

REQUEST FOR PROPOSALS

Issued by the Lake Winnepesaukee Association

for

Lake Winnepesaukee Comprehensive Protection Initiative

September 13, 2023



*"Everyone needs
some place beautiful."*

THE MILK CARTON KIDS

Photo: Carl Heilman II

Lake Winnepesaukee
Photo courtesy: Carl Heilman II

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REQUEST FOR PROPOSALS

Lake Winnepesaukee Comprehensive Protection Initiative

September 13, 2023

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, scope of work, estimated costs/budget, and proposed 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

<https://www.dropbox.com/scl/fo/3s5t5sx1m5gqjabzlpbb2/h?rlkey=2vovu4vt12tfy5c9jxyuu77c8&dl=0>

by close of business on **October 16, 2023**.

The Lake Winnepesaukee Association (LWA) 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 LWA. After the interview process, the LWA will proceed with contract negotiations with the top ranked 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 November 30, 2025.

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 (40 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, 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-based 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 NHDES water quality data, 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 working with municipal officials and stakeholders on public policy review and recommendations.

2. Project Personnel (40 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 20 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.

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 (Pat Tarpey)

Questions must be submitted by 5:00pm ET on September 29, 2023, and must have the Subject Line: "Lake Winnepesaukee Comprehensive Protection Initiative 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 (Subject: "Lake Winnepesaukee Comprehensive Protection Initiative RFQ Digest Request"). The LWA shall distribute the Q&A Digest by October 6, 2023.

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

September 15, 2023	RFQ Release
September 29, 2023	Deadline for submittal of questions on RFQ (5:00pm ET)
October 6, 2023	Q&A Digest emailed to those requesting a copy
October 16, 2023	Deadline for receipt of proposals to RFQ (5:00pm ET)
October 31, 2023	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

Lake Winnepesaukee Comprehensive Protection Initiative

September 15, 2023

INTRODUCTION

The Lake Winnepesaukee Comprehensive Protection Initiative builds on thirteen years of effort by the Lake Winnepesaukee Association (LWA) 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.

Because of the size of the Winnepesaukee watershed, the LWA has been developing watershed-based plans (WBP) at the subwatershed level. The association has been a lead partner and project manager in the development of six watershed-based plans for the lake, and currently is working on a watershed-based plan for the Wolfeboro Bay subwatershed. LWA will work with the local communities around the lake to develop watershed-based plans for the remaining areas of the lake - Alton Bay, Center Harbor Bay, and the Broads (Figure 1). In addition, LWA plans to update the WBPs for Meredith Bay, Sanders Bay, and Paugus Bay.

Lake Winnepesaukee, NHLAK700020110-02-19, has been listed on the 303(d) list of threatened or impaired waters for primary contact recreation use due to the occurrence of cyanobacteria. Although it was removed from the 2020/2022 303 (d) list for cyanobacteria, there were 5 advisories and 3 alerts for cyanobacteria issued in 2022, and so far in 2023, 4 alerts and 2 advisories have been issued. Three waterbodies in the Winnepesaukee watershed which drain to the lake, have also had cyanobacteria advisories issued this 2023 season; Lake Kanasatka, Mirror Lake, and Lake Wentworth. As the number of advisories have increased since 2020, it is likely Lake Winnepesaukee will once again be listed as impaired for primary contact recreation due to cyanobacteria.

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.

Development of EPA nine key element ('a-i') watershed-based plans for the remaining subwatersheds will capture a snapshot of the health of the waters in Lake Winnepesaukee, result in the identification of sources of pollutants and provide a roadmap for mitigation and protection efforts in the future.

Representatives from the Towns of Alton, Gilford, Laconia, Meredith, Center Harbor, Moultonborough, Tuftonboro, 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

Lake Winnepesaukee is New Hampshire's most valuable fresh water resource, nationally and internationally renowned for its remarkable setting, outstanding water clarity, and abundant fishery. It is also the main driver of the region's tourism economy. However, the lake's ecosystem is under threat from stormwater runoff, invasive plant and animal species, nutrient loading, and more.

Nutrient over loading is one of the major threats to the lake, and the nutrient of concern is phosphorus. More than 40 years of scientific data show an increase in concentration of in-lake phosphorus from natural background levels of 4.0 ppb to over 15 ppb in the northern part of the lake. Excessive levels of phosphorus have led to significant water quality problems including harmful cyanobacteria blooms affecting people and animals, hypoxia (low oxygen), and declines in aquatic and wildlife habitat.

