



**2017 WATERSHED ASSISTANCE GRANTS
FULL PROPOSAL APPLICATION FORM**
Watershed Management Bureau/Watershed
Assistance Section



RSA/Rule: Voluntary

Submittal Deadline - 4:00PM January 31, 2017

Please contact your NHDES project leader for assistance with any part of this application

1. PROJECT TITLE

Moultonborough Bay and Winter Harbor Watershed Management Plan Development

Include the name of the waterbody, management plan status, and phase of the project in your title. E.g., Crystal Lake Watershed Management Plan Implementation Phase 2: Smith Street Best Management Practices (BMPs).

2. APPLICANT INFORMATION

A. Organization Name: Lake Winnepesaukee Association

B. Project Manager

Project manager's name:	Patricia Tarpey
Title:	Executive Director
Affiliation:	Lake Winnepesaukee Association
Street address:	P.O. Box 1642
City, State, ZIP:	Meredith, NH 03253
Day phone: (603) 581-6632	Fax: () Email: ptarpey@winnepesaukee.org

C. Legal Contact (Officer legally authorized to sign agreements)

Legal Contact's name:	Diane Hanley
Title:	President
Affiliation:	Lake Winnepesaukee Association
Street address:	P.O. Box 1642
City, State, ZIP:	Meredith, NH 03253
Day phone: (603)387-3429	Fax: () Email: dhanley81@icloud.com

Signature of Legal Contact: _____ **Date:** _____

If an applicant does not have a DUNS number, they must obtain one. DUNS registration can be completed through Dun and Bradstreet at www.dnb.com or by calling 1-866-705-5711.

D. Data Universal Numbering System (DUNS) Number: 067515291

When applicable, the applicant must provide their Executive Compensation Data, including: The names and total compensation of the five most highly compensated officers if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

Note: Total compensation is the cash and non-cash dollar value earned by an executive during the preceding fiscal year and includes the following: salary and bonus; awards of stock; earnings for services under non-equity incentive plans; change in pension value; and, above-market earnings on deferred compensation which is not tax-qualified.

E. Please check the applicable box:

By signing this application I certify that the Executive Compensation Data requirements of the FFATA do not apply to the Applicant organization.

By signing this application I certify that the Executive Compensation Data requirements of the FFATA apply to the Applicant organization and the Applicant agrees to provide information to DES as required by the FFATA.

3. PROJECT LOCATION

A. Town(s): **Moultonborough, Tuftonboro, Wolfeboro, NH**

Does project involve other states? Yes No

B. What water body does it affect? **Moultonborough Bay, and Winter Harbor, Lake Winnepesaukee**

12-digit hydrologic unit code (HUC): 010700020104, 010700020106

C. Attach a project location map showing the watershed and relevant project site locations (required).

D. Small Municipal Separate Storm Sewer System (MS4) Certification:

By signing this application I certify that the proposed project is not located within a regulated MS4 area.

By signing this application I acknowledge that the project location is within a regulated MS4, and certify that the actions undertaken through the project do **not** implement requirements of a MS4

HUC look-up:
<http://www2.des.nh.gov/SWQA/> or contact your NHDES project leader for assistance.

Permit, the Multi-Sector General permit, or Construction General Permit. Additionally, the municipality will not claim work completed through this project for credit toward implementation of MS4 requirements.

If at any time, the work being funded pursuant to this grant agreement is required to be implemented by a MS4 permit, or is determined to be required to be implemented pursuant to a MS4 permit, the work from that time forward will no longer be eligible for funding under this grant agreement.

4. PROJECT TYPE

A. Include impairment information, if applicable:

Does the project area include impaired waters? **Yes X** **No**

Does the project address the identified water quality impairment(s)? **Yes X** **No**

Designated Use(s) impaired: Primary contact recreation

Specific cause(s) of impairment: Occurrence of cyanobacteria, source unknown

Designated Use impairments and causes of impairments are identified on the *2012 305(b)/ 303(d) Surface Water Quality Assessment* or on the draft 2014 assessment. If the waterbody is not listed as impaired, describe and attach documentation of the impairment.

