PETER SHUMLIN
Governor

State of Vermont
OFFICE OF THE GOVERNOR
May 29, 2014

Gina McCarthy, Administrator
Environmental Protection Agency
Office of the Administrator – 1101A
1200 Pennsylvania Avenue, N.W,
Washington, D.C. 20460

H. Curtis Spalding, Regional Administrator
Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Dear Administrator McCarthy and Administrator Spalding:

Please find attached my Administration's Phase One Plan establishing the steps that Vermont will take to reduce our state's share of the phosphorus load into Lake Champlain. As the sixth largest freshwater lake in the United States, and the source of vital economic, recreational, and cultural opportunities, Lake Champlain is a water of critical importance to Vermont, the region and our nation. We share the nation's interest in returning this treasured water body to full health.

As you review this Plan, please recall that Vermont has a small, rural population. That fact, coupled with a strong land ethic reflected in our state and local land use laws, has ensured that our landscape has retained a historic land use pattern of village centers surrounded by working farms and forests. This development pattern is much different from many other parts of New England or the urban areas surrounding the Chesapeake Bay which are much more heavily developed. The population density of the Lake Champlain Basin as a whole is 61 people per square mile compared, for instance, to a density of 277 people per square mile for the Chesapeake Bay Basin, or 858 people per square mile for the State of Massachusetts.

For this reason, the plan for reducing pollution into Lake Champlain will necessarily be different than the Clean Water Act plans in most other parts of the country. In Vermont, for instance, our lower population density is associated with fewer wastewater treatment plants. The vast majority of the impacts on water quality in Lake Champlain result from other sources pollution such as stormwater runoff. Unlike states that can meet the needed reductions by focusing on wastewater discharges, Vermont needs a comprehensive solution. In order to address the pollution sources into the lake, Vermont must target its work where it will make the greatest difference.

We must ensure that we spend our precious financial resources where we get our greatest return on investment. We have developed a plan, building on past lessons, to do just that.

Recognizing the critical importance of a clean Lake to a healthy environment and economy, Vermonters have been working hard for the past forty years, under the auspices of the federal

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Clean Water Act in close coordination with the U.S. Environmental Protection Agency (Agency or EPA), to reduce the levels of phosphorus discharging into Lake Champlain. EPA and other federal agencies have provided much needed support to Vermont's efforts through funding and technical assistance. In accordance with federal requirements, Vermont has imposed stringent standards on our wastewater treatment plants and has achieved dramatic reductions in a range of pollutants including phosphorus. Vermont has also taken significant steps to reduce polluted stormwater runoff from urban and suburban development, our transportation network, and Vermont's working farms and forests. Despite these significant efforts, we have not reached our goal of a clean Lake Champlain and realize more must be done.

Since I first took office in 2011, the State of Vermont has collaborated with EPA to replace the 2002 Lake Champlain Total Maximum Daily Load (TMDL) and the accompanying implementation plan with a new plan that will result in significant additional reductions to the levels of phosphorus in Lake Champlain. The process we followed to develop this plan included conversations with legislative committees of the Vermont General Assembly, public hearings to receive input from Vermont citizens, and a public comment process that resulted in extensive public comments. I asked my Cabinet to consider this legislative and public input as they worked together across the agencies of agriculture, transportation, commerce and natural resources to achieve the goal of reducing phosphorus in Lake Champlain. In response, these agencies have developed a strategy that is at once comprehensive, covering the major sources of polluted runoff, and targeted, taking advantage of research, project results, and tools developed over the past decade to address the most critical sources of pollution. The state agencies also worked closely with EPA staff to address their specific concerns regarding the scope of state planning and level and timing of demonstrated commitments in meeting the TMDL. The strategy resulting from all of these efforts is described in the attached Phase One Plan.