The Lake Winnepesaukee watershed, located in Belknap and Carroll Counties in the lakes region of New Hampshire, drains to Lake Winnepesaukee, the largest freshwater body in the state with a size of 44,586 acres and total watershed area of 236,225 acres, or 369 square miles. The watershed encompasses a total of fourteen communities; eight of which are shorefront comprising approximately 87% of the land area. The eight shorefront communities are Moultonborough, Tuftonboro, Wolfeboro, Alton, Gilford, Laconia, Meredith, and Center Harbor. Additional communities in the watershed include Sandwich, Brookfield, New Durham, Gilmanton, New Hampton, Ashland, and Holderness.

The lake located at 43°35'56" N Latitude and 71°19'23" W Longitude, is highly irregular in shape encompassing approximately 240 miles of shoreline (includes the shoreline of islands over 5 acres in size). The surface water area of the lake occupies 44,586 acres; however water from lakes, ponds, streams and rivers in the watershed account for another 11,056 acres, which drain to Winnepesaukee. The total surface water makes up approximately 23.5% of the total watershed area. The major tributaries and waterbodies contributing large volumes of water to Lake Winnepesaukee include Lake Waukegan, Meredith; Lake Kanasatka, Lees Pond, and Shannon Brook, Moultonborough; Melvin River, Cops Ponds, Twentymile Brook, Nineteenmile Brook, Mirror Lake, Tuftonboro; Lake Wentworth, Wolfeboro; Merrymeeting Lake and Merrymeeting River, Alton; Poor Farm Brook and Gunstock Brook, Gilford. The physical shoreline ranges from boulder-strewn to sandy. Some back bay areas have wetland shorelines, mostly in the far northern end of Moultonborough Bay Inlet; in Green's Basin and Lees Mills.

Watershed-based plans have been developed for Lake Waukegan, Meredith Bay, Paugus Bay, Sanders Bay, Moultonborough Bay Inlet, Moultonborough Bay, and Winter Harbor. A WBP is currently being developed for the Wolfeboro Bay subwatershed. In addition to the development of new WBPs, LWA will update plans for Meredith Bay, Paugus Bay, and Sanders Bay, which were completed over 10 years ago, and did not include watershed and shoreline surveys.

The development of watershed-based plans (WBPs) will identify sources of pollution to the lake, and provide a roadmap for mitigation and protection efforts in the future, by estimating pollutant reductions needed, and the actions necessary to meet those reductions. The WBPs will include a water quality data review, establishment of water quality goals for phosphorus, pollutant load modeling scenarios, subwatershed assessments, maps, and a watershed action plan including costs, authority, a schedule for implementation, milestones and success indicators, and a monitoring plan to evaluate effectiveness of implementation efforts over time.

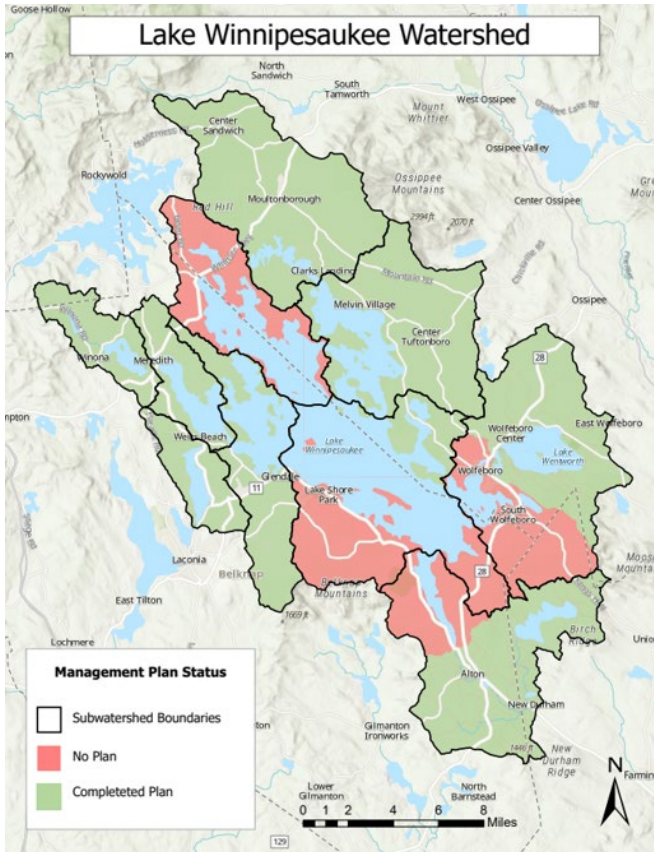


Figure 1. Map depicting the current watershed-based planning status.