B. Check the applicable project type(s):

a. Watershed-based Plan Preparation **X**

b. Watershed-based Plan Implementation

c. Implementation of an accepted alternative plan

5. PROJECT SUMMARY

A. Project Period

Note the general time frame for projects funded in 2017 is May 1, 2017 through December 31, 2019. The duration can vary, and actual start date will be dictated by EPA, and Governor and Council approval date.

Anticipated Start Date: *May 1, 2017* Projected End Date: *December 31, 2019*

B. Statement of Purpose

Provide a project narrative describing the purpose of the project, the types of nonpoint sources and water quality problems or threats to be addressed, and the questions that will be answered as a result of project implementation. Include relevant scientific, historic, or regulatory supporting information.

Lake Winnepesaukee, NHLAK700020110-02-19, is currently listed on the 2014 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.

Due to the size of Lake Winnepesaukee's watershed, watershed management and restoration plans are being developed at the sub-watershed level. Development of a watershed management plan for the

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Moultonborough Bay subwatershed will continue the effort to develop a comprehensive Lake Winnepesaukee Watershed Management plan by providing watershed and water quality analyses that will identify sources of pollutants in the subwatershed that are contributing nutrient loading to the lake.

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 is in development 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 also 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. However, inclusion of this subwatershed will be dependent on approval of a warrant article authorizing the contribution of \$15,000 toward the project. 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 lake average 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.

C. Executive Summary

In **200 words or less**, provide an Executive Summary of the proposed project suitable for a press release including: the general location (municipalities, counties, and watersheds); water quality threat or impairments; causes or sources of water quality threats or impairments; proposed management activities, e.g., stormwater BMPs to be constructed; proposed deliverables; desired project outcome; and how success will be verified.

Lake Winnepesaukee, NHLAK700020110-02-19, is currently listed on the 2014 Draft 305(b)/303(d) list of threatened or impaired waters for primary contact recreation use due to the occurrence of cyanobacteria (source unknown). It is imperative to continue working with communities around the lake in order to identify pollution sources that are contributing to the impairment. A watershed management plan for the Moultonborough Bay and Winter Harbor subwatersheds will continue the progress in developing a comprehensive Lake Winnepesaukee Watershed Management plan by providing watershed and water quality analyses that will identify sources of pollutants in the sub-watershed that are contributing nutrient loading to the lake.

The Moultonborough Bay subwatershed is 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 Wolfboro, Lake Winnepesaukee Association, Geneva Point Center, Bald Peak Colony Club, summer camps, homeowner associations and residents will work together to develop an action plan of strategies that will protect the value, uses, and beauty of the lake for many generations.

6. DESIRED ENVIRONMENTAL OUTCOME

Please provide a concise statement of the expected environmental result, outcome, or end-state that this project strives to achieve. If the environmental outcome is not expected to be achieved until after the project period, explain how this project will make progress toward the outcome. Goal-setting and results-planning can help water resource managers develop more deliberate project designs and achieve optimal project outcomes, e.g., watershed phosphorus loading will be reduced by 28 lbs./yr. resulting in lake phosphorus levels below 7.2 µg/l; the impaired river segment is in a state of equilibrium based on stream morphology principles; or, ambient fecal coliform bacteria levels will be reduced to enable reopening of a closed shellfish harvest area (18 acres).

The Moultonborough Bay sub-watershed is predominantly forested exhibiting good stream and lake quality. The development of an EPA nine key element watershed management plan for the MB sub-watershed will result in the identification of sources of pollutants and the actions necessary to correct them that will improve existing lake quality and aquatic habitat.

Near term results and outcomes expected from the project include setting an in-lake threshold for phosphorus, 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.

Mid-term results and outcomes expected will depend upon the implementation of actions identified in the plan. The prioritized implementation strategy developed as part of this plan will provide project partners/stakeholders with a tool to guide the selection and implementation of actions toward the goal for water quality improvement and protection.

