
VERMONT LAKE CHAMPLAIN PHOSPHORUS TMDL PHASE 1 IMPLEMENTATION PLAN

APPENDICES

APPENDIX A – EPA January 17, 2014 Letter	2
APPENDIX B – EPA February 13, 2014 Addendum Letter.....	11
APPENDIX C – EPA May 8, 2014 Response Letter	13
APPENDIX D – Summary of Regional Planning Commission Grants under Section 604B for FFY 2013.....	26
APPENDIX E – Act No 64. An Act Relating to Improving the Quality of State Waters	30
APPENDIX F – Agency of Agriculture, Food and Markets and Conservation Law Foundation Settlement Agreement, January 15, 2016	166
APPENDIX G – Legislative Report on Statewide Water Quality Improvement Programs, as Required by Statute (2014 Acts and Resolves No. 97, Sec. 1(c) as Amended by H.650).....	175

APPENDIX A – EPA JANUARY 17, 2014 LETTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

January 17, 2014

David Mears, Commissioner
Vermont Department of Environmental Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620-3520

Chuck Ross, Secretary
Vermont Agency of Agriculture, Food and Markets
116 State Street
Montpelier, VT 05620-2901

Dear Commissioner Mears and Secretary Ross:

The purpose of this letter is threefold: to provide comments on the draft "State of Vermont Proposal for a Clean Lake Champlain" (the "Proposal"); to provide the Vermont agencies with a clear understanding of the Environmental Protection Agency's expectations for the development of plans to implement the required phosphorus reductions in the revised Total Maximum Daily Load (TMDL) for Lake Champlain; and to describe an accountability framework to ensure those reductions are achieved.

The State Proposal

EPA applauds the substantial efforts the State has made in developing the Proposal. It is broad in scope and ambition, appropriately reflecting the challenge of restoring the health of Lake Champlain. As we have learned from the Scenario Tool, it will take an aggressive application of all of the measures in the Proposal to achieve water quality standards. Generally the Proposal lacks the specific details of what will be done by when. We appreciate that fleshing out the details is an iterative process and that the public outreach conducted in December, the comments you will receive this month, and analyzing information about things like unit costs are part of that process.

Climate change is another area that needs to be addressed throughout the Proposal. We suggest that relevant sections in the document include a discussion of how the implementation approach will take climate change into account. Climate adaptation and flood resilience should be addressed for each major category of practices. The report should note the phosphorus increases projected in EPA's climate change analysis, and explain how certain BMP, AAP, AMP

Toll Free • 1-888-372-7341

Internet Address (URL) • <http://www.epa.gov/region1>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)

measures can and will be designed to be effective for higher intensity rainfall events. We suggest including a stand-alone section that summarizes the efforts the State has already undertaken to prepare and adapt to climate change (e.g., new culvert sizing specifications, etc.) and the additional things the State will be doing moving forward. EPA's additional comments on many of the programs in the draft Proposal are provided in an attachment.

Implementation Planning

We recognize that the level of detail necessary for implementation planning will take time to develop. The following are EPA's expectations divided into distinct planning phases. For the first phase EPA expects the state agencies to revise the Proposal and provide final policy commitments in a basin-wide scale implementation plan (Phase I Plan) by March 31, 2014. EPA expects the Phase I Plan to include a description of the authorities, actions, and, to the extent possible, control measures that will be implemented to achieve the nonpoint source target loads. EPA expects the Phase I Plan to identify a schedule for accomplishing reductions including dates for enhancing programs and implementing key actions to achieve these reductions, with all such actions to be implemented as soon as possible and by no later than a date to be discussed further. These actions include, but are not limited to, adopting new regulatory authorities, improving compliance with existing regulations, and securing additional resources for personnel, grant or cost-share programs. Ideally, EPA would like to see a high level project management chart (e.g., Gantt chart) that shows the intended schedule for each of the program elements.

Each of the programs identified in the Proposal is described as applicable across the Vermont portion of the Lake Champlain basin. For each of those programs, EPA expects that the State will identify and commit to implement specific pollutant reduction controls and actions in successive two-year milestones. We anticipate that some programs can be implemented quickly while others will need to be developed. For those items that depend on new funding, please prioritize actions into items that will be funded in the first two years, the next two years, and so on. EPA expects that the Phase I Plan will be followed by a commitment letter from the Governor by April 30, 2014.

EPA is seeking these commitments this spring because the State has expressed a clear preference to retain some flexibility in the TMDL's Waste Load Allocation (for point sources). As noted in my October 23, 2013 letter to Commissioner Mears, under these conditions in order for the TMDL to be issued consistent with EPA's regulations, it must provide reasonable assurances that the nonpoint source control measures will achieve expected load reductions. A satisfactory Phase I Plan and associated commitment letter will provide reasonable assurances.

After the TMDL has been finalized later this year, EPA expects the State to develop sub-basin implementation plans (Phase II Plans/Tactical Basin Plans), which more explicitly indicate what measures or practices will be applied in specific areas by certain dates. This spatial and temporal targeting of phosphorus loads to a finer scale will help local decision-makers (e.g., municipal governments, conservation districts, watershed associations) better understand the

contribution to and responsibilities for reducing pollutant loads. EPA expects the State to update these basin plans every five years, consistent with Vermont's current basin planning process, to take advantage of the latest information on phosphorus sources and control options applicable to each watershed. Additional suggestions regarding the Tactical Basin Plans are included in the attachment.

Accountability Framework

EPA views the Phase I and Phase II Implementation Plans the core of a broader, ongoing accountability framework by which EPA will assess progress toward fulfilling the pollution reduction targets identified in the TMDL. EPA expects that the State will identify and commit to implement specific pollutant reduction controls and actions in each of the successive two-year milestone periods included in the Plans. Prior to the start of each milestone period, EPA will evaluate whether the actions identified for that period are sufficient to achieve the pollutant reduction specified for the end of that two-year period, and whether the State has fulfilled the commitments identified in the previous period. EPA expects that the successive Plans and two-year milestone periods will contain increasingly greater source sector and geographic load reduction specificity, more rigorous assurances that load reductions will be achieved, and more detailed and transparent reporting to the public. EPA expects this accountability framework, including development of the Phase I Plans prior to the establishment of the TMDL and the State's commitment to produce detailed Phase II Plans and adopt two-year milestones, will strengthen the assurance that the TMDL point and nonpoint source allocations can and will be achieved and maintained.

EPA Commitments

EPA will continue to work in close collaboration with your agencies over the coming months as we develop the draft Waste Load and Load Allocations. This ongoing collaboration should provide opportunities for give and take as you digest comments on the Proposal and work to develop the Phase I Plan. If the Phase I Plan does not meet the expectations outlined above, EPA may take any of a number of actions. As noted in my October 22nd letter, likely options may include, but are not limited to setting Waste Load Allocations that would push Waste Water Treatment Plant discharges to the limit of available technology and require offsets for the plants' remaining phosphorus loads, and expansion of permit coverage to bring more sources under direct regulatory control (e.g., expand MS4 coverage, use Residual Designation Authority to capture currently unregulated point source stormwater dischargers, designate certain AFOs to be CAFOs subject to NPDES permitting). Similarly, if the State does not submit or fulfill its two-year milestones for phosphorus reductions, EPA may take any of a number of actions including, but not limited to, designating additional sources to be subject to NPDES permits.

EPA recognizes and applauds the substantial efforts the State is proposing to take to enhance program capacity and meet the necessary phosphorus reduction targets. We look forward to continuing to work with you to achieve a clean Lake Champlain.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Perkins", written in a cursive style.

