

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ([http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915\\_Phase\\_1\\_Implementation\\_Plan\\_Final.pdf](http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf)))

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ( <a href="http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf">http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf</a> ))					Color Key for responsible party	Franklin Watershed Committee (FWC)	VT Department of Environmental Conservation (DEC)	VT Agency of Agriculture, Food and Markets (AAFM)	ROADS - State, Town or private	USDA Natural Resources Conservation Service (NRCS)
Status	Project Name	Project Type	Project Description	Source	Lead Partner	Supporting partners	Funding source	DEC Notes	FWC Notes	
On going	Lake Carmi Tributaries volunteer water quality sampling program	Assessment	Continue to support and consider adopting sampling site recommendations as shown in Gerhardt study (remove 5 sites, add 4 )	Fritz Gerhardt recommendations ( <a href="http://dec.vermont.gov/sites/dec/files/documents/WSMD_MAPP_Phosphorus%20Levels%20in%20Six%20Tributaries%20of%20Missisquoi%20Bay_2015.pdf">http://dec.vermont.gov/sites/dec/files/documents/WSMD_MAPP_Phosphorus%20Levels%20in%20Six%20Tributaries%20of%20Missisquoi%20Bay_2015.pdf</a> ) TMDL Action#18	FWC	DEC	DEC LaRosa partnership	Ongoing by FWC. and AmeriCorps member and coordinator when available, April - October. Fritz' recommendations have not been adopted yet		
On going	Lake Carmi Lay Monitoring Program	Assessment	Continue to support ( see results at: <a href="http://dec.vermont.gov/watershed/lakes-ponds/data-maps/scorecard">http://dec.vermont.gov/watershed/lakes-ponds/data-maps/scorecard</a> )	DEC	FWC	DEC	DEC	FWC continuing lake sampling beginning end May to October. Fritz Gerhardt has contract to summarize 2017 data		
Action required	Determining phosphorus loading from lake sediments (internal loading)	Assessment	Study internal loading – lake bottom coring;	Lcarmi TMDL Action#1B	DEC	FWC			FWC interested in contracting with UVM to do this study	
Action required	Stream Geomorphic Assessments	Assessment	Complete Stream geomorphic assessments on all streams either full or lite version to identify projects	Lcarmi TMDL Action#7 & 8	DEC, Volunteers	FWC	ERP, DEC	Marsh Brook, Dewing, Hammond north have assessment info. Remaining streams are small. Karen and Staci will continue to review/discuss needs for geomorphic assessments with FWC	FWC INTERESTED IN APPLYING FOR ERP GRANT OR WATERSHED (CON PLATE) GRANT TO COMPLETE	
Action required	Riparian Plantings	Riparian plantings	Consider Marsh Brook below State Park Road, above Towle Neighborhood Road (in addition to plantings already completed under CREP); Alder Run.	Lcarmi TMDL Action#9	FWC		ERP	Karen Bates discussed with FWC to Franklin NRCD would be interested in assisting. Need to figure out landowner interest	The Franklin Natural Resource Conservation District would be interested in assisting with outreach and planting. Unless willing landowners are identified first, LCBP education/Outreach may be a suitable grant.	
on-going	Implementation of NRCS watershed plan for Pike	agriculture BMP	Providing funding priorities for field practices in the Pike river watershed and education and outreach to agriculture	NRCS <a href="https://www.nrcs.usda.gov/wps/PA_NRCSConservation/umtion/download?cid=nrcseprd1257452&amp;ext=pdf">https://www.nrcs.usda.gov/wps/PA_NRCSConservation/umtion/download?cid=nrcseprd1257452&amp;ext=pdf</a> Lcarmi TMDL #12	NRCS	AAFM, UVM Extension	USDA	David Blodgett, NRCS is contact. BMPs implemented today through NRCS, presented to Implementation team, including FWC and LCCA Summer 2016. Handout developed		
Action required	Wastewater Feasibility Study followup	Wastewater	Determine interest in using study to identify additional strategies including development of a community wastewater system	Lcarmi TMDL action#2	DEC	LCCA, DEC staff		Possible idea: Use of Fire Districts to fund community water water treatment facilities if pursued. Limited studies to identify impact from inadequate wastewater treatment to date. None show contamination to lake.		

