

**SUPPORTING INFORMATION ASSOCIATED WITH THE ALLOCATION PRIORITIES FOR CLEAN WATER FUND BOARD**

**Table 2: State Agency Recommendations – Agency of Agriculture, Food and Markets**

#	Sector	Agency	Funding Program	Supporting Information
1	Agriculture	AAFM	On-Farm Implementation (Grants & Contracts);  <b>Supports: Capital projects, farm agronomic practices</b>	<p>Approx. 95% of the respondents to the August clean water questionnaire cited agriculture, the largest phosphorus source in the Lake Champlain Basin (LCB), as a priority for investment. Additionally, the recently completed survey of farms in the northern Lake Champlain Basin (referred to as the Northern Lake Survey) show a substantial need for infrastructure improvement on small farms, which will be required as part of the farms' certificate of compliance with state regulations. The funds will: (a) provide match to the recently received USDA funds, such as the USDA RCPP, to address implementation needs in critical areas, as required under the Lake Champlain TMDL; (b) target the current funding gap for agronomic practices; (c) address critical small farm infrastructure needs; and (d) support conservation practice implementation for major water quality resource concerns outside the LCB which currently is not supported by USDA.</p> <p>Funding priority projects outside the LCB is necessary because there is not sufficient USDA funding to address these needs. Last year, USDA provided financial assistance for farmstead practices on only two 2 farms outside the LCB.</p>
2	Agriculture	AAFM	Grants & Contracts;  <b>Supports: Incentives, technological solutions, applied research farm, alternative strategies, farm acquisition</b>	<p>This allocation will support a suite of agricultural sector-based programs (described under "Activities") that are not supported by existing state and federal funding.</p> <p>The allocation will support the development of projects that focus on non-traditional reduction strategies that could lead to new and innovative implementation policies. For example, areas where livestock agricultural densities are increasing are also the areas where water quality impacts can be significant, signifying the importance of developing strategies to that influence the import and export of nutrients. If these types of alternative solutions are not implemented, it is unlikely that overall water quality goals will be met, despite substantial financial support for conservation practices.</p>

**Table 2: State Agency Recommendations – Agency of Agriculture, Food and Markets**

#	Sector	Agency	Funding Program	Supporting Information	
3	Agriculture	AAFM	Operating;  <b>Supports: Staff capacity to support regulatory requirements</b>	Act 64 directed the Board to provide this allocation to support Agency of Agriculture’s staff capacity needs.	
<b>SUBTOTAL (FY16, FY17) = \$2,650,000</b>				\$675,000	\$1,975,000

**Table 2: State Agency Recommendations – Agency of Natural Resources**

#	Sector	Agency	Funding Program	Supporting Information
4	All Sectors	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: Technical &amp; educational assistance</b>	<p>Minimizing precipitation-driven polluted runoff &amp; erosion fundamentally means changing land use practices, which requires education &amp; technical assistance. Municipalities managing stormwater runoff coming off of roads and parking lots, farmers, loggers, and other businesses and landowners need opportunities to learn about the problems with polluted runoff and understand how they can take action to address the problems. Education will help raise awareness that these same actions can achieve other benefits, such as improved flood resilience. This recommendation will enable the State to recruit support from partners across the State who can deliver technical and educational assistance to targeted audiences on a range of water quality and flood resiliency-related topics.</p> <p>Although the delivery of technical and educational support would largely begin in FY2017, the recommendation includes funds in FY2016 to target the development of agricultural land treatment plans (LTP); this investment will be critical for improving water quality by influencing the implementation of practices at both production areas and farm fields. LTPs are part of the USDA Natural Resources Conservation Service (NRCS) 590 Standard for nutrient management planning. LTPs are required for any farm that receives federal funding for waste management systems. The 590 standard is also currently in the draft Required Agricultural Practices (RAPs) as a requirement for certified small farm operations beginning in 2017. The Northern Lake Survey illustrates that a large percentage of the small farms will need assistance in the mandatory land treatment planning prior to implementing infrastructure improvements. Developing LTPs takes substantial time and resources. This allocation supports 3-4 land treatment planners, to be under contract with the Vermont Department of Environmental Conservation (VDEC).</p>
5	All Sectors	ANR	Ecosystem Restoration Program, Grants & Contracts <b>Supports: LaRosa Analytical Services Partnership</b>	<p>The LaRosa Analytical Services Partnership Program offers financial support to locally-based watershed organizations for analytical services from the VDEC laboratory to facilitate volunteer water quality testing projects and help track the effectiveness of project implementation. Partners participating in the program commit to quality assurance project planning to ensure that resulting data are of use to the Department of Environmental Conservation. There is a structured process in place for project development, volunteer training, sample submission, scheduling, data quality assurance, and reporting to the Department. LaRosa partnerships have been awarded in most watersheds across the State. Data have been used to identify possible discharges, characterize impaired waters, find water quality violations, assist in the renewal of discharge permits, track improvements and support a variety of water quality initiatives.</p>
<b>SUBTOTAL (FY16, FY17) = \$1,185,000</b>				<p style="text-align: right;"><b>\$100,000      \$1,085,000</b></p>

