

## Appendix C. Summary of Recommendations, by responsible party - Headwaters Region

Federal	Congress	<ul style="list-style-type: none"> <li>• recognize that New England should have its fair share of federal assistance for agriculture, and that the needs of its agriculture are distinct from those of other regions; maintain funding levels for NRCS cost-share programs for conservation practices</li> <li>• continue to reduce sources of mercury contamination and acid precipitation.</li> <li>• not support a new east-west highway across the Headwaters region.</li> </ul>
	USGS	<ul style="list-style-type: none"> <li>• reinstate the gages on the Mohawk and Upper Ammonoosuc Rivers that were discontinued in 2004 and install a gage at Hall Stream.</li> </ul>
	US Army Corps of Engineers	<ul style="list-style-type: none"> <li>• purchase development rights from willing owners of land in the natural valley flood storage area to help prevent flooding downstream.</li> <li>• revisit its policy of removing riparian buffers.</li> </ul>
	FEMA	<ul style="list-style-type: none"> <li>• provide accurate, up to date floodplain maps for Headwaters region towns.</li> </ul>
	EPA	<ul style="list-style-type: none"> <li>• establish updated rules for disposal or return of unused medicines and work with medical providers for more responsible disposal.</li> <li>• revisit the fish tissue toxin study in the Headwaters region, and sample coldwater species.</li> </ul>
	US Fish & Wildlife Service	<ul style="list-style-type: none"> <li>• establish updated rules for disposal or return of unused medicines and work with medical providers for more responsible disposal.</li> </ul>
	NRCS & county conservation districts	<ul style="list-style-type: none"> <li>• assist with contacts for riverfront landowners as part of a warning system for flooding below Murphy Dam.</li> <li>• purchase development rights from willing owners of land in the natural valley flood storage area.</li> <li>• continue to offer cost-sharing for construction of manure storage pits; adopt consistent, simple terms for cost-sharing programs; increase awareness of nutrient management planning as a potential cost-saving measure for farmers as well as a pollution-reducing technique, through county Cooperative Extension Service and conservation districts; adjust the time land is left in grass based on individual farm conditions.</li> </ul>
States	NH legislature	<ul style="list-style-type: none"> <li>• continue to reduce sources of mercury contamination and acid precipitation.</li> <li>• not support a new east-west highway across the Headwaters region.</li> <li>• fund a Conservation Reserve Enhancement Program similar to Vermont's.</li> </ul>
	VT legislature	<ul style="list-style-type: none"> <li>• enact shoreland protection.</li> <li>• continue to reduce sources of mercury contamination and acid precipitation.</li> <li>• continue to fund the Conservation Reserve Enhancement Program.</li> <li>• enact a program to map the state's aquifers.</li> </ul>
	environmental agencies (NH DES and VT DEC)	<ul style="list-style-type: none"> <li>• make water quality monitoring data easily accessible to the public, including those who do not use computers.</li> <li>• avoid further impoundment of the river mainstem to keep aeration at rapids and drops. States should permit new hydro dams on tributaries only if they operate as run of river dams, not peaking dams, and only after weighing the benefits and drawbacks in careful consultation with state and federal fish and wildlife agencies.</li> <li>• not permit landfills, salvage yards, and junkyards to be located on aquifers or varved soils.</li> <li>• not permit new fuel tank farms to be located near the river.</li> <li>• consider ways to reduce the growing tire litter problem, either through a deposit and return program, or by helping towns to accept waste tires at no cost.</li> <li>• ensure that industrial development near the river, such as a gravel pit, has a good buffer of vegetation between operations and the river, to block dust and noise.</li> <li>• hold a public outreach program for realtors and for those who live along rivers and streams to remind them of the rules and best management practices that protect water quality.</li> <li>• look at potential contamination from suspension agents and cyclone operation at gravel pits. Monitor and enforce permit conditions for gravel pit construction.</li> <li>• educate developers about the need for stormwater permits.</li> <li>• offer an information packet to owners of shoreland about the best ways to manage their property.</li> <li>• maintain effective communication and cooperation with timber management companies and other forest landowners.</li> <li>• continue to cooperate with fisheries agencies to better understand and address the Didymo infestation.</li> </ul>