Stephen S. Perkins
Office of Ecosystem Protection

Attachment

cc: Kari Dolan, VT DEC

Additional EPA Comments on the State of Vermont's November 20, 2013 draft Proposal for a Clean Lake Champlain

- 1) EPA has estimated that lake restoration will require, at a minimum, an aggressive version of the actions included in the State's proposal. A few lake segments will require more effort. Therefore, it's very important that the State's final Phase I plan be at least as comprehensive as the November draft -- anything less extensive than these actions could significantly weaken the reasonable assurance that needed phosphorus reductions will be achieved.
- 2) Include schedules and milestones throughout, with indications of which parts of an action will be completed when. For those items that depend on new funding, prioritize actions into items that will be funded in the first two years, the next two years, etc. Ensure that major, substantial actions are funded in the early years. The two-year milestones must be measurable accomplishments that can be readily tracked, such as funding sources established, key personnel hired, numbers of farms inspected, new categories of stormwater covered by permits, numbers and percentages of needed management practices implemented, etc.
- 3) Include in each section a discussion of how the implementation approach will take climate change into account. Climate adaptation and flood resilience should be addressed for each major category of practices. The report should note the phosphorus increases projected in EPA's climate change analysis, and explain how BMP, AAP, AMP, and other management measures will be designed to be effective for higher intensity rainfall events and greater annual flow volumes. A stand-alone section should be added to the report to summarize the efforts Vermont has already undertaken to prepare/adapt to climate change (e.g., new culvert sizing specifications, etc.) and the additional things the state will be doing moving forward.
- 4) For the agricultural section, as part of the schedule and milestones additions, please indicate the full number of agricultural inspectors needed to complete inspections of all small farms by a certain date (preferably 2015), and include a strategy for securing the funding and staff needed, with clear milestones and schedules for completing all inspections and achieving compliance with AAPs. Likewise, please specify all other staff, such as agricultural engineers and agronomists, needed to carry out other aspects of the agricultural section of the proposal, and the schedule for hiring these staff. Agricultural staff currently funded through the Lake Champlain Basin Program should be included in this plan, as the Basin Program funding for these staff is anticipated to be temporary and non-sustainable.
- 5) The proposal to relax the winter manure spreading ban raises concern. EPA's preliminary review of research on this topic indicates that few if any BMPs can prevent significant nutrient loading to waters from manure spreading on frozen ground. Rather than relaxing the spreading ban, we recommend greater use of

- nutrient management plans to guard against heavy spreading in the spring during wet conditions and other inappropriate times.
- 6) For stormwater treatment practices for existing development (retrofits), include a discussion of the level of treatment (e.g., the types of practices and runoff depth to be designed for) to be required through the new permit initiative. For the phosphorus reduction scenarios generated by the scenario tool, EPA assumed use of stormwater practices that would achieve a 50% - 70% phosphorus reduction from applicable impervious area. Please add this information to the proposal so that EPA can be assured that the stormwater aspects of the State's proposal will achieve a comparable level of phosphorus reduction. Also, it's important that the criteria for triggering the need for retrofits be at least as aggressive as those indicated in the November 20th proposal.
 - 7) Also regarding stormwater, please include a section that addresses new requirements anticipated for existing MS4s. Currently, stormwater management is presented in the context of expanding permit coverage to areas not presently regulated. Even though this would be somewhat outside the central focus on reasonable assurance for nonpoint sources, it's important to include the existing regulated stormwater sources for completeness purposes, and to avoid giving the unintended impression that nothing further will be required from existing MS4s. EPA's scenario tool simulations include significant additional reductions from existing MS4s as part of the package that allows phosphorus reduction goals to be met in applicable lake segments.
 - 8) Please add a section that addresses new initiatives for stormwater from new development. Include a description of how the current revisions to the stormwater manual will require the use of practices with higher phosphorus removal efficiencies in the Lake Champlain basin. With all the effort to reduce phosphorus loads from existing sources, it's important that new sources are also adequately addressed. It is much less expensive to implement phosphorus controls during the initial project construction stage than as post-development retrofit projects.
 - 9) The river channel stability section addresses the need to minimize further river corridor and floodplain encroachments. This topic is very important to include as minimizing future encroachments will be critical to allowing natural progress towards stream equilibrium conditions. Likewise, the section on preventing adverse channel modifications is also important, as stream channelization (such as berming and straightening) decreases stream stability and increases phosphorus loads from streams. However, an additional section (perhaps a subsection 4.3) is needed to cover actions that will accelerate this progress toward equilibrium conditions for river and stream reaches where intervention is deemed appropriate based on geomorphic assessments. This additional section should especially include actions related to re-establishing stream and river access to floodplains and should lay out a

systematic approach that makes use of the river corridor plans and related information to identify opportunities, secure easements where needed, and complete floodplain restoration projects on an on-going basis. This section should also address the State's plans to support efforts to stabilize banks where appropriate, although EPA recognizes such interventions need to be approached carefully and typically only in cases supported by suitable geomorphic assessments. EPA's analysis suggests a large percentage of the phosphorus load to the lake comes from stream channel erosion, so it's important that the State adequately address how this source will be addressed. While EPA understands it will take time for streams to approach equilibrium conditions, and that natural and passive stream "evolution" will be a big part of the solution, we also believe it is very important for Vermont to adequately document steps the State will take to accelerate this process where appropriate.

- 10) Please include plans for addressing the internal phosphorus load in St. Albans Bay. EPA's scenario runs simulating the potential reduction from nonpoint sources in the St. Albans Bay watershed estimate that phosphorus targets can be achieved as long as the Bay's internal phosphorus source (from bottom sediments) is ultimately reduced as well. While EPA acknowledges that internal phosphorus controls will not be effective until watershed sources are adequately reduced (as has been affirmed in several St. Albans Bay studies), for completeness purposes, we believe this topic must be addressed in the State's proposal.
- 11) Tracking progress: a section should be added that discusses the State's commitment to track implementation progress and enter both BMP installations and programmatic progress into a tracking tool that EPA is helping to develop. Among other things, this tracking should support reporting on achievement of the two-year milestones.
- 12) Revise and expand the section on tactical basin plans to address how either these plans or separate TMDL implementation plans will make use of the TMDL phosphorus data for each subwatershed and include a detailed strategy and schedule for implementing all practices needed to achieve phosphorus reduction goals. The basin plans must include detailed descriptions of where and when practices will be implemented, identification of critical sources areas (CSAs), and whether actions will be funded with cost-share funds or grant funds, required via regulatory programs such as AAPs or new stormwater permits, or whether they will be accomplished through enforcement of existing requirements. The proposal should indicate dates by which each basin plan will be completed, and VDEC should commit to completing all plans within no more than two to three years of TMDL issuance.

Given the importance of the basin planning step, we are including below an outline of key elements that should be included in each plan. Note that these plans must

include all actions needed to attain phosphorus reduction targets and the full time-frame for implementation, but plans should be organized into 5-year increments (consistent with the existing tactical planning process). If full implementation is expected to take 15 years, for example, the plan could be divided into three 5-year increments. The activities planned for all phases must be identified up front, with more detail included for the first 5-year increment. Subsequent increments could be updated with additional detail during the final years of the previous 5-year increment. This approach allows for use of the latest and best information in each subsequent phase, such as refined estimates of source characterizations (especially for CSAs) and the effectiveness of management practices. The plans should lay out the TMDL targets (the total reduction needed), the phosphorus load reduction expected from each 5-year increment, and the management practices to be applied in each 5-year increment. The overall process will provide both clear expectations of future work planned and documentation of quantified load reduction estimates already achieved at regular intervals (i.e., each 5-year increment).

Outline of Recommended Elements for Initial Basin Implementation Plans:

- Description of implementation process (the 5-year increment approach);
- Summarize reductions needed from the TMDL;
- Identify broad source categories and respective estimated phosphorus loads based on TMDL analysis;
- Identify TMDL wasteload allocations (WLAs) and associated reductions needed;
- Identify TMDL load allocations (LA) and associated reductions needed;
- Provide master implementation schedule for all phases (increments) including timetable for developing implementation plans for each phase and accountable implementation and load reduction milestones;
- Results of CSA analysis (GIS analysis at a minimum) to be conducted as part of the initial plan development;
- Basis and documentation of any revisions/refinements in information used to estimate source loading rates and P load reduction credits for management practices;
- Inventory of phosphorus reduction practices already implemented in all applicable source categories, together with estimates of phosphorus load reductions achieved;
- Revised estimate of outstanding load reduction to be achieved (TMDL reduction less reduction already achieved by existing practices);
- Phosphorus load reduction to be achieved during the first 5-year implementation period;
- Description, location, and schedule for practices/actions selected to achieve the phosphorus reduction amount assigned to the first 5-year period. EPA's scenario tool and/or a separate DEC analysis (with adequate documentation) can be used to confirm that the level of implementation will be sufficient to achieve the needed reduction.

- Any additional resources (staff and funds) and regulatory mechanisms needed to accomplish all of the implementation activities consistent with achieving the full 5-year phosphorus load reduction;
- Identification of year-2 and year-4 implementation milestones (what actions will be completed by each of those periods);
- Description of the method to be used to track progress on implementation actions;
- Description of how water quality trends will be monitored over time; and
- Identification of any immediate and long term research needs important to the development of future phases of implementation plans.

Outline for all future 5-year increments of implementation plans:

- Same elements as described above (although some of the broader items such as those related to TMDL requirements could be referenced from the first iteration);
- Refinements to existing CSA analysis if applicable; and
- Basis and documentation for any revisions/refinements to information used to estimate source loading rates and P load reduction credits for management practices.

