

Appendix C. Summary of Recommendations, arranged by responsible party

Federal	Congress	<ul style="list-style-type: none"> • identify mechanisms for decreasing carbon dioxide emissions to help reduce the possible effects of climate change. • reduce sources of mercury contamination.
	USGS	<ul style="list-style-type: none"> • cooperate with states to maintain existing gages for public safety.
	US Army Corps of Engineers	<ul style="list-style-type: none"> • coordinate with towns in monitoring runoff and snowmelt. • ensure that the earthen flood control dams at North Springfield and Hartland are well maintained for the safety of the public, and devote the proper resources to these facilities. • examine the severe erosion at Commissary Brook, identify its causes, and fund a means to halt the surge of sediment into the Connecticut River mainstem.
	FERC	<ul style="list-style-type: none"> • include best management practices such as moderated ramping rates in the 2018 license for Wilder and Bellows Falls Dams. Review the daily operating logs to be sure that the water levels remain within license limits, and require an independent gage to verify dam operations. • avoid further impoundment of the river to keep aeration at rapids and drops.
	US Fish & Wildlife Service	<ul style="list-style-type: none"> • devise new rules for handling and disposing of controlled medications. Work with health care institutions and the Food and Drug Administration to teach people to wrap and discard their unused and out-dated medicines in regular household trash rather than flushing.
	EPA	<ul style="list-style-type: none"> • devise new rules for handling and disposing of controlled medications. Work with health care institutions and the Food and Drug Administration to teach people to wrap and discard their unused and out-dated medicines in regular household trash rather than flushing. • provide funding to assist with CSO elimination projects. • partner with the railroad to identify ways to help its management become more aware of ways to avoid pollution of surface waters. • work with the US Army Corps of Engineers and VT DEC to examine the severe erosion at Commissary Brook, identify its causes, and fund a means to halt the surge of sediment into the Connecticut River mainstem. • revisit the fish tissue toxin study in 5-10 years to track progress in removing mercury and other contaminants from the environment.
	NRCS	<ul style="list-style-type: none"> • provide for professional monitoring and care of major buffer restoration projects to ensure success.
	environmental agencies	<ul style="list-style-type: none"> • better coordinate water quality monitoring with regional planning commissions, using water quality planning grants. • cooperate with USGS to maintain existing gages for public safety; add a gage at Blood (True's) Brook to help ensure proper operation of the Meriden wastewater treatment facility. Consider a new gage at Lake Sunapee as a lower priority, because information can be sought from the manager of the dam at the foot of the lake. Approach TransCanada for funding assistance to maintain gages, if necessary. • identify mechanisms for decreasing carbon dioxide emissions to help reduce the possible effects of climate change. • avoid further impoundment of the river to keep aeration at rapids and drops. • should not permit landfills, salvage yards, and junkyards to be located on aquifers or varves. Map contaminated groundwater sites. Be vigilant about possible MtBE contamination. • promote a regional processing facility for construction and demolition debris that will encourage recycling where possible. • continue to reduce sources of mercury contamination. • regulate outdoor wood-fired units to control emissions. • make up to date information on brownfields assessment discoveries readily available, especially for nearby residents who may be affected. • examine the severe erosion at Commissary Brook, identify its causes, and fund a means to halt the surge of sediment into the Connecticut River mainstem. • review sand and gravel excavation plans with great care, ensuring that excavations are set well back from the riverbank and cannot threaten its stability. Ensure regular monitoring of operations.
	transportation agencies	<ul style="list-style-type: none"> • avoid constructing new roads near rivers and streams. • ensure that culverts are properly sized when replacing them during road work. Increase the minimum design standards for bridge and culverts to bankfull width to reflect current climate research. Offer support to towns to cover engineering costs for sizing culverts and bridges. • include riparian buffer restoration in road projects near streams and rivers. • VT Agency of Transportation should consider its salt storage guidelines, develop regulations for salt storage near water, and identify better sites for salt storage in the region.
	NH legislature	<ul style="list-style-type: none"> • enact legislation discouraging use of detergents containing phosphorus.