Long-term results and outcomes expected from implementation of a fully developed plan are:

- *Maintaining the high quality water in Moultonborough Bay*
- *a reduction in phosphorus, nitrate and bacteria levels in Moultonborough Bay due to proper septic system maintenance, and upgrades to or replacement of aging septic systems*
- *a reduction in nutrient loading to the Broads resulting from the reduction of in-lake TP levels in Moultonborough Bay*
- *a decrease in public expenditures to address water quality impairments.*
- *Removal of Lake Winnepesaukee from the State's list of impaired waters.*

7. STAKEHOLDER COORDINATION, ROLES, AND RESPONSIBILITIES

Describe participation and commitments expected from other agencies, organizations and municipalities. Provide letters affirming commitment and approval from any BMP construction location property owners, and/or match providers (required).

The Lake Winnepesaukee Association (LWA) is dedicated to protecting Winnepesaukee's water quality and natural resources through monitoring, education, stewardship, and science guided approaches for lake management. As the local lake association whose mission is to protect this valuable resource, LWA is strongly committed to development of a comprehensive management plan for the lake.

LWA will be the project manager and administrator for the project. LWA has been a lead partner in the effort to develop a watershed-wide management plan for Lake Winnepesaukee, beginning with the completion of the Meredith, Paugus, Saunders Bay Sub-watershed Management Plan (on file with NHDES and found on the Winnepesaukee Gateway at www.winnepesaukeegateway.org).

On September 30, 2016, LWA completed a Watershed Restoration Plan for Lake Waukewan and Lake Winona, which is an update to the 2005 Waukewan Watershed Management Plan, making it compliant with EPA's nine (a-i) criteria.

LWA is currently developing a watershed restoration plan for Moultonborough Bay Inlet. As MBI flows into Moultonborough Bay, the pollutant load and in-lake analyses will serve to inform the modeling for the Moultonborough Bay sub-watershed. The plan will be completed in 2017.

The Tuftonboro Conservation Commission(CC) will be an active participant in the project. As mentioned, the Tuftonboro CC has been concerned and actively monitoring the Wolfboro RIWDS as it has the potential to significantly and negatively impact Nineteenmile Brook and Moultonborough Bay. The Tuftonboro CC will continue to monitor the operation of the RIWDS and any alternative solutions proposed. In addition, the CC is actively pursuing land conservation along the Melvin River and Great Meadows wetland complex, has been proactive in the establishment of a Lake Host and Weed Watchers Program, support of water quality monitoring, and participation in the Mirror Lake Watershed Committee. The Tuftonboro CC has a warrant article in place for the 2017 Town Meeting to raise and appropriate \$15,000 toward the development of the Moultonborough Bay Management Plan.

Lakes Region Planning Commission plans to work with the town of Tuftonboro on inventorying and assessing all culverts within the community, using NH DOT's protocols. This information will add value to the management plan in identifying sites in need of mitigation.

The Town of Moultonborough will be an active participant in the project. Representatives have agreed to serve on the Advisory Committee, and the Conservation Commission is active in Weed Watchers, Lake Host, Water Quality Monitoring, and Milfoil Control programs.

Mirror Lake Protective Association will assist with education and outreach within their watershed community.

NH LAKES will assist with education and outreach in the watershed conducting the Watershed Warrior program, Lake Host program, and education on invasive species and other lake related issues.

8. WATERSHED-BASED PLAN

See the NHDES webpage for examples of completed [Watershed-based Plans](#), and see [Info Packet](#), Attachment A for more information about the elements (a through i) of a watershed based plan.

Note: Proposals for **projects dealing with geomorphology-based restoration or hydromodification** are not required to address the pollutant loading element b) below, but must demonstrate that the assessment unit is impaired or threatened according to the criteria as detailed in the CALM, and that completion of the project will lead to removal of that impairment; please contact us prior to submitting this application.