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ([http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915\\_Phase\\_1\\_Implementation\\_Plan\\_Final.pdf](http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf)))

Color Key for responsible party

Franklin Watershed Committee (FWC)

VT Department of Environmental Conservation (DEC)

VT Agency of Agriculture, Food and Markets (AAFM)

ROADS - State, Town or private

USDA Natural Resources Conservation Service (NRCS)

Status	Project Name	Project Type	Project Description	Source	Lead Partner	Supporting partners	Funding source	DEC Notes	FWC Notes
On going	Septic Social	Wastewater	Offer Septic Socials once a year to provide information to landowners about effective wastewater treatment systems	Lcarmi TMDL Action#2	FWC	LCCA, DEC staff	DEC staff	Not well attended 2016. Plan for 2018 with partner	
On going	Septic Tank pumpouts	Wastewater	Offer discounts on pumpouts	Lcarmi TMDL Action#3	FWC		Lake Champlain Basin Program, DEC watershed grants,	Supported by FWC. Obtain update - how many were subsidized last year, and how many we can offer this year?	
On going	Water reduction practices	Wastewater	Provide devices to reduce use of water	Lcarmi TMDL Action#3	FWC	LCCA, DEC staff	Lake Champlain Basin Program, DEC watershed grants,	FWC - in past, have offered low-flow faucet, showerhead, toilet raffle at events. Need update	
Plan completed; implementation ongoing	Franklin Stormwater Master Plan (FSMP) implementation (see specific projects below)	Stormwater	Stormwater master plan implementation for Pike River and Lake Carmi watersheds	Franklin stormwater master plan LCarmi TMDL Action#4	FWC	Town	ERP, BBR	Plan completed (see individual projects below)	
Action required	FSMP: LC-05 (Middle Rd., 1/2 mile west of Gallup Rd)	Erosion	Culvert outlet is perched two feet above the current streambed. Stream banks immediately downstream are actively eroding. Nearby ditches are narrow and incising.	Franklin stormwater master plan	Town		VTRans BBR	10/12/17 - Town clerk said it could be good project. Based on aerial photography, drainage may not connect to Alder Run or other direct drainage to lake. Would only be priority if there is hydrological connection. Need permission to walk private property	Need to check if and how stream connects to Alder Brook
Action required	FSMP: LC-06 (N. Sheldon Rd., 1/2 mile south of Riley Rd)	Infrastructure	Culvert is too short for the current road width. Bank above culvert outlet is very steep and has collapsed over the opening. Pavement surface above the outlet is beginning to collapse	Franklin stormwater master plan	VTRans		VTRans BBR	12/5/17 - site visit with VTRans. Wait for report	
Action required	FSMP: LC-08 (State Park Rd, 350 ft south of intersection with Dewing Rd)	Infrastructure	Sinkhole in the road shoulder has formed above the upstream end of culvert; rocks have been installed in an effort to stabilize the scour pool at downstream end of culvert.	Franklin stormwater master plan	VTRans		VTRans BBR	12/5/17 - site visit with VTRans. Wait for report. Sink hole fixed	
Action required	FSMP: LC-09 (State Park Rd)	Erosion	Logging road and landing on the east side of State Park Rd, ~500 ft north of Kennison Rd, has not been properly closed out and is actively eroding. Undersized culvert used to convey existing roadside drainage under access.	Franklin stormwater master plan	VTRans		VTRans BBR	Site has revegetated. If further erosion seen, check with landowner. Continue to discuss available resources with county forester	
Action required	FSMP: LC-10 (State Park Rd)	erosion	Recent ditching along State Park Rd in from of #3306 and across from the entrance to the park is actively failing	Franklin stormwater master plan	VTRans		VTRans BBR	12/5/17 - site visit with VTRans. Wait for report	

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ([http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915\\_Phase\\_1\\_Implementation\\_Plan\\_Final.pdf](http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf)))

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ( <a href="http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf">http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf</a> ))					Color Key for responsible party	Franklin Watershed Committee (FWC)	VT Department of Environmental Conservation (DEC)	VT Agency of Agriculture, Food and Markets (AAFM)	ROADS - State, Town or private	USDA Natural Resources Conservation Service (NRCS)
Status	Project Name	Project Type	Project Description	Source	Lead Partner	Supporting partners	Funding source	DEC Notes	FWC Notes	
On going	Lake Wise Implementation	Shoreline	review, prioritize and implement projects proposed through lakewise evaluations.	Lcarmi TMDL Action #4	DEC	FWC	ERP	Over 10% of lake shore residents (206? camps) have shown interest. Just less than 10% have had assessment completed. To date, 11 camps have Lake Wise certification. FWC has submitted reports for work to date.		
On going	Lake Wise Implementation	Shoreline	Continue to scope for demonstration projects	Lcarmi TMDL Action#5	DEC	FWC	ERP	support continuation, but will need further funding for more Lake Wise evaluations and project support.		
On going	Lake Wise Evaluations	Shoreline	Continue to encourage landowners to participate in evaluation and acknowledge efforts to meet criteria	Lcarmi TMDL Action #5 & #17	FWC	FWC	LCBP, or DEC Watershed grants?	Continue, but will need further funding for more Lake Wise evaluations and project support.	Will plan more for this summer or next summer if we can get another grant.	
On going	Improving private roads: assessment	Roads	Continue assessments on private roads	Lcarmi TMDL Action #14	FWC	Road assn or camp owner	ERP?, landowner	FWC has coordinated private road assessments. All complete except Sandy Bay Brook roads.		
On going	Improving private roads: Implementation	Roads	Private roads – Implement projects from assessments,	Lcarmi TMDL Action #15	FWC	NRPC	ERP?, landowner	over 5 miles of private road work completed based on assessment work. FWC will work with landowners to continue improvements with help of grants and landowner assistance		
On going	Act 64 farm related permits	Regulations	North lake Farm survey and assessment: Conduct assessments on livestock farms in watershed to discuss RAPs, identify water quality concerns and provide outreach regarding cost-share assistance opportunities.	AAFM and Lcarmi TMDL Action#12	AAFM		AAFM	NLFS completed. Assessment information compiled for Lake Carmi farms and provided to FWC, LCCA at implementation team meeting. Handout developed		
On going	Act 64 road related permits	Regulations	Town will assess all town roads and fix prioritized areas where road erosion enters waterbody	Lcarmi TMDL Action #14 and Act 64	Towns,, Northwest Regional Planning Commission (NRPC)		Town, ERP	NRPC assisting town with assessment		
Action required	State of Vermont RCPP (DEC Lake Champlain RCPP	Agriculture and Silviculture	Water quality improvement projects on agricultural and forest lands, Wetland Reserve Program, Agricultural Conservation Easement Program, Education & Outreach, Fostering Partner Relationships		DEC		USDA	Need to ID any old logging sites that need restoration; WSMD update		