	VT DEC	<ul style="list-style-type: none"> <li>• map the state's aquifers.</li> </ul>

	New Hampshire DES	<ul style="list-style-type: none"> <li>• sponsor a regular water quality monitoring program that includes bacteria, pH, and turbidity, and encourage measurement of the acidity of rain storms. NH's VRAP program should arrange with local wastewater plants to process bacteria samples to encourage local water quality monitoring, and change its rules to allow reimbursement of local plants for this service.</li> <li>• identify sources of contamination for waters listed on the Section 303(d) list as needing a TMDL and look at the area's geology to learn more about pH.</li> <li>• install a gage at Hall Stream, and reinstate the gages on the Mohawk and Upper Ammonoosuc Rivers that were discontinued in 2004.</li> <li>• help develop a effective and reliable system for warning town officials about water releases that could result in flooding below Murphy Dam.</li> </ul>
	NH DES	<ul style="list-style-type: none"> <li>• revise rules for management of Murphy Dam in consultation with TransCanada.</li> <li>• NH Dam Bureau and the party proposing hydro power development at Murphy Dam should seek assistance from North Country Council and the State Historic Preservation Office to ensure that any new structures be designed and placed to avoid adverse effects on the appearance and use of Pittsburg's village center and recreation fields.</li> <li>• focus water quality monitoring efforts on Bog Brook.</li> <li>• work with the owner of the equipment salvage yard in Colebrook to test surface and groundwater above and below this site, especially near the business's headquarters building. The site may be a good candidate for a brownfields study.</li> <li>• not support a new east-west highway across the Headwaters region.</li> <li>• investigate sources of contamination in Hall Stream, and if necessary, speak with Quebec authorities.</li> <li>• require a minimum riparian buffer on farmland, and enforce the requirement.</li> <li>• assist the New Hampshire Lakes Association to set up a Lake Host program to check for invasive species at Connecticut Lakes boat launches on holiday weekends.</li> </ul>
	fisheries agencies	<ul style="list-style-type: none"> <li>• revisit the fish tissue toxin study in the Headwaters region, and sample coldwater species.</li> </ul>
	transportation agencies	<ul style="list-style-type: none"> <li>• ensure that culverts and bridges are sized properly in order to carry the water that might come their way during larger storms.</li> <li>• reduce the amount of salt used on winter roads. Avoid using fertilizer and lime during road reconstruction projects close to rivers.</li> <li>• include riparian buffer restoration in road projects near streams and rivers, and keep culverts clear of woody debris.</li> </ul>
Towns	town management	<ul style="list-style-type: none"> <li>• help develop a effective and reliable system for warning town officials about water releases that could result in flooding below Murphy Dam.</li> <li>• continue to landfill construction and demolition debris.</li> <li>• ask for help from regional planning commissions to survey culverts and bridges to identify those that are undersized; also note if they block fish passage and seek grants for replacing them where necessary. Require culvert permits to be issued by the road agent for new development.</li> <li>• ensure that their riverfront landowners have access to CRJC's erosion maps and guidance.</li> <li>• establish a town conservation commission, if one does not already exist, and encourage it to become informed about invasive species.</li> </ul>

	planning boards & commissions	<ul style="list-style-type: none"> <li>• adopt a floodplain ordinance similar to Northumberland’s prohibiting building in the 100-year floodplain and on flowage rights of way, to protect their citizens and businesses from damage and to reduce the public cost of disaster relief. Towns should ensure that buildings are set a safe distance back from the river even when outside of the floodplain, to reduce the risk of property loss in erodible areas.</li> <li>• not permit landfills, salvage yards, and junkyards to be located on aquifers or varved soils.</li> <li>• not permit new fuel tank farms to be located near the river.</li> <li>• ensure that auto junkyards and facilities handling hazardous waste are located well back from the river.</li> <li>• not allow development that puts both wells and septic systems close together on very small lots.</li> <li>• take advantage of source water protection grant and loan programs.</li> <li>• encourage developers and landowners to establish and/or maintain buffers of native vegetation along rivers and streams for privacy and pollution control.</li> <li>• ensure that industrial development near the river, such as a gravel pit, has a good buffer of vegetation between operations and the river, to block dust and noise.