APPENDIX B – EPA FEBRUARY 13, 2014 ADDENDUM LETTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

February 13, 2014

David Mears, Commissioner
Vermont Department of Environmental Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620-3520

Chuck Ross, Secretary
Vermont Agency of Agriculture, Food and Markets
116 State Street
Montpelier, VT 05620-2901

Dear Commissioner Mears and Secretary Ross:

The purpose of this letter is to augment my January 17, 2014 letter, calling specific attention to the need to focus on additional measures for South Lake and Missisquoi Bay.

As noted in the January 17 letter, based on the results of the Scenario Tool, EPA believes it will take an aggressive application of all of the measures in the Proposal to achieve water quality standards. However, the Scenario Tool also indicates that for two lake segments, Missisquoi Bay and the South Lake, additional measures will be required beyond those described in the Proposal. Please ensure that your final Proposal includes a description of the additional actions or measures that will be taken in these lake segment watersheds. EPA is available to assist in evaluating the effectiveness of potential additional measures using the Scenario Tool. For example, EPA's preliminary analysis suggests some additional phosphorus reductions may be achieved from forest lands with increased implementation of certain forest management practices. These reductions from forested areas will help, and it's important that they be added to the Proposal, but additional reductions will also be needed from other sectors. Agricultural land is the dominant phosphorus source in these watersheds, and it is therefore essential that the Proposal include an especially strong commitment to phosphorus reductions from agricultural lands in these watersheds. An evaluation of the suite of proposed additional measures with the Scenario Tool should be included to demonstrate that these measures, in combination with the measures proposed in November will be sufficient to achieve the reduction targets in these critical segments. If the effects of certain proposed measures are not feasible for simulation using the Scenario Tool, then the alternative basis for determining their effectiveness should be described in the Proposal.

As always, EPA stands ready to assist your agencies in this effort.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Perkins". The signature is fluid and cursive, with the first letter of the first name being a large, stylized 'S'.

Stephen S. Perkins
Office of Ecosystem Protection

cc: Kari Dolan, VT DEC
Laura DiPietro, VT AAFM

APPENDIX C – EPA MAY 8, 2014 RESPONSE LETTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

May 8, 2014

David K. Mears, Commissioner
Vermont Department of Environmental Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620
Re: Draft Phase One Plan: Lake Champlain Total Maximum Daily Load

Dear Commissioner Mears:

Thank you for submitting the “Draft Phase One Plan” for the Lake Champlain Total Maximum Daily Load (TMDL). EPA appreciates all the effort that multiple Vermont agencies made to develop the draft and deliver it by the date we had requested. We are encouraged to see that the scope of programs and measures contained in the proposal issued last fall has been expanded and more fully fleshed out. The draft marks another significant step forward in the development of the new TMDL.

The purpose of this letter is to provide comments on the areas of the draft plan that EPA believes need to be strengthened in the revised Phase One Plan. Our overarching and general comments are provided below. More detailed comments on specific sections of the plan are contained in an enclosure.

Funding

As many others have noted, turning a good plan into reality hinges on getting more staff and more money for the core work of this plan. However, the additional staffing needs are not identified, and there is no clear commitment to or indication of how the state plans to secure the funding that will be needed to launch new programs and expand existing ones. While we understand that there will need to be many sources of implementation funding – local, state, federal, public-private – over time, Vermont will need to commit state resources to get these programs up and running. EPA was encouraged to read the April 20 commentary in the VT Digger by Secretaries Markowitz, Searles, Ross, and Miller regarding their determination to work with the General Assembly to deploy the resources needed to implement the plan. The revised Phase One Plan needs to include details on the steps and timetable the Administration plans to take in fiscal year 2015 to identify staffing and funding needs and secure those resources.

This funding plan is needed to ensure that the Phase One Plan will be implemented – an important element for demonstrating adequate reasonable assurance that necessary nonpoint source phosphorus reductions will occur. We understand that there can be uncertainty associated with securing resources. However, this should not preclude the State from committing to take measured steps towards securing these resources. Therefore, we request that all statements that are conditioned on receipt of adequate resources, such as, “...if provided additional staffing resources...” (p. 72, 3rd paragraph), be revised to include a commitment detailing the steps to secure these resources. We ask that you address these and more specific comments on funding and staffing in the enclosure as you work within the State in the coming months to develop a resource strategy in support of the Phase One Plan.

Implementation Milestones

The draft plan leaves the impression that nearly everything starts in 2016. Through intervening conversation we now understand that the years referenced in the plan are state fiscal years. Thus the year listed as 2016 in the draft actually starts on July 1, 2015. Still, the plan should more clearly indicate the elements of the plan that are already getting started or will be started between now and 2016 (e.g., AAP revision, AMP revisions, Stormwater Manual revisions). These elements should also be clearly indicated in the Gantt chart in Appendix E.

There is significant variability in the level of milestone detail in Chapter Five. In the revised Phase One Plan we would like to see year-by-year detail, particularly in fiscal years 2015-17 so that there are clear yardsticks for assessing progress. For instance, there are key steps (e.g., issuing a draft permit for public comment) and significant time increments before the state issues the new transportation TS4 general permit. Seeing such milestone steps will allow EPA and other interested parties to know that the State is on the path to actually issue the permit in 2016.

Accountability Framework

In Chapter Seven, the draft plan requests a 20 year implementation schedule to allow for communities to plan and stage needed improvements into long-term capital planning. Although we consider this a topic that does not need to be settled before the revised Phase One plan is completed, we are providing our preliminary thoughts on the request.

While EPA is prepared to consider that some of the implementation work will extend 20 years into the future, we will require a clearer commitment to implement the higher benefit programs in the early and middle phases of implementation. We would hope that no more than the last 10% of the planned reductions would occur between years 16 to 20. We understand that the finer detail on timing within each sub-watershed would be worked out in the Tactical Basin Planning process.

We continue to believe that progress reporting will need to be more frequent than every five years, especially until the Tactical Basin Planning process is completed for all the watersheds. Working from the proposed schedule in the Tactical Basin Planning section in Chapter 5, that would suggest the first reporting and evaluation phase would run through December 2017.

If the Tactical Basin Plans are as detailed as we expect, providing an accountability framework at the sub-watershed level, then we would be prepared to discuss extending the progress reporting cycle, perhaps to mirror the Tactical Basin Planning cycle.

With regard to accountability and progress reporting, we strongly encourage Vermont to include some state backstops or contingencies in the revised plan for the significant new actions and programs. For example, if some of the voluntary or incentive programs (or the funding for those programs) fall short, what additional actions will the State take? EPA is happy to discuss this further.

Nonpoint Source Reductions

As noted at the outset, we are very encouraged to see that the scope of the nonpoint source phosphorus control measures includes all the program areas in your initial proposal last fall and that there is far more detail in the draft Phase One Plan. The Tactical Basin Planning and Internal Phosphorus Loading in St. Albans Bay sections are good examples of this improvement. As also noted above, there is significant variability in the level of detail in the “Implementation Steps and Timeframe” sections which we believe need to be brought to a more consistent level of detail in the revised Phase One Plan. There is also inconsistent information on the intended extent of implementation for individual control practices. Some practices, such as those proposed for inclusion in the revised Accepted Agricultural Practices, are clearly expected to be implemented in all applicable areas throughout the basin. Other practices, such as cover cropping for example, are proposed to be implemented as recommended in nutrient management plans, with no indication of the ultimate level of anticipated implementation. The expected level of implementation resulting from the various components of the Phase One Plan is important to EPA’s effort (using the scenario tool) to confirm that the State has provided sufficient assurance that needed nonpoint source phosphorus reductions will be achieved.

We were encouraged to see that a section addressing additional efforts needed in the so called “gap watersheds” (i.e., Missisquoi Bay, St. Albans Bay and South Lake) is included among the Agricultural Programs. However, it raises further questions. One is whether these efforts are in addition to the commitments in the prior sections, or do they reflect geographic targeting of those overall resources to the Gap Watersheds, thus potentially diminishing efforts in other watersheds. It is also unclear whether there are additional nonpoint measures beyond Agriculture that are being considered in these watersheds. We remain concerned that there is not a clear plan with actions that meet the preliminary reduction targets in Missisquoi Bay and South Lake. In addition to clarifying these issues, the revised Phase One Plan should include more detailed actions in these watersheds along with estimates of the extent of application of these practices across these watersheds.

Point Source Reductions

EPA’s January 17, 2014 letter was focused on securing commitments to nonpoint source reductions such that flexibility could be considered in future discussions about the point source portion of the TMDL equation. As such, EPA did not require, nor were we expecting, a point source chapter in the draft Phase One Plan. We still consider this an area for further discussion.