Table 2: State Agency Recommendations – Agency of Natural Resources

#	Sector	Agency	Funding Program	Supporting Information
6	Agriculture	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: Three existing partner agronomists</b>	<p>Over the last few years, the Lake Champlain Basin Program (LCBP) has provided the initial seed funding to support a highly successful agricultural technical assistance program called the Agronomy &amp; Conservation Assistance Program (ACAP), housed at partner organizations (the University of Vermont Extension and the Poultney-Mettowee Natural Resources Conservation District). The program uses three agronomists – agricultural water quality advisors -- in the Lake Champlain Basin to help farms reduce soil and nutrient loss and improve water quality. Each agronomist works with approximately 30-50 farmers annually. In the first two years, this program already resulted in technical assistance to 178 farms, 36,000 linear feet of livestock fencing installed, 1,672 acres planted with a no-till grain drill, and 2,860 acres planted in cover crops.</p> <p>The LCBP initially supported the program with the understanding that the State would eventually assume program oversight. The likelihood of continuing to fund the program through the LCBP into the future is now uncertain. This allocation will enable the State to assume the management of the program.</p>
7	Municipal Stormwater	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: Municipal stormwater project identification &amp; prioritization</b>	<p>Stormwater runoff that degrades surface and groundwater comes from impervious surfaces and all land clearing and land use conversion activities (such as open-land conversion to developed areas). This allocation supports the development of 10-20 municipal-based comprehensive stormwater management plans that identify, prioritize and target stormwater mitigation practices. We will identify the municipalities using the “Tactical Basin Planning” process (the state-sponsored process that involves the development of plans that assess water quality throughout a watershed and identify and prioritize actions to improve water quality).</p> <p>Historically almost all municipalities have responded to stormwater runoff or drainage problems when they arise, which is often during an emergency or after a structural failure has occurred. Stormwater management planning supports the management of stormwater runoff <u>before</u> structural failures occur or before the waters become impaired. This approach saves money, since prevention is cheaper than restoration. This methodology engages the public in project planning, which helps to build participation and buy-in at the local level. This methodology stresses the importance of preserving natural features and functions of a watershed in order to enhance resilience to future flooding. It also allows for the consideration of alternative stormwater management approaches to traditional pipe (gray) infrastructure, such as more efficient and economic low impact (green) infrastructure. The outcome of the planning effort is a list of priority projects and actions, offering a community “road-map” to achieve and protect water quality.</p>

Table 2: State Agency Recommendations – Agency of Natural Resources

#	Sector	Agency	Funding Program	Supporting Information
8	Municipal Stormwater	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: Municipal Stormwater projects</b>	On an acre-for-acre basis, developed land areas generate a disproportionate amount of the nutrient and sediment loading to the state’s waters. Developed land involves the construction of buildings, roads, and parking areas. These are impervious surfaces that reduce infiltration of precipitation and speed the delivery of runoff into surface waters. VDEC has identified numerous projects for implementation through the “Tactical Basin Planning” process. This allocation represents a number of priority stormwater mitigation projects already identified, designed and ready for implementation.
9	Municipal Stormwater	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: Municipal Capital Equipment Assistance</b>	This allocation will support a modest pilot incentive program to help strengthen municipalities’ capacity in stormwater management by making available financial assistance for the acquisition of capital equipment. Examples of equipment include high efficiency street sweepers and catch basin cleaning technologies. These technologies help keep sand, grit, dirt, leaves, fertilizers and other materials out of storm sewer systems -- and ultimately out of receiving waters. Hydroseeding systems are another technology to reduce erosion and sedimentation of nearby waterways. Offering a grant program to support these technologies will facilitate municipal adoption and use of these approaches.