	NH DES	<ul style="list-style-type: none"> inform landowners about the Shoreland Protection Act.
	NH Agric. Dept.	<ul style="list-style-type: none"> require a minimum riparian buffer on farms, as is required in Vermont.
	VT legislature	<ul style="list-style-type: none"> adopt statewide shoreland protection. adopt landfill siting regulations to match New Hampshire's. update its current use taxation program to permit protection of riparian buffers.
	VT Public Utilities Comm.	<ul style="list-style-type: none"> ensure that if an electric transmission line is built in the region, herbicide for vegetation control is not used near waterways, and riparian buffers are not disturbed. Encourage use of native groundcover that grows thick with an extensive root system but does not grow tall.
	Vermont DEC	<ul style="list-style-type: none"> begin basin planning for Rockingham's Commissary Brook as soon as possible, due to severe sedimentation problems and resulting pollution of the Connecticut River. adopt water withdrawal registration rules for the Connecticut River mainstem similar to New Hampshire's. map aquifers. monitor the railroad and nearby surface waters for salt migration related to the salt storage shed in Bellows Falls.
	NH Fish & Game Dept.	<ul style="list-style-type: none"> ensure that agricultural activities at its property at the Cornish Boat Landing follow best management practices and that the riparian buffer is expanded on the property.
	NH Dept. of Safety	<ul style="list-style-type: none"> increase enforcement of boating speed laws, to minimize boat wake-induced riverbank erosion.
Towns	town management	<ul style="list-style-type: none"> towns with combined sewer overflows should proceed as quickly as possible to eliminate them. strongly encourage regular and more frequent household hazardous waste collections, perhaps charging a small fee to offset costs. The service should rotate among area towns, and be offered in each town at least once a year. Consider contributing to computer recycling by WinCycle in Windsor. arrange for roadside and riverbank cleanups by people who have to do court-ordered community service. should not issue permits for projects that violate the state Shoreland Protection Act. ask for help from regional planning commissions to survey culverts and bridges to identify those that are undersized. Seek funds for replacing undersized culverts and those that block fish passage. consider working together on regional purchase and storage of road salt to reduce the number of sites where salt is stored and could contaminate rivers. Springfield and Rockingham should identify better sites for salt storage.
	Planning boards & commissions	<ul style="list-style-type: none"> adopt ordinances prohibiting filling and building in the 100-year floodplain and on flowage rights of way; consider establishing a building setback that reflects local soil conditions and the historic record of soil loss into the river, and ensure that buildings are set a safe distance back from the river even when outside of the floodplain require developers and landowners to establish and/or maintain buffers of native vegetation along rivers and streams. seek help from regional planning commissions to identify culverts and bridges that are undersized and might not carry the water that might come their way during larger storms. do not permit landfills, salvage yards, and junkyards to be located on aquifers. Take advantage of source water protection grant and loan programs. adopt ordinances prohibiting building in the 100-year floodplain and on flowage rights of way, to protect their citizens and businesses from damage, to avoid adding to flooding of their downstream neighbors, and to reduce the public cost of disaster relief. 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. adopt new Flood Insurance Rate Maps. require sedimentation and erosion controls during and after construction. work with state geologists to map varves in their towns, to be sure major construction does not take place on unsafe soils. (50/50 match with USGS) avoid constructing new roads near rivers and streams. ask regional planning commissions for advice in how to avoid runoff problems related to large scale clearing, and consider whether culverts are sized in anticipation of runoff from future cleared slopes. ask developers to include infiltration methods such as small swales and runoff basins to capture runoff for groundwater recharge; 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. consider discouraging roads and development on steep slopes to control stormwater runoff. require additional treatment to remove oil from parking lot runoff and if possible, to remove heavy metals. Require long-term maintenance of the unit so it continues to work.