Describe how the project will either develop or implement the required elements of a watershed based plan (a-i below). The plan should address measures intended to maintain or meet a quantifiable water quality goal.

a. Identify pollution causes and sources:

LWA will issue a request for qualifications from environmental consulting firms that have a proven track record of developing successful watershed management plans that incorporate the required elements (a-i) from EPA, and for conducting watershed assessments to identify and prioritize areas in need of best management practices that target nonpoint source pollutants. The consulting firm will draw upon existing resource materials, including 305(b)/303(d) listings, UNH-LLMP annual reports, Wolfboro RIWDS reports, water quality data, NHDES Trophic Lake Survey Reports, and NHDOT culvert assessments to supplement

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watershed investigations designed to identify those pollution sources that need to be controlled in the watershed. Once sources have been identified, they will be prioritized for remediation based upon severity of impact to surface waters within the watershed, and the cost effectiveness of pollutant reductions. The consulting firm and project partners will generate a list of pollution causes and sources developed at the sub-watershed level such as;

1. Identification of non-functioning or improperly sized catch basins
2. Number and location of existing stormwater BMPs in watershed that are not being maintained and/or are not functioning as designed
3. Linear feet of stream banks and stormwater swales with active erosion
4. Number of culverts and/or barriers causing severe hydromodification (partner with LRPC and NHDOT)
5. Number of acres and/or linear feet of poor quality or missing riparian buffer
6. Number of subsurface on site wastewater disposal systems potentially in failure or in need of remediation
7. Number of miles of gravel roads that require drainage BMPs

b. Estimate pollution reductions needed:

Based upon the nonpoint source pollutant list generated by the selected consultant, as presented under section a, and the outcome(s) of running various watershed models (STEPL, AVGWLF, LLRM, etc.) pollution reduction estimates will be generated for the Moultonborough Bay and Winter Harbor subwatersheds. The goal will be to determine the pollutant reductions needed to meet watershed protection goals throughout the watershed. The water quality goal 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 control measures and best management practices for installation/implementation throughout the watershed.

The associated pollutant loading and in-lake response analyses will include but may not be limited to the following:

- *Evaluation of existing water quality data in the Moultonborough Bay and Winter Harbor sub-watersheds from all available sources.*
Some water quality and flow data have been gathered for Nineteenmile Brook due to the Wolfeboro RIWDS. A tributary monitoring study conducted in 2004-05 by the LWA on Wingate Brook, Melvin River, Twentymile and Nineteenmile Brooks, may provide baseline data. Water quality analyses may identify the need to re-establish monitoring of these streams.
- *Establishment of a threshold for phosphorus loading in the sub-watersheds using STEPL or another land use model predicting watershed P loads, based on current and future watershed loading conditions and the lake's assimilative capacity.*
- *Verify watershed P load models using in-lake P prediction models.*
- *Establishment of an in-lake TP goal or threshold for Moultonborough Bay and Winter Harbor.*

c. Actions needed to reduce pollution:

The consulting firm selected for this project will be tasked with developing a prioritized list of pollution sources in the watershed, the pollutant loading contributed to receiving waters from each source, as well as pollution reduction estimates. Maps may be generated at the watershed, subwatershed, and reach/site specific scale to illustrate those areas in need of restoration actions called for in the plan. Individual site sheets will be compiled for each proposed BMP that will identify location, issue, recommended action, estimated pollutant loading, and cost/lb. of TP removed.

Potential pollutant reduction measures will be identified for each priority area in the watershed in conjunction with the pollutant reduction efficiencies for each technique. Structural and non-structural best management practice measures will be identified through this process. The predicted success rate of each measure along with associated costs will also be developed. The various management alternatives will be evaluated and ranked to develop the “best fit” and/or best “bang for the buck” scenario for each priority area in the watershed.

d. Costs and authority:

The completed watershed management plan will have technical and financial estimates for the required engineering, permitting, and construction and maintenance actions identified in the plan.