</li> <li>• ask for sedimentation and erosion controls during and after construction.</li> <li>• consider working with state geologists to map varves in their towns, to be sure major construction does not take place on unsafe soils.</li> <li>• not issue permits for projects that violate the NH Shoreland Protection Law.</li> <li>• ensure that roads are built to standards that include slope limits. Discourage construction of new roads near rivers and streams.</li> <li>• consider discouraging roads and development on steep slopes to control stormwater runoff. Ask regional planning commissions for advice in how to avoid runoff problems related to large scale clearing. Look at ways to include “low impact development” ideas as they review projects, and at how to change existing development to reduce runoff and promote stormwater infiltration. Require additional treatment to remove oil for new discharges to surface waters and dry wells, and treatment to remove metals should be required for redevelopment projects with discharges to surface waters.</li> <li>• investigate how conservation easements can help keep town service and school costs down if the land is not developed into house lots or into second homes which could later become year-round residences; develop the means to guide development that occurs on prime agricultural soils, such as discouraging building in the floodplain, allowing use of cluster development as a way of keeping farmland available, and encouraging commercial development in areas that are not prime agricultural soils.</li> <li>• become informed about invasive species.</li> </ul>
	Road crews	<ul style="list-style-type: none"> <li>• ensure that culverts and bridges are sized to carry water during larger storms. Keep culverts clear.</li> <li>• reduce the amount of salt used on winter roads.</li> <li>• avoid using fertilizer and lime during road reconstruction projects close to rivers.</li> <li>• follow snow disposal BMPs. Snow should be stored on flat, pervious surfaces, such as grass, and at least 25-100 feet from the edge of a stream or river, with a silt fence between the snow and the stream. Use larger setbacks for snow disposal near public wells. Once snow melts, clear debris quickly and deliver to the landfill.</li> <li>• include riparian buffer restoration in road projects near streams and rivers.</li> </ul>
	conservation commissions	<ul style="list-style-type: none"> <li>• encourage people to handle automotive fluids, pesticides, and other chemicals properly so they don’t contaminate their own wells.</li> <li>• teach people to wrap and discard their unused and out-dated medicines in regular household trash rather than flushing.</li> <li>• organize car pooling to distant household hazardous waste collections and consider holding a local collection with wide publicity to ensure that citizens will participate. Towns should help their citizens become aware of new recycling rules for items containing mercury that will go into effect in July, 2007.</li> <li>• encourage developers and landowners to establish and/or maintain buffers of native vegetation along rivers and streams for privacy and pollution control.</li> <li>• explore ways to eliminate pet waste problems.</li> </ul>
Regional organizations	Regional Planning Commissions	<ul style="list-style-type: none"> <li>• assist towns with surveys of their culverts and bridges to see if they are properly sized.</li> <li>• teach people to wrap and discard their unused and out-dated medicines in regular household trash rather than flushing.</li> <li>• educate developers about the need for stormwater permits.</li> </ul>
	Land conservation organizations	<ul style="list-style-type: none"> <li>• purchase development rights from willing owners of land in the natural valley flood storage area to help prevent flooding downstream.</li> <li>• The New Hampshire Lakes Association should set up a Lake Host program, with the help of TransCanada and NH DES, to check for invasive species at Connecticut Lakes boat launches on holiday weekends.</li> </ul>
Utilities	Trans Canada	<ul style="list-style-type: none"> <li>• help develop a effective and reliable system for warning town officials about water releases that could result in flooding below Murphy Dam.</li> <li>• continue to have an on-site manager at First and Second Lake, and avoid automating these dams.</li> <li>• assist the New Hampshire Lakes Association to set up a Lake Host program, with the help of NH DES, to check for invasive species at Connecticut Lakes boat launches.</li> </ul>

	Railroad	<ul style="list-style-type: none"> <li>• rail car rehabilitation company should avoid storing deteriorated rail cars near water.</li> <li>• pick up and remove discarded railroad ties.</li> </ul>
