDS is permitted to discharge up to 600,000 gpd of treated municipal wastewater. The town of Tuftonboro has been highly concerned with the RIWDS, conducting a baseline environmental assessment of Nineteenmile Brook in 2008 prior to the construction of the RIWDS in 2009. The environmental assessment conducted by Normandeau Associates determined that:

“Baseline studies for water quality, aquatic and wetland wildlife and aquatic habitat and associated fish and macroinvertebrates all indicate that Nineteen Mile Brook from about ¼ mile above the Tuftonboro/Wolfeboro town line is a high quality small stream, typical of New Hampshire streams largely unaffected by cultural development.”

After slope failures and groundwater seeps were discovered within 6 weeks of operation, the Tuftonboro Conservation Commission again contracted with Normandeau Associates to provide additional environmental assessment services. During the spring of 2009, Normandeau conducted a stream gaging program to quantify potential water loading to Nineteenmile Brook from the RIWDS. During late summer/fall of 2009, an algal study was conducted after algae was observed in the brook and at the location of the groundwater seeps.

Problems have continued to arise from the operation of the RIWDS. While the town of Wolfeboro is actively seeking solutions, development of a watershed management plan would assist in determining the overall impact that nutrient loading to Nineteenmile Brook, and ultimately Nineteenmile Bay may have from this potential source. It is also important to note that the Tuftonboro town beach, which has been impaired due to E. coli, lies at the mouth of Nineteenmile Brook.

The Winter Harbor sub-watershed is included in the project, as it lies adjacent to the Moultonborough Bay sub-watershed within Tuftonboro and Wolfeboro. Logistically it makes sense to form one Advisory Committee to address nonpoint sources of pollution within both sub-watersheds. The project will address Tuftonboro's area of Winter Harbor only, as the town of Wolfeboro is seeking independent funding to assess Wolfeboro's portion of the Winter Harbor subwatershed.

LWA will communicate and work with Wolfeboro to share information relevant to this subwatershed. The Winter Harbor sub-watershed includes Mirror Lake, which outlets to Winter Harbor, Lake Winnepesaukee. Mirror Lake is impaired for primary contact recreation due to a cyanobacteria impairment. Water Quality data from Winter Harbor shows generally higher than average lake levels of total phosphorus. **The Mirror Lake Protective Association completed a watershed restoration plan for Mirror Lake in 2012**, and is actively implementing best management practices to reduce nutrient loading within the watershed. Information from the completed restoration plan will assist in the development of the plan for Winter Harbor.