The Phase One Plan contains numerous management strategies that will result in Lake Champlain meeting its phosphorus standards. The Plan includes the following elements:

Agriculture: Agriculture is the largest source of phosphorus load into Lake Champlain, estimated to be approximately forty percent of the total load. The State has committed to implementing the following programs to reduce phosphorus from agricultural sources: (1) Increase inspections and compliance efforts for all farms with a focus on small farms which have been largely unregulated in the past; (2) Implement a requirement that will strengthen livestock exclusion from perennial waters through regulation and incentives; (3) Update current agricultural regulations to increase management of buffers, gullies and ditches; and (4) Update requirements for and increase investment in nutrient management planning.

River stability: River and streambank erosion, which releases soil-locked phosphorus, is estimated to constitute over twenty percent of the phosphorus load into the Lake. Vermont is experiencing an increase in extreme weather patterns with a significant and measurable increase in the frequency and intensity of precipitation, likely as a consequence of climate change. Following the floods in 2011, the region experienced an object lesson in the sheer amount of sediment that flows off of the landscape during high-water events. In that year, 75% of the phosphorus load into the Lake from the Winooski River sub-basin was associated with just two storm events that produced erosion and prolonged flooding.

The State's recommendations in this category involve restoring stream and river equilibrium through giving our rivers "room to move." Much of the cost of addressing river and streambank erosion is in the form of land conservation and strategic floodplain restoration. The benefits go well beyond water quality and include a substantial reduction in flood damage. Using data from recent flood events, the State is establishing updated standards for state land use permits (Act 250), development exempt from municipal regulation, and state development in floodplains. The State is also promoting adoption of these updated standards by local governments through the National Flood Insurance Program.

Transportation: Transportation-related stormwater pollution constitutes approximately ten percent of the total phosphorus load and strategies to reduce this load are second only to agriculture as a measure of cost-effective investment. The State commits to undertake two major new programs to reduce phosphorus from transportation infrastructure: (1) A "TS4" permit for state roads modeled on the Municipal Separate Storm Sewer System Permit ("MS4") under which the entire state road network will be regulated under a general permit that allows our state transportation agency to operate under one stormwater permit; and (2) A Municipal Roads Stormwater General Permit requiring the development and implementation of stormwater management plans for local roads. Our fiscal commitments will include increases for state transportation funds and staffing resources to build a strong local roads technical assistance program within the Vermont Agency of Transportation.

Developed Land: Although the Lake Champlain basin has a small percentage of developed land (~3-5%), matching its low population density, stormwater runoff from developed lands (apart from transportation) makes up about ten percent of the total phosphorus load into the Lake. The costs of various practices ("best management practices") vary widely and the State is proposing an approach under which towns and cities will be able to develop plans that allow them to prioritize stormwater control projects to optimize investments and to implement those plans over time. The State is proposing a new general permit for existing developed lands including a first stage in which sites with greater than three acres of impervious cover will be required to obtain permit coverage, and a second stage in which municipal stormwater systems where high density (greater than 7%) impervious cover exceeds fifteen acres. These criteria will be better defined during the watershed-specific "Phase 2" or tactical basin planning phase, which will allow for needed flexibility to focus on the most critical of sources in a cost-effective manner. The permit will also include requirements for stormwater management and phosphorus control plans. The State is also implementing an Executive Order promoting the use of green stormwater infrastructure.

In addition, the Plan includes other components that address the remainder of the phosphorus load. The proposal includes actions relating to: (1) improving forest harvesting practices, improving forest health, and restoring forest lands, (2) restoring and conserving wetlands, (3) protecting and restoring lake shorelands, and (4) expanding state funding for local and regional stormwater pollution management programs.

As EPA indicated in its comments on our draft Phase One Plan, Vermont does not currently have the capacity to fully implement this Plan on its own. As the most rural watershed thus far to have undertaken enhanced TMDL compliance commitments with EPA, Lake Champlain will require an all-hands-on-deck effort involving adjoining state and international partners, the EPA and

other federal agencies, municipalities, developers, private philanthropic groups, and all of the citizens of Vermont. I will be proud to lead this partnership, and I commit to seeking the resources and funding necessary to implement this Plan. This commitment includes providing EPA, as requested, the detailed staffing and funding strategy underlying this plan by November 15, 2014. This funding report will contain specific recommendations for state funding to ensure that Vermont does its fair share to ensure a clean Lake Champlain through the contribution of state, local, and private funding and resources. The plan will also contain specific recommendations for staffing resources necessary to implement the TMDL.