However, in response to the proposal in Chapter Three, EPA believes it is highly unlikely that the final TMDL would allocate no reductions to wastewater treatment plants in any of the lake segments. There are some lake segments (i.e., Main Lake, Shelburne Bay, Burlington Bay and St. Albans Bay) where the wastewater treatment contribution is well above the smaller lake-wide average contribution from this sector. In addition, the Missisquoi Bay and South Lake segments still will not meet the reduction targets with the nonpoint measures identified to date.

Furthermore, as described in more detail below, final adjustments to the predictive model may result in changes to specific segment allocations. As such, EPA believes it is likely that some point source reductions will be needed. We encourage VT DEC to engage on this issue and share ideas. As you know, EPA sets the wasteload allocations as part of the TMDL. More detailed discussions on the various point sources will be useful to EPA in setting the wasteload allocations. Lastly, with regard to the regulated stormwater portion of the wasteload allocations, we have not yet discussed VT DEC's plans to expand its stormwater permitting program, and the draft plan is unclear as to whether VT DEC intends to extend NPDES permitting coverage to additional stormwater sources (both municipal and non-municipal) through the exercise of its residual designation authority. We request that VT DEC clarify its intent in more detail in the revised plan.

Climate Change and Resilience

We appreciate the thoughtful consideration in Chapter Six of the effects of climate change on the suite of nonpoint controls contained in the plan. In general, we agree that the best strategies to minimize the undesirable impacts from climate change are already known to Vermont's resource managers, and that the statewide drive towards greater climate resiliency and its effort to reduce phosphorus loads to Lake Champlain are mutually reinforcing.

Status of EPA's Development of Allocations

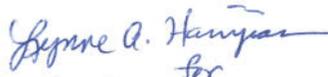
Most of our efforts to date have been based on predicted segment specific allocations and reductions that were evaluated last fall using EPA's Scenario Tool and the modeling it rests upon. As you know, work is continuing between DEC and EPA technical staff and EPA's contractor to make some technical adjustments to the inputs to the model. As such, it is possible that there will be changes to some of the segment specific targets. While we do not expect that changes will render any of the proposed nonpoint source measures unnecessary, changes may influence the outcome of the point source allocation discussion. Rest assured that if changes in the modeling substantially impact the proposed nonpoint measures included in the revised plan, EPA will provide the state with the opportunity to modify the plan accordingly.

Conclusion

We greatly appreciate the effort undertaken to date to develop a comprehensive and wide-ranging approach to nonpoint source reductions of phosphorus to Lake Champlain. We hope Vermont will make an effort to revise the Phase One Plan by May 30th along with a commitment letter from the Governor. A revised Phase 1 Plan with more details on the nonpoint source elements will allow us to turn to the point source allocation with greater precision.

We value the truly collaborative nature of our efforts over the past three years and look forward to working in that same spirit to bring the TMDL process to closure and to focus on those important next steps to restore and protect Lake Champlain.

Sincerely,

A handwritten signature in blue ink that reads "Stephen S. Perkins" with a horizontal line extending to the right. Below the signature, the word "for" is written in a smaller, cursive script.

Stephen S. Perkins
Office of Ecosystem Protection

Enclosure

ENCLOSURE

EPA'S COMMENTS ON VERMONT'S DRAFT PHASE ONE PLAN FOR THE LAKE CHAMPLAIN TMDL

CHAPTER 3: STRATEGY TO ADDRESS POINT SOURCE POLLUTION

Please refer to EPA's comments in the Point Source section of the cover letter. EPA and VT DEC need to have more discussions on the point source portion of the TMDL.

In addition, EPA has the following comments:

On pages 35 and 36 for Urban Stormwater - MS4s and Residual Designation Authority Discharges (RDA) – There is not a clear indication of how/whether to expand use of MS4 and RDA authorities which would result in more items in the wasteload allocation side of the equation. Although the RDA section of Chapter 3 says "...DEC plans on expanding the RDA permit to the remaining urban stormwater impaired waters in the near future..." (last sentence on page 36), there is no mention of expanding these programs in Chapter 5. Comment 7 of EPA's January 17, 2014 letter regarding existing MS4s is largely unaddressed. A paragraph on page 81 does discuss the phosphorus reduction benefits of the flow restoration plans required for most MS4s in stormwater impaired waters. But some MS4s are minimally affected by flow restoration plans, so the Phase One Plan should go beyond the flow restoration plans and also discuss whether additional phosphorus reduction measures will be required and whether additional areas for residual designation are proposed.

CHAPTER 5: VERMONT'S COMMITMENT TO FURTHER REDUCE NONPOINT SOURCES

Agricultural Programs (pp. 68-70)

The Phase One Plan should provide clarity on the timing of implementation and milestones for the small farm certification program, small farm nutrient management plans, and changes to the livestock exclusion regulations.

Water Quality Permitting Programs: LFOs, MFOs, and CAFOs (pp. 68-70)

The Draft Phase One Plan states that the CAFO program manager inspects a minimum of 12 farms annually per agreements with EPA, but consistently achieves a higher rate (p 70). Under the Implementation Steps and Timeframe (p 70) for LFOs, MFOs and CAFOs, item number 1 states that a minimum of 75 CAFO inspections will be conducted annually, which is a notable increase from the current 12 annual inspections. Please provide the interim steps between items 1A and 1B (p 70) that will be taken. Further, we assume that additional staff and funding will be necessary to accommodate the proposed increased inspection level. Please identify the number of staff, and funding needs required to increase the annual inspections in the State's resource plan that will be developed in support of the Phase One Plan.

It is unclear what is meant by DEC's commitment to inspect CAFOs, since there are no currently permitted CAFOs in Vermont. Please clarify if the intent is to inspect all LFOs and MFOs that could be potentially identified as CAFOs (i.e., if found to be discharging). Presumably the minimum of 75 CAFO inspections includes SFOs, as well as MFOs and LFOs, but the draft Plan

does not state this explicitly, nor does it clearly state in 1B that these farms would be in the Lake Champlain Basin. Please clarify whether SFOs are included in the stated 75 CAFO inspections, and whether 75 CAFO inspections identified in 1B will be in the Lake Champlain Basin. We understand that AAFM currently inspects all LFOs throughout Vermont and in the Lake Champlain Basin (p 69), and that AAFM will continue to inspect LFOs in the Basin annually (Item 2A, p 70).

Although we understand that work completed in recent years could potentially be applicable to reasonable assurance demonstrations, especially when accounting for the lag time between when a practice is implemented and when the water quality benefit is realized, AAFM should explain this in the revised Plan. Otherwise, it unintentionally appears that credit for reasonable assurance is being sought for practices already being done. Finally, for the remaining Implementation Steps, numbers 3 – 5 (p 70), please clarify when they will, or did commence.

Accepted Agricultural Practice Rule Updates and Compliance Section (pp. 71 – 78)

We understand there can be uncertainty associated with securing resources. However, this should not preclude the State from committing to take measured steps towards securing these resources. We request that all statements that are conditioned on receipt of adequate resources, such as those appearing on pages 71 and 72, be revised to include a commitment to developing a plan that includes the steps to secure these resources.

It is EPA's understanding that the AAP revision process will begin in the fall of 2014 (p 72). Although 2016 appears at 1F, it is unclear when the implementation steps 1A – F and 2A (p 73 – 74, respectively) will actually begin. Please clarify, and provide timeframes for all steps, and any that will be taken in 2015.

On page 71, AAFM indicates the small farm inspection program will be expanded. Please provide the number of inspections that will likely result from expanding this program versus the existing inspections (approximately 120 annually) done on a complaint-driven basis.

We understand that one small farm inspector was hired in 2013, and that AAFM is proposing to use existing staff to accomplish small farm inspections (p 71). This only partially addresses the request in Item 4 of the Attachment to our January 17, 2014 letter. In the State's resource plan, please provide the number of existing (and any new) staff that will be dedicated to these inspections, whether additional funding is needed and how it will be sought.

Update AAPs to Require Changes in Buffers, Gullies, and Erosion (p. 72)

Please explain why the proposed revision to the AAPs for SFOs (and presumably the existing AAP for MFOs and LFOs) related to stream buffers only requires buffers on perennial streams even though seasonal and intermittent streams also transport phosphorus loads, especially during high flows. Similarly, we would like to understand the basis for requiring 10' buffers on ditches rather than wider buffers.