## Moultonborough Bay Subwatershed

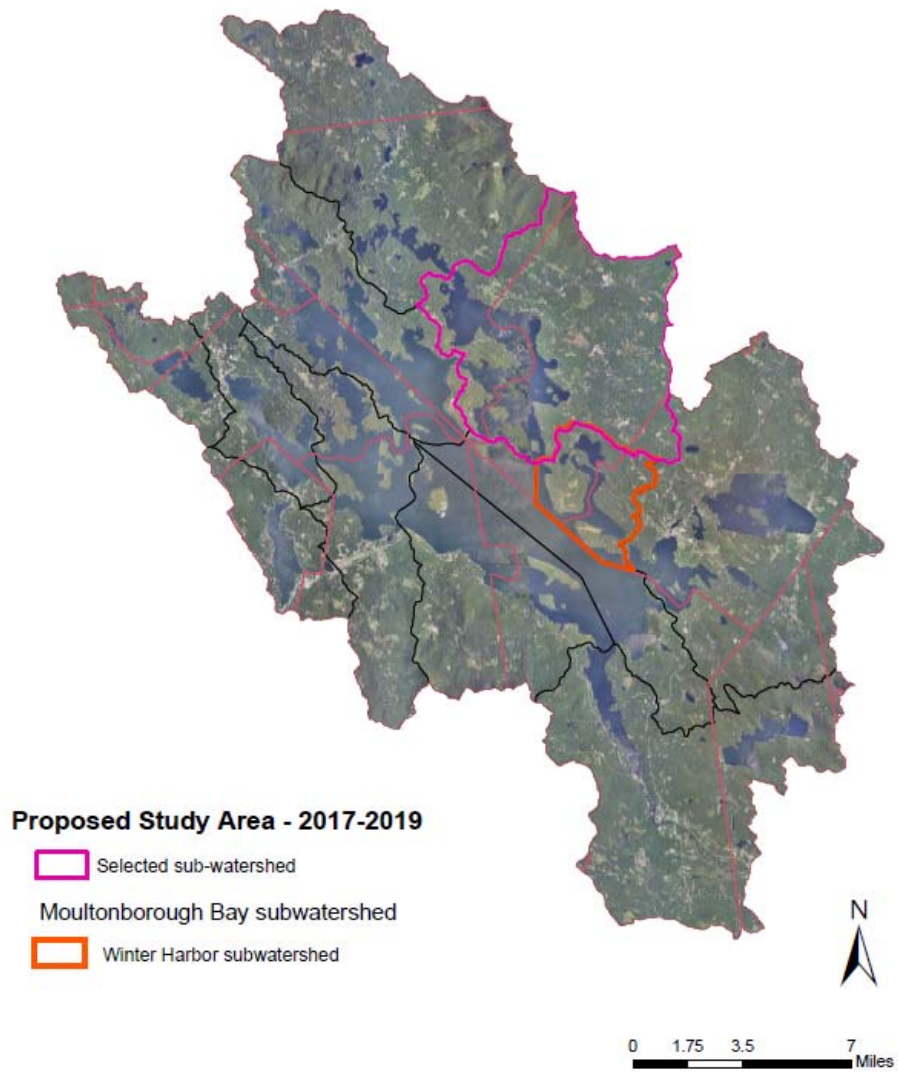


Figure 1. Map depicting the Moultonborough Bay and Winter Harbor watershed study area.

## **OVERALL PROJECT DESCRIPTION**

The scope of work for this project will begin the development of a management plan that addresses EPA's nine key elements for watershed-based plans. The overall project and scope of work represents a collaboration of entities working on various tasks and aspects of the project.

Near term results and outcomes expected from the project include setting an in-lake threshold for phosphorus for Moultonborough Bay and Winter Harbor, identification and prioritization of site specific BMPs to reduce sediment and nutrient loading, landscape management, and stormwater management through education and outreach to property owners, and nutrient reductions achieved through the implementation of stormwater improvements projects.

This stakeholder-driven process has proven successful in assisting communities in the Winnepesaukee watershed in understanding how land use and development affects their local water quality, and why development of a management plan is a necessary task for successful lake quality management and implementation.

Due to financial resources and the size of the Moultonborough Bay and Winter Harbor subwatersheds, it is not expected that this project will identify all pollution causes and sources at a significant subcategory level to fully satisfy EPA element (a). The consultant will make a determination of land use and pollutant loading for each of the major drainage catchments within the Moultonborough Bay and Winter Harbor sub-watersheds as required under element (b). One or more of the catchments contributing the highest estimated pollutant loading will be targeted for investigation and identification of pollution causes and sources.

Strategies will be identified for correcting high priority pollution sources, and identification of the resources needed and time required to accomplish the goals set forth in the watershed management plan will be determined. The consultant will provide the results of the project tasks in a written format suitable for inclusion in the draft management plan to the Lake Winnepesaukee Association. The consultant will also provide draft designs, final plans, cost estimates and bid packages for up to four (4) BMPs.

## SCOPE OF SERVICES

The consultant shall perform the following tasks as described below and in the detailed proposal titled 'Moultonborough Bay and Winter Harbor Watershed Management Plan Development' submitted by the LWA, dated January 31, 2017.

*Please note that the Objectives and Task number sequence presented below correspond to the Grant Agreement between the State of New Hampshire and the LWA. The selected firm will only be responsible for completing the Tasks as listed below. Some tasks will be a shared responsibility with the LWA.*

### **Objective 1: Preliminary Planning - Kick off the Moultonborough Bay and Winter Harbor WMP project**

Task 6: Consultant in collaboration with LWA shall hold a watershed management planning project kick-off meeting with stakeholders and the general public. LWA will publicize the meeting, invite stakeholders to join in the planning process, and introduce the selected consultant.