In addition, my cabinet and I will continue our work with your Agency, other federal agencies including the U.S. Departments of Agriculture, Interior, and Transportation as well as the U.S. Army Corps of Engineers, and Vermont's Congressional delegation to tap into the significant resources and capacity of the United States government to provide funding, technical assistance, and training. I appreciate all of the assistance our federal partners have provided in our efforts.

The Plan has been revised in response to EPA comments to better articulate the specific commitments set forth. Examples of this include subdividing larger or more complicated tasks into smaller subtasks with deadlines, providing increased detail on program descriptions to ensure consistency in the Plan, and increasing the clarity of timelines. Taking these steps will improve transparency and accountability over the Plan implementation period. I also share EPA's objective of ensuring that higher benefit programs take place in the early and middle phases of the program with no more than ten percent of the reductions taking place in the later phases of the program. The State's Plan assures the implementation of new steps in a manner that is targeted to those goals and will promote accountability.

The Plan also is a targeted and smart approach that takes into account our shortfalls in the past, as well as the hard science and experience that proves what works. For example, if we rebuilt every wastewater plant along the lake at an enormous cost, it would only reduce phosphorous by 3 percent. That is a bad plan. We should not spend state or federal resources in ways that do not justify the investment. EPA indicated in its comments to our earlier draft Plan that it is "highly unlikely" that the final TMDL would allocate no reductions to wastewater treatment plants in any of the lake segments, as the State had suggested. We await final load calculations from EPA that will help us understand whether these additional commitments, and their associated expenses, are warranted, and will consider implementation of more stringent phosphorous limits on wastewater treatment plants at that time. If the State and Agency determine that additional reductions in permitted wastewater loads are required for the TMDL, then we believe the following principles should apply:

- Reductions in wastewater allocations should be targeted only to facilities in those lake segment watersheds where the currently permitted wastewater load represents a significant proportion of the total phosphorus load from all Vermont sources, and where wastewater upgrades would meaningfully reduce the phosphorus reduction burden placed on non-wastewater sources;

- TMDL-based discharge permit limits should be defined as annual average phosphorus loading rates, rather than as concentration limits, in order to allow operational flexibility in attaining the limits;

- New permit requirements should be implemented through compliance schedules that allow sufficient time for planning, budgeting, and engineering, and that take advantage of cost-efficient opportunities to couple phosphorus upgrades with other planned facility construction projects; and

- Other forms of flexibility should be available to achieve the wasteload allocations in an optimally cost-effective manner, including phosphorus trading and integrated permitting.

If the manner of EPA's final load allocation for wastewater treatment does not reflect the above principles, then I will direct my agency secretaries to withdraw the commitments we are making elsewhere in the Plan.

It is my understanding from EPA's comment letter that, over the summer, EPA will be finalizing the scientific modeling and information necessary to predict the necessary levels of pollution reduction that will assist us in finalizing the Plan and creating a funding report. The attached Plan is premised upon the modeling and cost estimates developed by EPA to date. In the event that the revised modeling results substantially affect our shared understanding of the predicted ability of the attached Phase One Plan to reduce polluted stormwater runoff, we expect to engage in further discussions with EPA about the extent and nature of the proposals in the Plan.

I look forward to working with you to implement Vermont's Phase One Plan once approved and to ensure that one of our Nation's crown jewels is protected so that children for many generations to come will be able to enjoy the clean water of Lake Champlain.

Sincerely,

Peter Shumlin
Governor

cc. Stephen Perkins, Director
Office of Ecosystem Protection
USEPA REGION 1 - New England