Update AAPs to Require Changes in Livestock Exclusion Regulations (p. 73)

The update to the AAPs requiring changes to the Livestock Exclusion Regulations is clearly an effective approach to help prevent erosion and eliminate additional pollutants from livestock

wastes. The draft Plan states that livestock exclusion would “significantly” reduce phosphorus loads from pasture. Please explain the basis for this statement and the approximate amount of phosphorus reduction expected (or at least the percentage of this phosphorus source that will be controlled). The plan should clarify the meaning of the term “significant” livestock Operations in 2B, p. 74. Lastly, the plan should clarify that new additions to the AAPs apply to all farms and not just small farms.

Nutrient Management Plans (p. 74)

It is unclear how AAFM is going to enhance nutrient management plan activities with existing staff. The State’s resource plan should explain what steps will be taken (including the additional staff that will be needed and how they will be acquired) to ensure that nutrient management plans are properly implemented on farms.

As an overall comment related to agricultural BMPs (particularly structural practices) please include in the revised plan information on the size and extent of storms on which BMP design and implementation will be based and how that relates to the kinds of changes in precipitation frequency and duration observed most recently.

Partner Assistance (p. 77)

In the Implementation Steps and Timeframe section, Item 1F includes a mandate for certification of manure applicators. Detail is needed, however, especially regarding milestones. For example, please provide those milestones needed for the certification program. In the State’s resource plan, please include whether, and how additional staff and funding resources will be sought.

Additional Efforts in Gap Watersheds (Missisquoi Bay, St. Albans Bay and South Lake (p. 78).

It appears that AAFM is targeting resources to the Gap Watersheds and critical source areas (CSAs), thus potentially diminishing efforts needed in other watersheds. In this Gap Watershed section, please clarify if the targeted CAFO and SFO inspections are in addition to the inspection efforts described in the Permitting Program section, or merely a refocusing of those resources. Since the scenario tool estimates that about a 70% reduction from agricultural land could be achieved if a robust suite of practices were implemented nearly everywhere, focusing only on CSAs will probably not be enough to achieve the needed higher reduction percentage. Instead, it will likely require a combination of attention to CSAs along with applying additional practices (beyond what were simulated in the scenario tool) to Gap Watershed areas. The revised plan should include a timetable for obtaining additional resources to support this effort, and the State’s resource plan should identify the additional staff resources and increased targeted funding needed to accomplish the objectives. Also, the revised Plan needs to provide a clear explanation regarding the basis for focusing efforts and resources on CSAs, and clarify how the practices in the CSAs will equate to phosphorus reductions.

Two additional practices which EPA staff discussed with state staff recently, are prescribed grazing for pasture and manure incorporation for hay fields. These practices were not simulated in the scenario tool, and at least the latter practice could achieve significant additional phosphorus reductions. There is mention of the practice under the nutrient management category, but no clear commitment to widespread implementation. Another additional practice

that could have significant phosphorus reduction benefits (even though they are difficult to quantify at present) is controlled tile drainage. This topic is mentioned on p. 76, but there is no strong commitment to implementing this practice. These are examples of opportunities for additional phosphorus reductions in the Gap Watersheds. Given how difficult it will be to achieve necessary reductions in these watersheds, consideration should be given to making these practices requirements, and whether or not the four additional BMP practices identified in Item 5 in the implementation plan should be considered as well (pp. 78-79).

EPA is concerned about establishing a clear plan for the Gap watersheds. Given recent discussions regarding forestland and forestry practices, there are likely limited opportunities for phosphorus reductions from this sector. In addition to concerns stated previously, there is not a clear set of actions that add up to the required phosphorus reductions in these watersheds to meet the TMDL targets. Thus, EPA would like to discuss this issue more thoroughly with DEC prior to the submittal of the revised Phase One Plan.

STORMWATER MANAGEMENT (pp. 79 – 85)

Stormwater Runoff from State Roads (p. 79)

A TS4 stormwater general permit for the entire state-operated system is an effective way to ensure controls of phosphorus. In order for this to be an NPDES permit, DEC will need to exercise its residual designation authority to designate those portions of the system that are not within urbanized areas. The process and schedule for doing so should be incorporated into the Implementation Steps and Timeframe for this element, including major milestones leading up to the issuance of this general permit (e.g., draft permit out for public comment, etc.). Also, the State's resource plan needs to identify the additional staff that will be needed to develop and manage the new permit.

Stormwater Runoff from Municipal Roads (p. 80)

The extent to which BMPs beyond the existing "Town Road and Bridge Standards" will be required by the contemplated new roads permit is unclear. Therefore, it is unclear how much phosphorus reduction is likely to be achieved by this program. Please provide an estimate of the expected phosphorus reductions to be achieved. Considering both the permitting and implementation timeframes are quite long, please include the major milestones leading up the issuance of this General Permit (e.g., draft permit out for public comment), including the year of expected issuance, and schedule for implementation. Also, please clarify if the Municipal Road General Permit will be a State or NPDES permit. Finally, the State's resource plan needs to identify the additional staff that will be needed to develop and manage the new permit and a plan to obtain additional staffing resources.

Stormwater Runoff from Existing Developed Lands (p. 81)

Similar to the Municipal Road General Permit, please clarify if the Developed Lands General Permit will be a State or NPDES permit. In order to estimate the reductions from this existing developed lands permit, in the revised Phase One Plan please include DEC's analysis of the percentage of additional existing impervious area expected to become subject to stormwater

permits using the impervious cover criteria thresholds indicated in the Plan (p 81). The revised plan should also provide an estimate of the expected phosphorus reductions.

The revised Plan needs to include the major milestones leading up the issuance of this General Permit (e.g., draft permit out for public comment), including the year of expected issuance. Also, the State's resource plan needs to identify the additional staff that will be needed to develop and manage the new permit and provide a plan to obtain additional staffing resources.

Stormwater Runoff from New Development (p. 82)

The description refers to "state-of-the-art" stormwater BMPs that will be included in the upcoming revisions to the Vermont Stormwater Management Manual (VSMM). Also, it states that these practices, along with the State's permit program, will "prevent substantial phosphorus loading." Without more specific information about the new practices to be included, it is not possible to determine the extent of phosphorus loading they will be able to prevent. In addition, the extent to which these practices will reduce existing phosphorus loads when employed at redeveloped and expanded sites, as distinguished from preventing new additional phosphorus, should be estimated, if possible, in the revised Plan.

In the Implementation Steps and Timeframe section, please include interim steps for the revisions to the VSMM, in particular, specifying those sections of the VSMM to be revised in 2015. Also, for steps currently listed (1 – 4)), please provide estimated timeframes. Please include in the revised plan information on the size and extent of storms on which BMP design and implementation will be based and how that relates to the kinds of changes in precipitation frequency and duration observed most recently.

NON-REGULATORY STORMWATER MANAGEMENT FOR NON-MS4 MUNICIPALITIES (pp. 82 – 85)

River Channel Stability (p. 86)

The Draft Plan does not appear to address comment 9 in EPA's January 17, 2014 letter. It is important for DEC to include a sub-section addressing actions that will restore vegetated buffers where there are currently none (with a cross reference to buffer requirements on Agricultural lands) and actions that will restore floodplain access. As written, the plan still focuses only on preventing further loss of buffers and floodplain access, etc. Also, the Plan should include a discussion of the potential for shorter-term increases in phosphorous loads as some stream segments may need to progress through a more erosive stage before making it to equilibrium conditions.

Forest Management (pp. 90 – 98)

DEC proposes to develop a Vermont Forestry Direct Link Loan Program for qualified logging professionals to provide financial incentives that would increase the use of BMPs and environmentally friendly logging equipment. EPA understands the benefit of this program to help protect and improve water quality during logging operations. The implementation steps includes an augmentation to the VT State Clean Water Revolving Fund by EPA (p. 93) in 2017. The language in the revised plan should be amended on page 94 because EPA cannot predict the budget allocation for this fund in 2017, and whether it will be increased.

Additional actions to reduce phosphorus loadings in the Missisquoi Bay and South Lake Sub-watersheds include focusing the efforts of two foresters, partially funded through NRCS, to assist landowners with forestry cost-share practices to reduce phosphorus contributions from forestlands in these watersheds. Forest, Parks and Recreation proposes to expand this voluntary cost-share program, VT NRCS Forest Trails and Landings Cost-Share Practice 655, throughout the Lake Champlain basin and provide an additional 25% for cost-share practice to make this a no-cost practice for landowners. The State's resource plan should include the interim steps required for the State to provide the funds for the 25% portion of the cost.

As stated earlier, we understand there can be uncertainty associated with securing resources. However, this should not preclude the State from committing to take measured steps to secure these resources. We request that all statements that are conditioned on receipt of adequate resources, such as, "This proposal hinges on continued funding from NRCS." (p. 94) be revised to include a commitment to secure these resources.