	conservation commissions	<ul style="list-style-type: none"> work with their state's water quality agency to do more regular and sustained monitoring of Connecticut River tributaries. be very aware of the potential for catastrophic events, and coordinate with the U.S. Army Corps in monitoring runoff and snowmelt. identify mechanisms for decreasing carbon dioxide emissions to help reduce the possible effects of climate change. educate people to keep their septic systems in good shape and to handle automotive fluids, pesticides, and other chemicals properly so they don't contaminate their own wells. Offer an annual testing day for private well water. encourage mercury product recycling; encourage paint swaps and educate homeowners on how to dispose of paint, since paint is expensive to treat. hold an annual "Green Up" Day. inform NH landowners about the Shoreland Protection Act. educate landowners to establish, maintain and enhance the native riparian buffer vegetation on their property. investigate how conservation easements on farmland can help keep town service and school costs down if the farm is not developed into house lots or into second homes which could later become year-round residences.
	Road crews	<ul style="list-style-type: none"> ensure that culverts are properly sized when replacing them during road work. Keep culverts clear of woody debris. follow snow disposal best management practices (BMPs). Snow should be stored on flat, pervious surfaces, such as grass, and at least 100-200 feet from the edge of a stream or river, with a silt fence between the snow and the stream. Once snow melts, debris should be quickly cleared from the site and brought to the landfill. Test the areas where they have piled snow for many years, to see if lead has accumulated in the soil. include riparian buffer restoration in road projects near streams and rivers.
Regional Planning Commissions		<ul style="list-style-type: none"> educate people to keep their septic systems in good shape and to handle automotive fluids, pesticides, and other chemicals properly so they don't contaminate their own wells. encourage mercury product recycling; encourage paint swaps and educate homeowners on how to dispose of paint, since paint is expensive to treat. assist towns with bridge and culvert surveys. assist towns with model ordinances for the actions described above.
Utilities	Trans Canada	<ul style="list-style-type: none"> continue to monitor snow pack in order to predict snowmelt; alert towns if a problematic ice jam is anticipated. conserve its 67 acre parcel at Sumner Falls in Hartland and either continue to own, manage, and pay taxes on it, transfer the land to the town of Hartland while continuing to fund the maintenance of it, or conserve it and turn it over to the Army Corps of Engineers. conserve and continue to lease its farmland to experienced area farmers and continue the tradition of stewardship set by its predecessors.
	Railroad	<ul style="list-style-type: none"> manage the rail system to protect nearby surface waters, by ensuring that all waste is disposed of properly.
volunteer groups	watershed groups	<ul style="list-style-type: none"> work with their state's water quality agency to do more regular and sustained monitoring of Connecticut River tributaries. provide for professional monitoring and care of major buffer restoration projects for several years to ensure success.
	trail groups	<ul style="list-style-type: none"> ensure that all local trails have water bars to keep stormwater from eroding the compacted soils on the path.
	youth groups	<ul style="list-style-type: none"> encourage students to take on water quality monitoring and river clean-ups as suitable community service projects.
Landowners	Dam owners	<ul style="list-style-type: none"> strongly consider removing those dams that no longer serve a purpose and cost more to fix than the benefits they offer or dams that pose a threat to areas downstream. The Town of Springfield should seek state assistance for removing the Springfield Reservoir Dam.
	Developers	<ul style="list-style-type: none"> ensure that their developments keep natural drainage patterns and use swales and depressions ("rain gardens") to reduce runoff and recharge groundwater. ensure that septic systems are properly engineered and designed. avoid constructing new roads near rivers and streams. obey the law against filling wetlands.
	Farmers	<ul style="list-style-type: none"> work with conservation districts and Cooperative Extension Service to prepare a total nutrient management plan for their land, to make best use of available nutrients, reduce potential for water quality impacts, save farm money by reducing cost of fertilizer purchases, and determine where and when biosolid application could benefit the farm operation; employ best management practices. inquire about how VT's Conservation Reserve Enhancement Program could help with water quality protection on the farm. stabilize irrigation hoses so they cannot vibrate and create a channel for erosion. ensure that livestock watering does not unduly affect streambanks and water quality. retain and encourage 50-100 foot riparian buffers to help minimize erosion of valuable soils.

	Forest landowners	<ul style="list-style-type: none"> discourage logging on steep slopes near the river, and in the riparian buffer. They should use best management practices and be sure their forest management plans include riparian buffers.
	Waterfront landowners	<ul style="list-style-type: none"> learn about the proper use and disposal of fertilizers, pesticides, and toxic materials; refrain from using fertilizer within 250' of rivers, and consider alternatives to chemical fertilizers, herbicides, and pesticides. Consult CRJC's <i>Homeowner's Guide to Nonpoint Source Pollution in the Connecticut River Valley</i>. make use of CRJC's <i>Riparian Buffers for the Connecticut River Valley</i> to learn how to plant and enhance riparian buffers on their property with attractive landscape plantings that help control erosion and provide food and cover for wildlife. encourage native plants on their riverbanks, resist the temptation to cut and mow to the water's edge, and remove invasive plants. Understand and obey state and local protection of riverbanks and buffers. include more vegetative and bio-technical components in their designs for streambank stabilization and contact their county conservation district office for advice.
	All landowners	<ul style="list-style-type: none"> know the location of and regularly maintain their on-site septic systems. obey the ban on barrel burning of trash.