As part of (c) above and (f) below, a schedule of actions will be developed that will include estimates of the technical and financial resources that will be necessary for implementation. Potential sources of technical and financial (direct funding and in-kind match) assistance to the communities are:

Town of Tuftonboro Conservation Commission

Town of Moultonborough Conservation Commission

Town of Wolfeboro – DPW is actively pursuing development of watershed plans and implementing best management practices for Wolfeboro

Lakes Region Planning Commission – ability to secure 604(b) grant monies for water quality protection

Carroll County Conservation District – ability to access technical assistance through USDA Natural Resource Conservation Service

USDA Natural Resource Conservation Service – financial opportunities through the Farm Bill Programs

Lake Winnepesaukee Association – outreach and education assistance, grant writing assistance

UNH Center for Freshwater Biology – Limnology and water quality monitoring assistance

UNH Cooperative Extension – assistance with outreach and education

NH LAKES – assistance with outreach and education.

NHDES Watershed Assistance Section – Section 319 funding and technical assistance

NHDES Soak Up the Rain - technical assistance for installation of small BMPs on individual properties

e. Outreach and education:

The town of Tuftonboro has been active in land conservation, Lake Host, Weed Watcher and Milfoil Control activities, as well as a long time participant in UNH's Lakes Lay Monitoring program. Tuftonboro has a strong and committed milfoil committee as well as being a member of the joint Milfoil Committee with the towns of Moultonborough and Wolfeboro. Representatives from the Conservation Commission also serve on the Mirror Lake Watershed Committee.

The town of Moultonborough has been an active and effective partner in outreach and education in the development of the Moultonborough Bay Inlet Watershed Restoration Plan currently in progress. The Conservation Commission looks for opportunities to educate the public on the issues relating to landscape management, septic design and maintenance, and stormwater management, and is highly interested in sharing information about the watershed with the community in order to enhance their efforts to protect water quality. Moultonborough's outreach and education efforts with regards to milfoil management have been highly successful, and have resulted in an impressive annual appropriation of ~\$200,000 for the last five years.

The town of Wolfeboro has also been active in educating the public on the importance of watershed management planning for the protection of water quality. The town is using the knowledge gained from the development of the Lake Wentworth Watershed Management Plan to raise town funds for implementation and development of watershed plans for the remaining areas of town, and is seeking funding in 2017 to develop a management plan for the Winter Harbor subwatershed.

LWA will utilize the local municipal, homeowner and lake associations to enhance public understanding of the link between land use and water quality, as well as the role of phosphorus as a nutrient for aquatic plant and algal growth. Some of the anticipated education and outreach efforts are as follows:

- *Creation of a Moultonborough Bay Watershed Advisory Group that will be involved with the development of the management plan.*
- *Public Education Program – 'Soak up the Rain', watershed and landscape management, water quality, etc.*
- *Voluntary participation in calculating property owners stormwater pollutant footprint using the online "What's Your P?" calculator on the Winnepesaukee Gateway website (based on the New Hampshire Residential Loading Model).*
- *The utilization of "WECAN", the Winnepesaukee Environmental and Community Action Network, to share information, communicate with other communities and stakeholders, such as Island assoc., camps, homeowner assoc., businesses, etc., and provide an online venue of resources in support of the Lake Winnepesaukee Watershed Management Plan.*
- *Integration of the Moultonborough Bay Watershed Management Plan into the LWWMP on the Winnepesaukee Gateway website.*

f. Schedule:

An implementation schedule will be developed by the consultant and stakeholders that identifies actions, pollutants addressed, estimated load reductions, technical assistance or resources needed, costs, funding sources, and anticipated timetable. The LWA will work with our project partners, municipalities, and

watershed stakeholders to ensure that the schedule is realistic, achievable, and contains outcomes that are measurable.

g. Milestones:

- *A water quality monitoring component is currently in place in Moultonborough Bay. Tracking of in-lake TP over time will measure whether or not NPS management measures (structural and non-structural) are being implemented successfully throughout the watershed, and whether the community is achieving the water quality goal threshold determined in the plan.*
- *A decrease in the number of acres treated with herbicide for milfoil each year.*
- *A decrease in the number of acres of milfoil removed through mechanical suction harvesting or handpulling.*
- *Reduction in number of beach postings/closures due to elevated E.coli (bacteria) levels*
- *Water quality data collected from continued participation in UNH LLMP water quality monitoring program will track trends for TP and Chl-a.*
- *Changes in local regulations, ordinances, or homeowner's association by-laws, design and construction standards, and maintenance practices that address nonpoint source issues*
- *Implementation of best management practices by community, i.e. number of feet of stream bank stabilized, length and width of vegetated buffers established on shoreline, number of catch basins retrofitted.*
- *Number of properties that have completed the Residential Loading Model*
- *Number of rain gardens or other small homeowner stormwater BMPs installed*

h. Success indicators and evaluation:

Indicators are derived directly from tasks identified in the Watershed Management Action Plan and include environmental, programmatic, and social indicators that serve to measure progress toward meeting the goals and objectives identified in the plan. Examples of potential indicators are:

Environmental indicators

- *An active water quality monitoring program within the watershed will be a primary indicator for measuring reductions in pollutant loading on a watershed scale. Selection of sites, frequency of sampling, parameters measured, etc. will be based on identification of problem areas, land use, impairments, etc. identified during the development of the management plan.*
- *Removal of Melvin Village Lake – Town Pier, and the Tuftonboro Public Beach from the 303(d)/305 b list for a severe impairment for primary contact recreation use due to E. coli.*
- *In-lake TP and Chl-a concentrations are improved leading to improved water clarity, and removal of Lake Winnepesaukee from impaired lake status due to cyanobacteria.*

Programmatic Indicators

- *Adoption of municipal ordinances and regulations that address stormwater management, septic systems, water resource protection overlay districts, etc.*
- *Number of priority sites remediated with recommended BMPs*

- *Number of acres of new land in conservation*
- *An operations and maintenance plan/agreement in place for any structural best management practice that may be implemented in order to ensure ongoing maintenance and proper functioning. This will be an essential tool for monitoring success that ensures that data entered into pollutant load reduction models is accurately portraying BMPs that are fully functioning.*
- *An annual BMP inspection and evaluation program within the watershed to ensure that historical BMPs and those installed as a result of the watershed management plan are functioning as intended and achieving the pollutant load reductions required.*
- *Annual review of the watershed management plan and the measurable milestones/success criteria by the community to determine if the actions implemented are succeeding; if monitoring data indicates efforts are not improving water quality, the strategies identified will be revisited.*
- *Amount of funding secured for plan implementation through fundraisers, donations, and grants*

Social Indicators

- *An active “WECAN” (Winnepesaukee Environment and Community Action Network) to share information and resources throughout the watershed.*
- *Increase in number of residential properties that have had the Residential Loading Model (RLM) completed and then had the companion “Homeowners Guide to Stormwater Management” applied to develop BMPs to reduce phosphorus runoff.*
- *Number of new volunteers generated for weed watchers, milfoil management, water quality monitoring, etc.*
- *Voluntary implementation of small BMPs by homeowners.*

i. Monitoring plan:

The UNH LLMP already has an active monitoring program in Moultonborough Bay that will continue into the foreseeable future. However, the development of a watershed management plan will help assess current monitoring and determine if additional sites should be added.

The Tuftonboro Milfoil Committee is a participant in Weed Watchers, the Lake Host Program and is actively monitoring the spread of milfoil and other invasive species.

The town of Moultonborough has a strong Weed Watcher Program, Milfoil Committee, and Lake Host Program. They are also involved with Tuftonboro and Wolfboro in a Tri-Town Milfoil Committee in order to enhance efforts through joint management. The Moultonborough Conservation Commission is actively educating residents about the connection between land use and water quality, and is strongly involved in the UNH LLMP. Moultonborough is also committed to implementing best management practices to reduce nutrient loading to Lake Winnepesaukee.