WATERSHED PROTECTION AND RESTORATION PROGRAMS (pp. 99 – 109)

The Clean Water Improvement Fund is a conceptual plan that aligns existing programs, and provides a framework for potential new programs, to establish a dedicated funding source to priority water quality improvement projects that would help meet the TMDL targets. Because this is a voluntary program, and does not specify an amount or percentage of annual funding that will be allocated, or estimate additional future funding, it will be difficult to rely upon this program for reasonable assurance. In its plan to secure resources, EPA recommends DEC provide additional information on new resources that will be in place to implement the program, and provide a commitment on the amount of annual funding, or percentage of annual funding from each of the existing programs that can be dedicated to Lake Champlain implementation efforts.

Wetland Protection and Restoration (pp. 110 – 112)

The Description (p. 111) states that, as a result of the transfer of authority from the Natural Resources Board to ANR, ANR is now able to protect "thousands of additional wetland acres." It is not clear whether this is occurring, or if ANR must take additional steps to effectuate the broader protection. If the latter, then such steps should be discussed and integrated into the plan, given the stated importance of wetlands in the abatement of NPS nutrients.

We support DEC's commitment to station one District Ecologist in the Lake Champlain basin, and request this commitment be added to the Implementation Steps and include a start date. The narrative in the Implementation Mechanism section (p. 111) states that several exceptional or irreplaceable wetlands within the Lake Champlain basin have been identified. However, under Milestones for Partial Implementation, item 2, (p. 112), only two of these wetlands will be advanced through the rulemaking process for Class I designation. We recommend that all wetlands within the basin that function to improve the water quality of Lake Champlain, and are eligible for Class I designation, be considered for advancement through the rulemaking process. Additionally, please provide an estimate of the acreage of these wetlands in the revised plan. Please clarify what is meant by Milestones for "Partial" Implementation (p. 112) and the basis for doing a majority of this work in 2020 and 2025 rather than beginning sooner.

CLIMATE CHANGE AND RESILIENCE (pp. 116 – 133)

The Draft Plan adequately addresses planning for larger storms related to stormwater. It would be helpful to address how green infrastructure can be designed for larger storms where feasible (e.g., infiltration BMPs with substrate that captures and treats runoff). Also, it will be important to address measures that the Agriculture sector can implement to mitigate impacts from larger storms.

IMPLEMENTATION SCHEDULE AND ACCOUNTABILITY FRAMEWORK (p. 134)

In Chapter 7, the Phase One Plan includes a 20 year implementation schedule to allow communities the time needed for planning and staging the most cost effective approach for improvements to roads and stormwater infrastructure (p. 134). However, before a 20-yr implementation schedule can be considered, VT DEC needs to more thoroughly document its basis for this request. For example, DEC should provide a discussion that explains and details specific milestones and implementation actions that will be needed during this 20 year period. While EPA is prepared to consider that some of the implementation work will extend 20 years into the future, we will require a clearer commitment to implement the higher benefit programs in the early and middle phases of implementation. We would hope that no more than the last 10% of the planned reductions would occur between years 16 to 20. We understand that the finer detail on timing within each sub-watershed would be worked out in the Tactical Basin Planning process.

DEC should clearly explain how the Phase 2 Implementation Plans will integrate with the Tactical Plans and schedules. Additionally, this Phase One Plan should clearly commit to and specify a date by which the detailed Phase 2 Plan(s) will be completed. We continue to believe that progress reporting will need to be more frequent than every five years, especially until the Tactical Basin Planning process is completed for all the watersheds. Working from the proposed schedule in the Tactical Basin Planning section in Chapter 5, that would suggest the first reporting and evaluation phase would run through December 2017. If the Tactical Basin Plans are as detailed as we expect, providing an accountability framework at the sub-watershed level, then we would be prepared to discuss extending the progress reporting cycle, perhaps to mirror the Tactical Basin Planning cycle.

Implementation Steps and Timeframes for the programs in Chapter 5 need to include intermediate steps. Some examples include stormwater from municipal roads (p. 80) and stormwater from existing developed lands (p. 81). Milestones should be clearly defined for the various actions so that EPA can clearly gauge progress. For example, revisions to the AAP rules need to include dates for initiating the revisions, completing a draft revised rule, and adopting the rules. Implementation steps listed as ongoing, annually, bi-annually, quarterly etc., need to include and explain when these steps were, or will be, started. This will give a better understanding of the start dates. Many new actions are not scheduled to start until 2016 or 2017 at the earliest. At a minimum, the Plan should clearly lay out actions that will be established by the end of 2016 (i.e., not just actions that will be started).

With regard to accountability and progress reporting, we strongly encourage Vermont to include some state backstops or contingencies in the revised plan for the significant new actions and

programs. For example, if some of the voluntary or incentive programs (or the funding for those programs) fall short, what additional actions will the State take? EPA is happy to discuss this further.

APPENDIX D – SUMMARY OF REGIONAL PLANNING COMMISSION GRANTS UNDER SECTION 604B FOR FFY 2013

MONITORING AND ASSESSMENT RELATED PROJECTS

ADDISON COUNTY REGIONAL PLANNING COMMISSION (ACRPC) \$3,636.36

ACRPC will continue its monitoring and assessment assistance to the Addison County River Watch Collaborative under their LaRosa grant. ACRPC will actively provide technical assistance and presentation of results to member municipalities. Outreach materials and maps developed under previous 604b funding will be used in ACRWC targeted communities. In addition, ACRPC will assist the ACRWC Coordinator to improve the ACRWC web page hosted on the ACRPC website.

CENTRAL VERMONT REGIONAL PLANNING COMMISSION (CVRPC) \$3,636.36

CVRPC will continue the assessment of Class 3 and 4 town roads in the Dog River watershed. Class 3 and especially class 4 town roads are typically located on steeper grades in narrower valleys and are often located in very close proximity to waterways and river; infrastructure conflicts as a result of this are more prevalent. The purpose of the assessment is to locate and identify water quality threats associated with these public roads, conduct an inventory of these class 3 and 4 town roads, prioritize restoration projects and develop recommendations for remediation. This assessment will draw upon existing work and protocols created as part of similar projects already completed in the Winooski Basin.

WINDHAM REGIONAL COMMISSION (WRC) \$3,636.36

WRC proposes to identify undeveloped stream corridors and undeveloped shorelands on ponds and lakes greater than 10 acres in the Windham Region portion of upper West River, Saxtons and Williams River watersheds (upper Basin 11), and the middle Connecticut River direct watershed (middle Basin 13). Stream segments will be characterized with stream order, segment length, ownership (public, private conserved, or private unconserved), and land use district and conservation priority based upon town and regional plans. Identification of undeveloped stream corridors and shorelands will be performed through a GIS analysis using E911 ESITE data, VTrans road centerline data, Conserved Lands data, the Vermont Hydrography Dataset, aerial photographs, and town and regional plans. The final product will be a set of maps and a brief report outlining the analysis procedure and providing results and statistics.

PLAN DEVELOPMENT RELATED PROJECTS

LAMOILLE COUNTY PLANNING COMMISSION (LCPC) \$3,636.40

LCPC will develop a flood resilience element, including flood risk maps, for its Regional Plan. This project will build upon efforts already in progress to update the Natural Resources element of the Regional Plan and to update local hazard mitigation plans for five Lamoille County towns. The flood resilience element developed in this effort will reference and be used for discussions during local hazard mitigation plan updates. Part of this project will involve the development of a spatial flood risk analysis. This analysis will use methods recommended and described on the flood resiliency planning website, and will result in maps and tables depicting the number of different structure types (single family homes, mobile homes, commercial/industrial, etc.) in different flood risk categories (floodway, 100-year flood zone, 500-year flood zone, and fluvial erosion hazard zone).

NORTHWEST REGIONAL PLANNING COMMISSION (NRPC) \$3,636.36

NRPC will implement portions of the Missisquoi Basin Plan and participate in the development of the Upper Lake Champlain Tactical Basin Plan. For the Missisquoi Basin, tasks will include participating in the Upper Missisquoi and Trout River Wild and Scenic Designation Committee and providing assistance for projects identified in municipal stormwater management plans. For the Upper Lake Champlain basin, tasks will include participating on the tactical basin plan stakeholder group and holding a series of public forums to gather local input for the tactical basin plan.

