

ACTION ITEM	DESCRIPTION	SNHPC	PLPA	Towns	Conservation Commissions	NH DOT	SOAK NH	Local Conservation Partners	Landowners & Residents	Consultant	University Partners	SCHEDULE	ESTIMATED COST	
Septic Systems														
Enhance awareness of proper septic system maintenance	1) Distribute educational pamphlets on septic system function and maintenance in tax bills.	✓	✓	✓	✓					✓		2017-18	\$2,000	
	2) Create and distribute a list of septic service providers (create magnets, etc.).	✓	✓	✓	✓							2017-18	\$500	
	3) Host multiple "septic socials" in key neighborhoods near the lake to address link between septic system maintenance and water quality. Target educational campaign in areas with minimally-maintained or aging septic systems.	✓	✓							✓			2017-27	\$150/yr
Inventory status of septic systems in watershed	1) Reach out to landowners that did not or could not respond to the 2015 septic survey to gather additional information.	✓	✓							✓		2017-18	\$3,000	
	2) Conduct voluntary dye testing of high impact septic systems. Goal: 5 systems.	✓	✓	✓					✓			2017-18	\$100/system	
	3) Develop and maintain a septic system database for the watershed. Towns to maintain. Cost estimate based on initial setup by SNHPC or consultants only.	✓	✓	✓	✓						✓		2017-27	\$4,000
	4) Assess the impact of elevated lake levels (raised 1.5 ft in 2013) on the water table and potential interception of low-lying septic systems.	✓	✓	✓	✓						✓	✓	2017-19	\$10,000
Enforce town septic system regulations	1) Communicate with town departments to enforce occupancy loads and have septic system inventories in Master Plans.		✓	✓	✓							2017-27	TBD	
	2) Inspect all home conversions from seasonal to permanent residences and property transfers for proper septic system size and design.				✓				✓			2017-27	\$250/system	
	1) Coordinate group septic system pumping discounts. Assumes volunteer labor to coordinate. Pump-out costs on landowners.	✓	✓						✓			2017-27	N/A	

Garner funding or discounts that support and encourage septic system maintenance	2) Investigate grants and low-interest loans to provide cost-share opportunities for septic system upgrades. Cost estimate based on resources to apply for grant.	✓	✓	✓			2017-18	\$1,500	
	3) Designate a portion of conservation dollars for the watershed that can be used for septic system upgrades.		✓	✓	✓		2017-27	N/A	
Canine Detection	1) Hire canine detection team to investigate shoreline septic systems.	✓	✓	✓	✓	✓	2017-20	\$5,000	
Watershed & Shorefront BMPs									
Garner funding for action items	1) Develop a subcommittee that develops a fundraising strategy and determines how funding is spent.	✓	✓	✓	✓		2017-19	N/A	
	2) Establish a capital reserve fund for watershed towns to spend on lake protection initiatives. Cost covers labor to setup and maintain fund.			✓	✓		2017-27	\$1,000/yr	
	3) Solicit residents for individual donations.		✓			✓	2017-27	N/A	
Address priority BMPs identified in surveys	1) Implement BMPs at the 8 high impact sites identified in the shoreline survey with disturbance scores of 14 or greater. Assumes cost of \$3,000 per site to revegetate and mulch with volunteer labor. Expected to reduce pollutant load by 9 kg P/year.	✓	✓	✓		✓	2017-27	\$24,000	
	2) Implement BMPs at the 15 sites identified in the watershed survey located in the Pleasant Lake watershed. Cost estimate includes implementation and annual maintenance for all BMPs in a ten year period. Expected to reduce pollutant load by 14 kg P/year. Gulf Road currently being addressed with grant funds.	✓	✓	✓		✓	✓	2017-27	\$66,878
	3) Develop a method of tracking and monitoring BMP implementation progress.	✓	✓				✓	2017-27	\$500/yr
Roads									
Create and manage drainage easements on roads	1) Work with road agents and landowners to create and manage drainage easements on private properties. This will help control salt/sand and stormwater runoff from roads.		✓	✓	✓		2017-27	TBD	

Coordinate culvert improvements with planned resurfacing of NH Route 107	1) Work with NH DOT to communicate known problems with culvert function along the state road so that they can be addressed during road resurfacing efforts set to take place in 2017.	✓	✓	✓	✓			2017	TBD		
Require training of road agents	1) Require training for road agents on proper salt, sand, and equipment use.			✓				2017-27	\$5,000		
Host road maintenance workshops	1) Hold workshops on proper road management.		✓	✓	✓			2017-27	\$500/yr		
Consider private road associations	1) Consider forming private road associations in key neighborhoods or heavily-used roads for better management by local stakeholders. Determine if this is a feasible option for the area.		✓		✓		✓	2017-27	TBD		
Municipal Planning & Land Conservation											
Adopt plan recommendations	1) Incorporate watershed plan recommendations into town master plans.			✓				2017-27	N/A		
Host workshops for watershed resident education of local land ordinances	1) Hold informational workshops for new landowners, towns, and developers on relevant town ordinances (i.e., Pleasant Lake Watershed Protection Ordinance for Deerfield), conservation easements, and watershed goals. Goal: 1-2.	✓	✓	✓	✓		✓	✓	✓	2017-27	\$5,000
Host training of code enforcement officers and ZBAs	1) Host training for code enforcement officers and ZBAs in watershed towns, where applicable.			✓				2017-27	\$5,000		
Identify opportunities for land protection and conservation within the watershed	1) Fund tools, such as natural resource inventories, to help target critical land for protection.			✓	✓		✓		✓	2017-27	\$5,000
	2) Collaborate with local conservation partners (e.g., Bear Paw Regional Greenways, Northwood Area Land Management Collaborative) on land conservation initiatives within the watershed.		✓		✓		✓			2017-27	N/A
Enhance enforcement of proper land management practices	1) Create better enforcement of forestry rules and regulations.			✓	✓			✓		2017-27	TBD
	2) Encourage easement holders to be notified and present at closings.			✓	✓			✓		2017-27	N/A
Improve municipal permitting process	1) Create list of BMP and LID descriptions for Town Selectman, ZBA, Planning Boards, and landowners.	✓	✓	✓				✓		2017-19	\$1,500
	1) Lot Coverage: adopt uniform requirements between both towns on Stormwater Management Plans for subdivisions, commercial, and multi-family development, and redevelopment disturbing 20,000 sq. feet or more.			✓	✓					2017-27	TBD