As land use changes and best management practices are installed, pollutant load reduction models will be updated to reflect these changes and outputs will reflect changed conditions relative to water quality of MB,

and its tributaries and ponds. These results will be reported to the NHDES Watershed Assistance Section for incorporation into their BMP performance and pollutant load reduction tracking systems.

9. PROJECT COST

A. Total Project Costs

Identify the amount of EPA Section 319 Grant funds requested, non-federal match (minimum of 40% of total project cost), other funding source(s) if applicable, and total project cost.

$$[\text{Grant funds requested}] \times 0.667 = \text{Required non-federal match amount}$$

$$[\text{Grant funds requested}] + [\text{match}] = \text{Total project cost}$$

Funding	Percentage	Amount
Federal EPA 319 Grant funds requested (≤60%)		
Required non-federal match amount (≥40%)		
Other funding source(s)		
Total project cost	100%	

B. Costs by Budget Category

In the provided Excel Workbook, complete **“Sheet A - Costs by Category”** which lists your 319 Grant project costs, including match, for each budget category. Please contact your DES project leader for assistance. **Attach the completed spreadsheet to this application.**

Spreadsheet A completed and attached

C. Project Budget by Objective, Deliverable, and Task

In the provided Excel Workbook, **review the instructions tab and then complete “Sheet B - Objectives”**, list the objectives, deliverables, and tasks with costs that will be required to fulfill each objective. Objectives need to be **“SMART”**. That is **S**pecific, **M**easurable, **A**chievable, **R**elevant to the overall project outcome, and **T**ime-specific. For each objective please also describe how you will measure success. Please contact your NHDES project leader for assistance. **Attach the completed spreadsheet to this application.**

Spreadsheet B completed and attached

10. QUALITY ASSURANCE

All projects must follow the *New Hampshire Section 319 Nonpoint Source Grant Program Quality Assurance Project Plan (QAPP)*. Projects that include collection, analysis, or manipulation of environmental data, including pollutant load reduction estimates, require an individual QAPP if such data collection and analysis deviates from the NPS Grant Program QAPP.

1. Please check the applicable box:

This project includes collection and analysis of environmental monitoring data.

- This project includes modeling or other analysis or manipulation of environmental data.
- This project does not include either of the above (skip to Section 11).

2. This project conforms to the *New Hampshire Section 319 Nonpoint Source Grant Program QAPP*.

- Yes** (development of a Site Specific Project Plan (SSPP) is included as a task in this application.)
- No** (development of an individual project QAPP is included as a task in this application.)

QAPP Questions?
Visit:
<http://des.nh.gov/organization/divisions/water/wmb/was/qapp/index.htm>

11. OPERATION AND MAINTENANCE

All projects that implement (BMPs) must develop an operation and maintenance (O&M) plan for each BMP, signed by the grantee or designated BMP owner indicating that they understand the maintenance required and that they intend to provide maintenance for that BMP.

If your project involves BMP construction, what long-term operation and/or maintenance will be required, who is responsible, and how will future operation and maintenance be sustained?

12. SUBMITTAL REQUIREMENTS

Submit the Watershed Assistance Grants Full Proposal Application Form and all attachments, via email in Microsoft Word or PDF file formats to: katherine.zink@des.nh.gov

If you have difficulty e-mailing attachments, such as maps and photos, please contact Katherine Zink to make alternate arrangements.

SUBMITTAL DEADLINE
4:00PM
January 31, 2017

Full Proposal Checklist - Your Full Proposal package should include:

- The completed Full Proposal Application Form
- The completed Costs by Category Budget (spreadsheet A) and Project Budget by Objective, Deliverable, and Task (spreadsheet B)
- A site map
- Letters of approval from BMP construction site owners (if applicable)
- Letters of commitment from match providers
- Optional: additional letters of support; photos; water quality data