**Table 2: State Agency Recommendations – Agency of Natural Resources (continued)**

#	Sector	Agency	Funding Program	Supporting Information		
10	Natural Resources	ANR	Ecosystem Restoration Program, Grants & Contracts;  <b>Supports: wetland &amp; floodplain restoration</b>	<p>Widespread and historic stream channelization (such as dredging, berming, straightening, and armoring practices) has resulted in increased erosion and therefore increased sediment and nutrient pollutant loading. Land drainage activities and structural controls such as riprap may prevent flooding and erosion at one site, but increase erosion downstream and contribute to destabilizing the stream system. These activities increase the power of floods thereby increasing stream bed and bank erosion, property damages and risks to public safety.</p> <p>Managing rivers and floodplains to attain and maintain dynamic equilibrium conditions (i.e., the vertically stable and least erosive, naturally stable conditions) provides for greater flood resilience and public safety while reducing sediment and nutrient pollution. This allocation meets EPA’s expectations under the TMDL to conduct active restoration. It involves working with municipalities and landowners to restore floodplains, river corridors, wetlands and riparian areas. This allocation will also focus on river and wetland easement projects that help municipalities be resilient to future flooding and limit future increases in phosphorus loading.</p> <p>Healthy forests translate into functional ecosystems that bind phosphorus and water, preventing additional runoff. This allocation will focus on management practices to prevent erosion, particularly at stream crossings and along skid trails and truck roads. Additionally, the allocation will focus on prioritized areas for riparian forest buffer restoration and municipal urban forest development as a “green stormwater infrastructure” strategy.</p>		
11	Wastewater Treatment	ANR	FED State Revolving Fund Loan Program  <b>Supports: Municipal Wastewater Treatment</b>	Additional nutrient removal treatment at municipal wastewater facilities will be required to meet TMDLs across the state. This allocation, albeit small compared to the statewide financial need, will help leverage additional federal funds to provide municipal assistance in complying with nutrient-based TMDLs, such as in asset management.		
<b>SUBTOTAL (FY16, FY17) = \$4,670,000</b>				<table border="1"> <tr> <td data-bbox="1705 1321 1892 1356">\$800,000</td> <td data-bbox="1898 1321 2043 1356">\$3,870,000</td> </tr> </table>	\$800,000	\$3,870,000
\$800,000	\$3,870,000					

**Table 2: State Agency Recommendations – Agency of Commerce and Community Development**

#	Sector	Agency	Funding Program	Supporting Information
12	Technical Support	ACCD	Vermont Center for Geographic Information <b>Supports: LiDAR Mapping</b>	This allocation provides some of the state match to a federal grant that will enable Vermont to acquire LiDAR mapping for a large portion of the Connecticut River Basin, specifically Windsor, Caledonia and Orange counties. LiDAR (Light Detection and Ranging) is a mapping technology that offers high resolution geographic information used to identify priority sources of polluted runoff across all sectors, from roads and abandoned logging roads to stormwater runoff sites. LiDAR serves other important public uses, such as floodplain and river corridor mapping for flood resiliency planning, emergency management mapping needs (such as dam failure and ice jam analyses, landslide prone areas and evacuation planning), transportation planning including bridge scour assessments and land use planning.
<b>SUBTOTAL (FY16, FY17) = \$430,000</b>				\$430,000 --

**Table 2: State Agency Recommendations – Agency of Transportation**

#	Sector	Agency	Funding Program	Supporting Information
13	Municipal Roads	VTrans	Municipal Mitigation Grant Program; <b>Supports: Gravel road projects</b>	This allocation supports municipal gravel road stormwater mitigation projects through the VTrans Municipal Mitigation Grant Program. The grants will help municipalities comply with the state road general permit, currently under development by DEC, and required as part of Act 64.  Unpaved roads are one of highest per-acre sources of phosphorus. The “best management practices” (BMPs) used to address unpaved roads are among the most cost-effective actions to reduce phosphorus. BMP implementation will also enhance municipalities’ resilience to flood damages and will help reduce long-term maintenance costs. The Municipal Mitigation Grant Program will establish scoring criteria that prioritize funding for those projects that have maximum water quality, resilience and cost saving benefits.
14	Municipal Roads	VTrans	Municipal Mitigation Grant Program; <b>Supports: Paved road projects</b>	This allocation supports municipal paved road-related stormwater mitigation projects through the VTrans Municipal Mitigation Grant Program. The grants will help municipalities comply with the state road general permit, currently under development by DEC, and required as part of Act 64.  The State has identified a number of roadway stormwater and culvert improvements through the Tactical Basin Planning process (the state-sponsored watershed assessment process). The Municipal Mitigation Grant Program will establish scoring criteria that place an emphasis on meeting the roadway stormwater and culvert improvement priorities of the Tactical Basin Planning process. Grant criteria will account for factors such as water quality/sediment transport blockage, vulnerability to failure, aquatic habitat restoration potential, and readiness for implementation.
<b>SUBTOTAL (FY16, FY17) = \$1,465,000</b>				-- \$1,465,000

**Table 2: State Agency Recommendations by Sector**

Agency Summary	State FY16	State FY17	Total
Agriculture	\$675,000	\$2,460,000	\$3,135,000
Municipal (roads, stormwater)	\$800,000	\$3,200,000	\$4,000,000
Municipal Wastewater	--	\$500,000	\$500,000
Natural Resources	--	\$1,150,000	\$1,150,000
All Sectors – LiDAR Mapping	\$430,000	--	\$430,000
All Sectors – Partner Support	\$100,000	\$1,085,000	\$1,185,000
<b>TOTAL</b>	\$2,005,000	\$8,325,000	\$10,400,000

**Table 2: State Agency Recommendations by Administering Agency**

Agency Summary	State FY16	State FY17	Total
Agency of Agriculture	\$675,000	\$1,975,000	\$2,650,000
Agency of Natural Resources	\$900,000	\$4,955,000	\$5,855,000
Agency of Commerce and Community Development	\$430,000	--	\$430,000
Agency of Transportation	--	\$1,465,000	\$1,465,000
<b>TOTAL</b>	\$2,005,000	\$8,325,000	\$10,400,000