NORTHEASTERN VERMONT DEVELOPMENT ASSOCIATION (NVDA) \$3,636.36

NVDA will work with Danville and Burke to improve and strengthen water quality protection language in their respective plans and regulatory documents. This may include the town plan (including a resiliency element), zoning bylaw, and flood hazard area bylaw. Geomorphic data has been collected on streams in both towns and updated maps and corridor plans are expected in March of 2014.

Burke has completed assessments on the East Branch and sections of the West Branch and Calendar Brook. Additional data is being collected on the West Branch through West Burke village and the Dishmill Brook draining Burke Mountain per their request. With a new corridor plan for Dishmill Brook, and an updated corridor plan for the West Branch, the town will have a complete dataset to begin discussing any needed bylaw changes. After serious flood damages in 2011, Danville requested support in their flooding bylaws. The town had no data on any streams and minimal information from their FEMA maps. Assessments were launched on the Sleepers River and its tributaries as well as the Water Andric. A corridor plan will be completed by March of 2014 prepared by the consultant for this project, Fitzgerald Environmental Associates.

SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION (SWCRPC) \$3,636.36

SWCRPC will address the new flood resiliency element for the Regional Plan, and encourage and assist towns within the SWCRPC Region to build flood resilient communities. The activities will allow RPC staff to develop appropriate planning protection language to be incorporated into the RPC Regional Plan and town plans. The new floodplain management language will focus future planning protections on flood resiliency and emergency preparedness.

TWO RIVERS-OTTAUQUEECHEE REGIONAL COMMISSION (TRORC) \$3,636.36

TRORC will draft a regional flood resilience plan. With the completion of this regional plan chapter, we will ensure that our Regional Plan is consistent with the new state planning goals and requirements.

In addition to drafting a flood resilience chapter for our regional plan, we wish to create a flood resilience chapter template that towns can use and include in their town plans. By providing our towns with a flood resilience chapter template, we will be helping them comply with the new state planning goals and requirements. Our work on this template will also investigate how towns can use components of their Hazard Mitigation Plan to create and satisfy the requirements of the flood resilience chapter.

CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION (CCRPC) \$3,636.36

CCRPC will work with key municipalities to aid them in developing the required flood resiliency element for their town plans. CCRPC will work with two of the following five towns that are likely to be updating their town plans in 2014: Bolton, Richmond, Underhill, Westford and Winooski. This work would also serve to inform the CCRPC's work in 2015 to update the Chittenden County Multi-Jurisdictional All Hazards Mitigation Plan due in 2016.

IMPLEMENTATION RELATED PROJECTS

BENNINGTON COUNTY REGIONAL COMMISSION (BCRC) \$3,636.36

BCRC will host a "regional" workshop where town and regional planners will be informed about Act 16 and how it will affect their local planning efforts. BCRC will also develop the river corridor maps for our member towns and will present these maps to those planning commissions that are updating their Town Plans. Additional technical assistance will be offered to those towns that express an interest.

RUTLAND REGIONAL PLANNING COMMISSION (RRPC) \$3,636.36

RRPC will develop a flood resilience element for its Regional Plan. It will also work with all 27 municipalities in the Region to complete a Flood Resilience Plan Checklist (found in: Disaster Recovery and Long-Term Resilience Planning in Vermont U.S. EPA Smart Growth Implementation Assistance Project Policy Memo for the Mad River Valley, August 2013; p.22). This preliminary checklist provides a menu of steps that could be taken to improve flood resiliency and is intended to help a municipality get started in a self-assessment. This data is beneficial to the towns' individual (local) hazard mitigation and emergency operations plan(s) as well as the town plan and the update of the Regional Plan. RRPC will also facilitate a training workshop to inform local officials about flood resiliency, Act 16, how it affects town plans, the municipal checklist and how it can help, and local hazard mitigation plan and its role.

**APPENDIX E – ACT NO 64. AN ACT RELATING TO IMPROVING
THE QUALITY OF STATE WATERS**

No. 64
2015

Page 1 of 135

No. 64. An act relating to improving the quality of State waters.

(H.35)

It is hereby enacted by the General Assembly of the State of Vermont:

* * * Findings and Purpose * * *

Sec. 1. FINDINGS AND PURPOSE

(a) Findings. The General Assembly finds that:

(1) Within the borders of Vermont there are 7,100 miles of rivers and streams and 812 lakes and ponds of at least five acres in size.

(2) Vermont's surface waters are vital assets that provide the citizens of the State with clean water, recreation, and economic opportunity.

(3) The federal Clean Water Act and the Vermont Water Quality Standards require that waters in the State shall not be degraded.

(4) To prevent degradation of waters and to preserve the uses, benefits, and values of the lakes, rivers, and streams of Vermont, the Vermont Water Quality Standards provide that it is the policy of the State to prevent, abate, or control all activities harmful to water.

(5) Despite the State and federal mandates to maintain and prevent degradation of State waters, multiple lakes, rivers, and streams in all regions of the State are impaired, at risk of impairment, or subject to water quality stressors, as indicated by the fact that:

(A) there are 81 waters or segments of waters in the State that are impaired and require a total maximum daily load (TMDL) plan;

No. 64
2015

Page 2 of 135

(B) there are 114 waters or segments of waters in the State that are impaired and that have been issued a TMDL;

(C) there are at least 115 waters or water segments in the State that are stressed, meaning that there is one or more factor or influence that prohibits the water from maintaining a higher quality; and

(D) there are at least 56 waters in the State that are altered due to aquatic nuisance species, meaning that one or more of the designated uses of the water is prohibited due to the presence of aquatic nuisance species.

(6) Impairments and other alterations of water can significantly limit how a water is used and whether it can be maintained for traditional uses. For example:

(A) aquatic life is only fully supported in 59 percent of the State's inland lakes; and

(B) swimming is only fully supported on 76 percent of the State's inland lakes.

(7) Without State action to improve the quality of State waters and prevent further degradation of the quality of existing waters, the State of Vermont will be at risk of losing the valuable, if not necessary functions and uses that the State's waters provide;

(8) Sufficiently addressing, improving, and forestalling degradation of water quality in the State in a sustainable and effective manner will be expensive and the burden of the expense will be felt by all citizens of the State,

No. 64
2015

Page 3 of 135

but without action the economic, cultural, and environmental losses to the State will be immeasurable;

(9) To protect the waters of the State and preserve the quality of life of the citizens of Vermont, the State of Vermont should:

(A) fully implement the antidegradation implementation policy in the Vermont Water Quality Standards;

(B) enhance, implement, and enforce regulatory requirements for water quality; and

(C) sufficiently and sustainably finance all water quality programs within the State.

(b) Purpose. It is the purpose of this act to:

(1) manage and regulate the waters of the State so that water quality is improved and not degraded;

(2) manage and plan for the use of State waters and development in proximity to State waters in a manner that minimizes damage from and allows for rapid recovery from flooding events;

(3) authorize and prioritize proactive measures designed to implement and meet the impending total maximum daily load (TMDL) plan for Lake Champlain, meet impending TMDL plans for other State waters, and improve water quality across the State;

(4) identify and prioritize areas in the State where there is the greatest need to act in order to protect, maintain, or improve water quality;

No. 64
2015

Page 4 of 135

(5) engage all municipalities, agricultural operations, businesses, and other interested parties as part of the State’s efforts to improve the quality of the waters of the State; and

(6) provide mechanisms, staffing, and financing necessary for State waters to achieve and maintain compliance with the Vermont water quality standards.

* * * Agricultural Water Quality; Definitions * * *

Sec. 2. 6 V.S.A. § 4802 is amended to read:

§ 4802. ~~DEFINITION~~ DEFINITIONS

~~For purposes of As used in this chapter, the word “secretary,” when used by itself, means the secretary of agriculture, food and markets:~~

(1) “Agency” means the Agency of Agriculture, Food and Markets.

(2) “Farming” shall have the same meaning as used in 10 V.S.A. § 6001(22).

(3) “Healthy soil” means soil that has a well-developed, porous structure, is chemically balanced, supports diverse microbial communities, and has abundant organic matter.

(4) “Manure” means livestock waste in solid or liquid form that may also contain bedding, spilled feed, water, or soil.

(5) “Secretary” means the Secretary of Agriculture, Food and Markets.

(6) “Top of bank” means the point along the bank of a stream where an abrupt change in slope is evident, and where the stream is generally able to

No. 64
2015

Page 5 of 135

overflow the banks and enter the adjacent floodplain during an annual flood event. Annual flood event shall be determined according to the Agency of Natural Resources' Flood Hazard Area and River Corridor Protection Procedure.