### **Objective 2: Preparation of Site Specific Project Plan (SSPP)**

Task 7: Consultant will assist LWA in development of the SSPP. Prepare a draft SSPP for all of the data analysis, modeling and assessment aspects of the project. LWA will provide the draft SSPP to NHDES for review and comment.

Task 8: Consultant and LWA will address draft SSPP comments and submit final SSPP to NHDES for review and approval.

### **Objective 3: Determination of Assimilative Capacity for each water quality parameter.**

Task 9: LWA will gather existing water quality data for Moultonborough Bay and Winter Harbor and provide it to the consultant to determine if it is of acceptable quality for use in analysis of assimilative capacity as per the approved SSPP.

Task 10: Determine the historical and current median P and chlorophyll-a levels for the deep water sites.

Task 11: Calculate the reserve assimilative capacity available for each parameter to maintain and meet state nutrient criteria.

Task 12: Analyze data to verify that assimilative capacity exists for current nutrient criteria for an oligotrophic waterbody.

### **Objective 4: Establish the water quality goal for phosphorus for Moultonborough Bay and Winter Harbor.**

Task 14-15: Consultant will assist in the development and documentation of the process required for formally arriving at the water quality goal for phosphorus, including participation in a facilitated meeting with the Water Quality Advisory Committee (WQAC), Steering Committee, and NHDES to agree on the water quality goal.

**Objective 5: Identify current and future pollution sources.**

Task 16: Determine and submit pollution source load estimates for the major drainage basins in the Moultonborough Bay and Winter Harbor subwatersheds. *(This task has been completed for the Mirror Lake Watershed, which is part of the Winter Harbor subwatershed.)*

Task 18: Using in-lake response models, including Vollenweider (or appropriate in-lake conversion model), in combination with empirical data, estimate in-lake phosphorus concentration and associated chlorophyll-a concentration. Submit to NHDES for review/ approval.

Task 19: Run additional modeling scenarios including natural background and build-out under current zoning. Additional scenarios may be run for near term, planned future development, or others to meet the water quality targets.

**Objective 6: Determine site specific stormwater treatment actions needed to maintain the water quality goals and future watershed conditions.**

Task 20: Determine phosphorus reductions needed to achieve the in-lake phosphorus water quality goals for current and future watershed conditions.

Task 21: Coordinate with the consultant to conduct watershed assessments for priority sub-watersheds to determine sites requiring mitigation; i.e. infiltration sites, culvert upgrades, streambank erosion sites. Provide photos, BMP descriptions, construction cost estimates.

Task 22: Estimate the load reductions expected for the management measures described under EPA element 'c' to maintain the water quality goals.

Task 23: Review results of Objectives #5 and 6 with the Steering Committee, and conduct preliminary overview of the prioritized BMP areas. Provide summary of identified sites and prioritization documentation to NHDES. Steering Committee provides input and approval on prioritization.

**Objective 7: Develop an Action Plan that outlines responsible parties, potential funding sources, approximate costs, and an implementation schedule for each action aimed at improving water quality and the means to make the water quality goals a reality.**

Task 24: Estimate the amounts of technical and financial assistance needed, associated costs, and the resources and authorities that will be relied upon to implement the management measures in the watershed management plan (element 'd').

Task 25: Review current land use regulations and ordinances in place within the Towns of Tuftonboro, Moultonborough, and Wolfeboro, and identify other potential non-structural BMPs needed in the watershed (Education/Outreach practices to be identified in Objective 8).

Task 26: Review a list of the proposed structural and non-structural BMPs with stakeholders and steering committee members in order to identify priority, and feasible schedule for the implementation of each BMP (element 'f').

Task 27: Develop and describe interim, measurable milestones for determining whether the NPS management measures or other control actions that are included in the watershed plan are being implemented as expected (element 'g').

Task 28: Coordinate with the consultant and the steering committee to assess the existing monitoring program, and propose changes as needed, so that successful implementation of the plan can be evaluated as compared to the criteria developed in Task 30 (element i).