OVERALL PROJECT DESCRIPTION

The scope of work for this project involves the development of EPA nine key elements watershed-based plans for three Winnepesaukee basin areas. 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 in-lake water quality goals for phosphorus for Center Harbor Bay, the Broads, and Alton Bay, identification and prioritization of site-specific measures 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.

SCOPE OF SERVICES

The consultant shall perform the following tasks as described below for the project titled '*Lake Winnepesaukee Comprehensive Protection Initiative*'. Some tasks are not listed and will be the responsibility of LWA.

Task 1: Project Management & Administration – Kick off the Lake Winnepesaukee Comprehensive Protection Initiative.

Consultant in collaboration with LWA will hold 3 kick-off meetings with stakeholders and the general public for Center Harbor Bay, the Broads, and Alton Bay watershed-based plans. LWA will publicize the meetings, invite stakeholders to join in the planning process, and introduce the selected consultant.

The consultant will provide project progress updates to LWA at their request.

Task 2: Preparation of Site-Specific Project Plan (SSPP)

Consultant will prepare a draft SSPP for all of the data analysis, modeling and assessment aspects of the project. LWA will provide the draft SSPP to USEPA for review and comment.

Consultant and LWA will address draft SSPP comments and submit final SSPP to USEPA for review and approval.

Task 3: Water Quality Data Review and determination of Assimilative Capacity for Total Phosphorus and Chlorophyll-a.

The consultant will gather existing water quality data for Center Harbor Bay, the Broads, and Alton Bay and summarize it according to the latest version of the NHDES Consolidated Assessment and Listing Methodology (CALM) and compare it to trophic state criteria. The consultant will determine if it is of acceptable quality for use in analysis of assimilative capacity as per the approved SSPP.

The consultant will determine the historical and current median TP, chlorophyll-a, water clarity levels for the deep-water sites in each subwatershed.

The consultant will conduct the assimilative capacity analysis in accordance with the Standard Operating Procedure for Assimilative Capacity Analysis for New Hampshire Waters (Appendix B in the NHDES guidance for Developing Watershed Management Plans in New Hampshire for Section 319 Nonpoint Source Grant Program Project).

The consultant will analyze data to verify that assimilative capacity exists for current nutrient criteria for an oligotrophic waterbody, and provide a summary report/technical memorandum to LWA.

Task 4: Pollutant Load Modeling Scenarios

The consultant will determine annual pollution source loads for each subwatershed using the Pollutant Load Estimation Tool (PLET) or other approved method. Data needed for the model includes water quality monitoring data, physical characteristics of the lake, precipitation data, septic system information, GIS land use data, subwatershed land area, and more. Model output includes an estimate of nutrient and sediment loads by land use type and source group (e.g. atmospheric deposition, internal load, waterfowl, septic systems, and watershed). Consultant will produce maps for each subwatershed showing major drainage basins, land cover, soil erosion potential, bathymetry, etc.

Using in-lake response models, such as the Lake Loading Response Model (LLRM), in combination with empirical data, the in-lake phosphorus concentration, associated chlorophyll-a concentration, secchi disk transparency, and algal bloom probability for each sub-basin will be estimated. The results will represent current conditions, and will be summarized in a report provided to LWA. LWA will submit to the report to USEPA for review and approval.

Once the model has been calibrated for current conditions, additional modeling scenarios will be run to estimate historical and future pollutant loading under build-out based on current zoning restrictions. The results will be used to help identify which areas of the watershed have the greatest pollutant loading currently or potentially in the future, and thus which areas should be targeted for management actions. Results of the modeling and build-out analysis will be summarized in a report and provided to LWA.

LWA and the consultant will hold stakeholder meetings to communicate and review the results of Objectives 3 and 4.

Task 5: Establish water quality goals for phosphorus. The water quality goals for in-lake TP set by the communities will determine the amount of phosphorus reduction needed, and will assist in the selection process of pollutant-controlled measures and best management practices for installation/implementation throughout the subwatersheds.