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ([http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915\\_Phase\\_1\\_Implementation\\_Plan\\_Final.pdf](http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf)))

Lake Carmi Watershed Projects In Progress or Planned by Partners: Sources include The Agency of Natural Resources Lake Carmi Phosphorus TMDL Action Plan, Missisquoi Watershed Tactical Basin Plan, NRCS Pike River Watershed Plan (Additional resources for addressing phosphorus loading to Lake Carmi include State and federal regulations and technical and financial resources that are described in the Lake Champlain Phosphorus TMDL Implementation Plan ( <a href="http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf">http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf</a> ))					Color Key for responsible party	Franklin Watershed Committee (FWC)	VT Department of Environmental Conservation (DEC)	VT Agency of Agriculture, Food and Markets (AAFM)	ROADS - State, Town or private	USDA Natural Resources Conservation Service (NRCS)
Status	Project Name	Project Type	Project Description	Source	Lead Partner	Supporting partners	Funding source	DEC Notes	FWC Notes	
On going	Vermont Association of Conservation Districts RCPP	Regulations	Work with small farms to develop Nutrient Management Plans that will help position farmers to do additional conservation practices, working closely with UVM Extension to have farmers develop their own NMPs through the Digging In program.	AAFM and Lcarmi TMDL Action#12	FNRC, VACD, UVM extension		VACD	WSMD contacted Franklin Natural Resource Conserv District, who implements this action. She has not worked with Lake Carmi watershed farms to this date.		
On going	Protection of wetlands	Protection	Coordinate with conservation organization and landowner to consider protection	Non-game Natural Heritage Program, TMDL Action#19	DEC, The Nature Conservancy		ERP	WSMD - on going		
on going	River corridor restoration	remediation	Explore potential for restoration streams that are not in natural condition	Lcarmi TMDL Action #10	DEC			WSMD did map review and in addition to Dewing and Kane Brook and will continue to work with land owners to determine if there are potential projects. WS		
On going	Wetland Restoration	remediation	Work with DEC Wetlands Program and NRCS to identify priority areas for remediation. Work with partners to implement	Lake Champlain Phosphorus TMDL	DEC		ERP, NRCS	working with Wetlands Program		
On going	cyanobacteria monitoring	assessment and education/outreach	gather data on the occurrence of cyanobacteria blooms. Reach out to campers and visitors about cyanobacteria so that they recognize blooms and know to avoid them. Outreach should also make the connection between extensive prolonged blooms and high nutrient levels, and the changes in land practices that are needed to reduce bloom occurrence.	VT Dept. of Health (DVH) DEC	DEC	VDH, DEC, LCC, LCCA	DVH	Department of Health website has information . See <a href="https://apps.health.vermont.gov/vtracking/cyanobacteria/2017/d/">https://apps.health.vermont.gov/vtracking/cyanobacteria/2017/d/</a> weekly reports. and see <a href="http://www.healthvermont.gov/health-environment/recreational-water/lake-conditions-for-general-information">http://www.healthvermont.gov/health-environment/recreational-water/lake-conditions-for-general-information</a>		
On going	aeration project proposal	technology	design and implement aeration demonstration project	DEC, LCarmiTMDL #13	Lake Carmi Implementation team		DEC			
Ongoing	Agricultural sector commitments in Lake Champlain Basin Phosphorus TMDL	Agriculture	for a complete explanation of AAFM work in basin, see agriculture section in the Lake Champlain Phosphorus TMDL Implementation Plan: <a href="http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf">http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf</a>							
Ongoing	USDA Natural Resource Conservation Service	Agriculture	For an explanation of NRCS work in the larger Pike River watershed (Lake Carmi included)see:file:///C:/Users/karenb/Downloads/Pike_Outreach_FINAL%20(2).pdf							