Task 29: Compile information about the identified structural and non-structural practices needed to achieve water quality goals, and then prepare the draft Action Plan. Prepare maps or other means of identifying location of BMPs.

Task 30: Develop a set of criteria or statistical analysis that can be used to determine whether the desired phosphorus loading is being achieved over time and if substantial progress is being made towards attaining water quality standards, and, if not, the criteria for determining whether this watershed based plan needs to be revised (element 'h').

**Objective 9: Publish a Watershed Management Plan for the Moultonborough Bay and Winter Harbor Subwatersheds through incorporation with the existing Winnepesaukee Gateway website.**

Task 37: Draft components of the watershed management plan for initial review and comment by NHDES and Steering Committee. The draft watershed plan will be delivered through the Winnepesaukee Gateway Website. All materials used to support the WMP through the Gateway website and the content on the Gateway website will be provided to DES for review and comment.

Task 39: Compile, review and integrate comments into the draft WMP, and prepare the final version of the WMP.

Task 41: Publicize and hold stakeholder meeting to communicate results of the plan.

**Objective 10: BMP Design**

Task 42: Identify and provide preliminary designs for up to four BMPs identified in Objective 6. Consider estimated load reduction, cost, feasibility, and opportunity to select BMPs for design. Submit proposed selections to NHDES for review and approval.

Task 43: Design final plans, prepare cost estimates and bid packages for up to four BMPs identified in the WMP (number depends on complexity of the BMP). Provide documentation to NHDES for review and approval.

**GEOGRAPHIC SCOPE:** The project area is the Moultonborough Bay and Winter Harbor sub-watersheds (59.3 square miles), which lie within the towns of Moultonborough, Tuftonboro and Wolfeboro, NH.

## PROJECT DELIVERABLES AND ESTIMATED PROPORTION OF CONTRACT EFFORT

	Deliverables	Estimated	
		Effort %	Cumulative %
Obj. 1.	Preliminary planning	3	3.0
Obj. 2.	Preparation of the Site Specific Project Plan	2	5.0
Obj. 3.	Determination of Assimilative Capacity	1	6.0
Obj. 4.	Establish the water quality goal for phosphorus	4	10.0
Obj. 5.	Pollutant Load Modeling Scenarios and maps	27	37.0
Obj. 6.	Subwatershed Assessments	27	64.0
Obj. 7.	Watershed BMP matrix with cost/benefit analyses	8	72.0
Obj. 9.	Publish a Watershed Restoration Plan	5	77.0
Obj. 10.	BMP Designs	23	100.0

## RESOURCES:

1. Winnepesaukee Gateway website:  
<http://winnepesaukeegateway.org/lake-management/lake-management-plans/>
2. Lake Winnepesaukee Association: 'Moultonborough Bay and Winter Harbor Watershed Management Plan Development'  
<http://www.winnepesaukee.org/category/programs-2/projects/>
3. Mirror Lake Watershed Restoration Plan  
[https://www.tuftonboro.org/sites/tuftonboronh/files/uploads/mirrorlakewmp\\_final\\_05222012web.pdf](https://www.tuftonboro.org/sites/tuftonboronh/files/uploads/mirrorlakewmp_final_05222012web.pdf)
4. Normandeau Associates, 2008. Nineteenmile Brook Watershed Baseline Environmental Assessment: Aquatic Biota and Water Quality
5. Algal Study in Nineteenmile Brook. Tuftonboro Conservation Commission, 2009.
6. Normandeau Associates, 2009. Nineteenmile Brook Watershed Baseline Environmental Assessment: 2009 Stream Gaging Program
7. Additional Information on the Wolfeboro RIWDS: The most recent report on the RIB project can be obtained in hard copy from Dave Ford, DPW Director, Town of Wolfeboro.  
<https://www.wolfeboronh.us/wastewater-treatment-facility/pages/rapid-infiltration-basins-rib-reports-documents>
8. UNH Lakes Lay Monitoring Program:  
<http://cfb.unh.edu/programs/LLMP/nhllmp.htm>