LWA will invite and convene representatives from NHDES, UNH Center for Freshwater Biology, water quality monitors, and town officials to review the results of the water quality data review and assimilative capacity analysis. The consultant will assist in the development and documentation of the process required for formally arriving at the water quality goals for phosphorus, including participation in facilitated meetings with the Steering Committees for each subwatershed.

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

The consultant will determine the phosphorus reductions needed to achieve the in-lake phosphorus water quality goals set in Objective 5 for current and future watershed conditions.

Coordinate with the LWA to conduct watershed assessments to determine sites requiring mitigation; i.e. infiltration sites, culvert upgrades, streambank erosion sites.

Following the field work, the consultant will provide a list of identified mitigation sites that will document GPS location, issues observed, recommended BMPs, estimated load reductions, estimated costs, technical assistance required, and photo documentation.

LWA and the consultant will review the results of Task 6 with the Steering Committees, and conduct preliminary overview of the prioritized BMP sites in each subwatershed. The Steering Committees will provide input and approval on prioritization of structural BMP sites. The consultant will provide a summary of identified sites and prioritization documentation to LWA, which will be submitted to USEPA.

Task 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.

The consultant will 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 identified in the watershed-based plans.

The consultant will develop a list of the proposed structural and non-structural BMPs and review with the steering committee members in each subwatershed in order to identify priority, and feasible schedule for the implementation of each BMP.

The consultant will develop and describe interim, measurable milestones for determining whether the NPS management measures or other control actions that are included in the watershed plans are being implemented as expected.

Coordinate with the LWA and steering committees 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 as part of the plan.

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.

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 the watershed-based plans need to be revised.

Task 8: Draft and finalize a-i Watershed-Based Plans for Center Harbor Bay, the Broads, and Alton Bay Subwatershed.

Draft components of the watershed-based plans for initial review and comment by USEPA and the Steering Committees.

Compile, review and integrate comments into the draft WBPs, and prepare the final version of the WBPs, which must be ADA compliant.

Publicize and hold stakeholder meetings to communicate results of the plan.

GEOGRAPHIC SCOPE: The project area is the Lake Winnepesaukee Watershed, specifically, Center Harbor Bay, the Broads, and Alton Bay sub-watersheds, which lie within the towns of Meredith, Center Harbor, Moultonborough, Tuftonboro, Wolfeboro, New Durham, Alton, and Gilford, NH.

PROJECT DELIVERABLES AND ESTIMATED PROPORTION OF CONTRACT EFFORT

	Deliverables	Estimated	
		Effort %	Cumulative %
Task 1.	Project Management and Administration	2	2.0
Task 2.	Preparation of the Site-Specific Project Plan	3	5.0
Task 3.	Water Quality Data Review	3	8.0
Task 4.	Pollutant Load Modeling Scenarios and maps	26	34.0
Task 5.	Establish the water quality goals for phosphorus	4	38.0
Task 6.	Subwatershed Assessments	22	60.0
Task 7.	Watershed BMP matrix and Action Plan	20	80.0
Task 8.	Draft/Final Watershed-Based Plans & Presentations	20	100.0

RESOURCES:

1. Lake Winnepesaukee Association website: <https://www.winnepesaukee.org/lakemanagement/>
2. New Hampshire Department of Environmental Services (NHDES). 2010a. *Guidance for Developing Watershed Management Plans in New Hampshire for Section 319 Nonpoint Source Grant Program Project*. August 22, 2008, revised April 14, 2010.
3. New Hampshire Department of Environmental Services (NHDES). 2021. *New Hampshire Department of Environmental Services Nonpoint Source Management Program Quality Assurance Program Plan*, EPA RFA # 20097, dated August 2021.
4. New Hampshire Department of Environmental Services (NHDES). 2022. *State of New Hampshire 2020/2022 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology* (dated February 18, 2022). Retrieved from: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/r-wd-20-20.pdf>
5. United States Environmental Protection Agency (USEPA). *Pollutant Load Estimation Tool (PLET)*. <https://www.epa.gov/nps/plet>
6. NHDES 2020/2022 Surface Water Quality Assessment Viewer: <https://nhdes.maps.arcgis.com/apps/webappviewer/index.html?id=d1ba9c5ec85646538e032580e23174f7>
7. UNH Lakes Lay Monitoring Program: <https://extension.unh.edu/natural-resources/land-conservation-water-resources/lakes-lay-monitoring-program>