<p>Improve municipal ordinances (to help mitigate the anticipated 20 kg P/yr loading increase due to predicated future development)</p>	2) Setbacks (Shoreland Zoning): increase the setback distance to 100 feet within the shoreland zone of both towns.	✓	✓		2017-27	TBD
	3) Wetland Buffers: increase the setback distance from all wetlands (not just prime wetlands) to 100 feet in Northwood.	✓	✓		2017-27	TBD
	4) Steep Slopes: require design and implementation of BMPs on all development on slopes >15%.	✓	✓		2017-27	TBD
	5) Conservation/Cluster Subdivisions: increase the amount of land set aside in conservation subdivisions to min. 50% of the development area (for Northwood only).	✓	✓		2017-27	TBD
	6) LID: Amend Stormwater Management ordinances to state that the use of LID techniques is preferred and shall be implemented to the maximum extent possible.	✓	✓		2017-27	TBD
	7) Work with the Town of Northwood to develop a Watershed Protection Ordinance similar to Deerfield.	✓	✓	✓	2017-27	TBD
	8) Meet with town staff to review recommendations to improve or develop ordinances addressing setbacks, buffers, lot coverage, LID, and open space.	✓	✓	✓	2017-27	\$1,000

Water Quality Monitoring

<p>Expand current lake monitoring program to gather more consistent water quality data</p>	1) Expand current lake monitoring program to include taking regular, annual DO and temperature profile readings, secchi disk readings, and epilimnion and hypolimnion total phosphorus and chlorophyll-a samples at the deep spot of Pleasant Lake. Aim for biweekly secchi disk readings and monthly DO and temperature profile readings combined with chemical sampling. Assumes season from June-September.	✓		✓	✓	2017-27	\$7,500
	2) Use a laboratory with the ability to analyze phosphorus samples down to 1 ppb. UNH WQAL currently has this ability.	✓			✓	2017	N/A

	3) Re-evaluate water quality (TP, DO) at regular intervals based on interim goals.	✓			✓	2018, 2021, 2027	\$2,500
Investigate the cause of low dissolved oxygen	1) Team up with university or consultant to sample sediments (at the deep spot and possibly South Cove) and study cause of low oxygen. Determine if cause of low DO warrants revision of goals. Currently part of PSU grant to fund sediment core analysis.	✓			✓	✓	2017-18 TBD
	2) Install buoy system in deep spot of Pleasant Lake to monitor DO and temperature throughout the water column using continuous data loggers. Cost includes initial setup and 5 years of maintenance by consultant.	✓			✓	✓	2017-21 \$30,000
	3) Track any improvements in DO if able to remediate identified cause of low DO.	✓			✓		2021-27 \$1,000
Expand tributary monitoring program	1) Sample 9 tributary sites for TP, turbidity, pH, alkalinity, specific conductivity or chloride, and TN 2-3 times per year from June-September. Target Farrelly, Veasey, Loon Cove, and/or Branch Brooks, if funding limited.	✓			✓	✓	2017-27 \$5,000/yr
Obtain more funding	1) Obtain funding from sources such as municipal contributions, NHDES grants, lake associations, targeted fundraising, and other grants related to climate change or invasive species studies.	✓	✓	✓	✓		2017-27 N/A
Maintain and/or improve current invasives management program	1) Support State legislation that increases funds for aquatic invasive plant (e.g., milfoil) eradication.	✓	✓	✓	✓		2017-27 N/A
	2) Increase the number of volunteer inspectors for the Lake Host and Weed Watchers programs		✓				2017-27 N/A
Enhance awareness of water quality issues in the watershed	1) Contact local representatives and attend selectman meetings to voice concerns and stay informed.				✓		2017-27 N/A
	2) Create flyers/brochures for shorefront homes regarding BMPs and septic systems.	✓	✓			✓	2017-27 \$2,000
	3) Contribute interesting articles about water quality and watershed protection efforts to various media sources. Assumes volunteer labor.	✓	✓		✓		2017-27 N/A

4) Work with SOAK NH to implement small scale BMPs and host concurrent residential stormwater workshops. Cost estimate does not include actual BMP implementation. Cost assumes printing, mailing to advertise events.



2017-27

\$500/yr