Recreation groups		<ul style="list-style-type: none"> <li>• check trails to see if water bars are needed to keep stormwater from eroding compacted soils.</li> <li>• abide by state boating law, which requires travel at headway speed only throughout the Headwaters region of the Connecticut River (except for the lakes), and avoid creating a wake.</li> <li>• Boaters or divers traveling from waters infested with zebra mussel must wash and dry all equipment before reuse, hose off the boat, diving gear or trailer, and drain and flush the engine cooling system and live wells of the boat, bait buckets and the buoyancy control device from diving equipment.</li> <li>• Local outfitters, lodge owners, and guides should educate their customers about Didymo and other invasives, and encourage them to clean their gear.</li> <li>• Fishermen and other recreationists must carefully clean their gear after visiting the Connecticut River and report sightings of invasive aquatic species to state agencies. Do not release unused bait into the water.</li> </ul>
Land owners	Developers	<ul style="list-style-type: none"> <li>• design their projects to keep natural drainage patterns and use infiltration methods such as many small swales and runoff basins to capture runoff for groundwater recharge.</li> <li>• ensure that culverts are sized in anticipation of runoff from future cleared slopes.</li> </ul>
	Gravel mining operators	<ul style="list-style-type: none"> <li>• process gravel at a safe distance from the river, to avoid contaminating the water with fine rock powder particles. Steps should be taken to keep such fine material from blowing around.</li> <li>• adhere to permit conditions.</li> <li>• ensure dust control of material dredged from gravel washing lagoons.</li> </ul>
	Farmers	<ul style="list-style-type: none"> <li>• move hay and equipment out of fields subject to flooding as soon as they are done working.</li> <li>• adopt best agricultural management practices; learn how conservation easements help keep the farm in the family and the land working; keep good records of yields, fertilizing, and soil/plant tissue analysis; decide on their own to establish/retain filter strips between fields and water courses; rotate corn frequently with other crops, particularly on flood-prone land.</li> <li>• consider the option of organic dairy farming.</li> <li>• make use of Vermont's Conservation Reserve Enhancement Program to plant riparian buffers or provide livestock water sources.</li> </ul>
	Forest landowners & loggers	<ul style="list-style-type: none"> <li>• follow best management practices for stream crossings, culverts, and erosion control.</li> <li>• use best forestry management practices when working near intermittent as well as year-round streams.</li> <li>• adopt the principles of sustainable forest management; develop management plans for their forests and conduct logging with the help of professional foresters; follow guidelines in <i>Good Forestry in the Granite State</i>; minimize the visual and water quality impacts of clear-cutting, especially near the river; promote and use integrated pest management to lessen the reliance on chemicals; protect and maintain a forested riparian buffer along waterways; dispose of slash away from streams; consider conservation easements on their property to allow it to continue in active forest management and to contribute to the economic, scenic, and timber resource base of the region, but also allow it to remain unfragmented by development.</li> </ul>
	Waterfront landowners	<ul style="list-style-type: none"> <li>• retain riparian buffers sufficient in size to control erosion and sedimentation. Consider planting some of the many ornamental native plants listed in CRJC's riparian buffer guidance.</li> <li>• be aware of the provisions of the New Hampshire Comprehensive Shoreland Protection Act, and avoid building close to the river or removing the riparian buffer growing along the river.</li> <li>• consider conservation easements to prevent development in places where the river is actively eroding, to give the river room to move.</li> <li>• consider selling development rights to place easements on riverfront land.</li> <li>• avoid using fertilizer near rivers or streams.</li> </ul>
	All landowners	<ul style="list-style-type: none"> <li>• check culverts on their land often to be sure they are not blocked.</li> <li>• avoid filling wetlands for new homes, camps, roads, and farm fields.</li> <li>• ensure that their septic systems are in good shape and operating well.</li> <li>• avoid illegal dumping and participate in river clean-up events.</li> <li>• be aware of state and federal laws that protect rivers and streams.</li> <li>• pick up after their pets on public areas.</li> <li>• obey the ban on burning of household trash.</li> <li>• avoid dumping aquarium plants or animals into any water body, but dispose of them by freezing or drying before putting them in the trash.</li> </ul>