(7) "Waste" or "agricultural waste" means material originating or emanating from a farm that is determined by the Secretary or the Secretary of Natural Resources to be harmful to the waters of the State, including: sediments; minerals, including heavy metals; plant nutrients; pesticides; organic wastes, including livestock waste, animal mortalities, compost, feed and crop debris; waste oils; pathogenic bacteria and viruses; thermal pollution; silage runoff; untreated milkhouse waste; and any other farm waste as the term "waste" is defined in 10 V.S.A. § 1251(12).

(8) "Water" shall have the same meaning as used in 10 V.S.A. § 1251(13).

* * * Agricultural Water Quality; Small Farm Certification * * *

Sec. 3. 6 V.S.A. chapter 215, subchapter 5a is added to read:

Subchapter 5a. Small Farm Certification

§ 4871. SMALL FARM CERTIFICATION

(a) Small farm definition. As used in this section, "small farm" means a parcel or parcels of land:

(1) on which 10 or more acres are used for farming;

No. 64
2015

Page 6 of 135

(2) that house no more than the number of animals specified under section 4857 of this title; and

(3)(A) that house at least the number of mature animals that the Secretary of Agriculture, Food and Markets designates by rule under the Required Agricultural Practices; or

(B) that are used for the preparation, tilling, fertilization, planting, protection, irrigation, and harvesting of crops for sale.

(b) Required small farm certification. Beginning on July 1, 2017, a person who owns or operates a small farm shall, on a form provided by the Secretary, certify compliance with the required agricultural practices. The Secretary of Agriculture, Food and Markets shall establish the requirements and manner of certification of compliance with the required agricultural practices, provided that the Secretary shall require an owner or operator of a farm to submit an annual certification of compliance with the required agricultural practices.

(c) Certification due to water quality threat. The Secretary may require any person who owns or operates a farm to submit a small farm certification under this section if the person is not required to obtain a permit or submit a certification under this chapter and the Secretary determines that the farm poses a threat of discharge to a water of the State or presents a threat of contamination to groundwater. The Secretary may waive a small farm certification required under this subsection upon a determination that the farm

No. 64
2015

Page 7 of 135

no longer poses a threat of discharge to a water of the State or no longer presents a threat of contamination to groundwater.

(d) Rulemaking; small farm certification. On or before July 1, 2016, the Secretary of Agriculture, Food and Markets shall adopt by rule requirements for a small farm certification of compliance with the required agricultural practices. The rules required by this subsection shall be adopted as part of the required agricultural practices under section 4810 of this title.

(e) Small farm inspection. The Secretary may inspect a small farm in the State at any time for the purposes of assessing compliance by the small farm with the required agricultural practices and determining consistency with a certification of compliance submitted by the person who owns or operates the small farm. The Secretary may prioritize inspections of small farms in the State based on identified water quality issues posed by a small farm. The Secretary shall adopt by rule, as part of the required agricultural practices, the required frequency of inspection of small farms.

(f) Notice of change of ownership or change of lease. A person who owns or leases a small farm shall notify the Secretary of a change of ownership or change of lessee of a small farm within 30 days of the change. The notification shall include the certification of small farm compliance required under subsection (a) of this section.

(g)(1) Identification; ranking of water quality needs. During an inspection of a small farm under this section, the Secretary shall identify areas where the

No. 64
2015

Page 8 of 135

farm could benefit from capital, structural, or technical assistance in order to improve or come into compliance with the required agricultural practices and any applicable State water quality permit or certification required under this chapter.

(2) Notwithstanding the priority system established under section 4823 of this title, the Secretary annually shall establish a priority ranking system for small farms according to the water quality benefit associated with the capital, structural, or technical improvements identified as needed by the Secretary during an inspection of the farm.

(3) Notwithstanding the priority system established by subdivision (2) of this subsection, the Secretary may provide financial assistance to a small farm at any time, regardless of the priority ranking system, if the Secretary determines that the farm needs assistance to address a water quality issue that requires immediate abatement.

Sec. 4. 6 V.S.A. § 4810a is added to read:

§ 4810a. REQUIRED AGRICULTURAL PRACTICES; REVISION

(a) On or before July 1, 2016, the Secretary of Agriculture, Food and Markets shall amend by rule the required agricultural practices in order to improve water quality in the State, assure practices on all farms eliminate adverse impacts to water quality, and implement the small farm certification program required by section 4871 of this title. At a minimum, the amendments to the required agricultural practices shall:

No. 64
2015

Page 9 of 135

(1) Specify those farms that:

(A) are required to comply with the small certification requirements under section 4871 of this title due to the potential impact of the farm or type of farm on water quality as a result of livestock managed on the farm, agricultural inputs used by the farm, or tillage practices on the farm; and

(B) shall be subject to the required agricultural practices, but shall not be required to comply with small farm certification requirements under section 4871 of this title.

(2)(A) Prohibit a farm from stacking or piling manure, storing fertilizer, or storing other nutrients on the farm:

(i) in a manner and location that presents a threat of discharge to a water of the State or presents a threat of contamination to groundwater; or

(ii) on lands in a floodway or otherwise subject to annual flooding.

(B) In no case shall manure stacking or piling sites, fertilizer storage, or other nutrient storage be located within 200 feet of a private well or within 200 feet of a water of the State, provided that the Secretary may authorize siting within 200 feet, but not less than 100 feet, of a private well or surface water if the Secretary determines that a manure stacking or piling site, fertilizer storage, or other nutrient storage will not have an adverse impact on groundwater quality or a surface water quality.

(3) Require the construction and management of barnyards, waste management systems, animal holding areas, and production areas in a manner

No. 64
2015

Page 10 of 135

to prevent runoff of waste to a surface water, to groundwater, or across property boundaries.

(4) Establish standards for nutrient management on farms, including:

(A) required nutrient management planning on all farms that manage agricultural wastes; and

(B) recommended practices for improving and maintaining soil quality and healthy soils in order to increase the capacity of soil to retain water, improve flood resiliency, reduce sedimentation, reduce reliance on fertilizers and pesticides, and prevent agricultural stormwater runoff.

(5) Require cropland on the farm to be cultivated in a manner that results in an average soil loss of less than or equal to the soil loss tolerance for the prevalent soil, known as 1T, as calculated through application of the Revised Universal Soil Loss Equation, or through the application of similarly accepted models.

(6)(A) Require a farm to comply with standards established by the Secretary for maintaining a vegetative buffer zone of perennial vegetation between annual croplands and the top of the bank of an adjoining water of the State. At a minimum the vegetative buffer standards established by the Secretary shall prohibit the application of manure on the farm within 25 feet of the top of the bank of an adjoining water of the State or within 10 feet of a ditch that is not a surface water under State law and that is not a water of the United States under federal law.

No. 64
2015

Page 11 of 135

(B) Establish standards for site-specific vegetative buffers that adequately address water quality needs based on consideration of soil type, slope, crop type, proximity to water, and other relevant factors.

(7) Prohibit the construction or siting of a farm structure for the storage of manure, fertilizer, or pesticide storage within a floodway area identified on a National Flood Insurance Program Map on file with a town clerk.

(8) Regulate, in a manner consistent with the Agency of Natural Resources' flood hazard area and river corridor rules, the construction or siting of a farm structure or the storage of manure, fertilizer, or pesticides within a river corridor designated by the Secretary of Natural Resources.

(9) Establish standards for the exclusion of livestock from the waters of the State to prevent erosion and adverse water quality impacts.

(10) Establish standards for soil conservation practices such as cover cropping.

(11) Allow for alternative techniques or practices, approved by the Secretary, for compliance by an owner or operator of a farm when the owner or operator cannot comply with the requirements of the required agricultural practices due to site-specific conditions. Approved alternative techniques or practices shall meet State requirements to reduce adverse impacts to water quality.

(b) On or before January 15, 2018, the Secretary of Agriculture, Food and Markets shall amend by rule the required agricultural practices in order to

No. 64
2015

Page 12 of 135

include requirements for reducing nutrient contribution to waters of the State from subsurface tile drainage. Upon adoption of requirements for subsurface tile drainage, the Secretary may require an existing subsurface tile drain to comply with the requirements of the RAPs for subsurface tile drainage upon a determination that compliance is necessary to reduce adverse impacts to water quality from the subsurface tile drain.

Sec. 5. REPORT ON MANAGEMENT OF SUBSURFACE TILE

DRAINAGE

(a) The Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources, after consultation with the U.S. Department of Agriculture's Natural Resource Conservation Service, shall submit a joint report to the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, the House Committee on Agriculture and Forest Products, and the Senate Committee on Agriculture regarding the status of current, scientific research relating to the environmental management of subsurface agriculture tile drainage and how subsurface agriculture tile drainage contributes to nutrient loading of surface waters. The report shall include a recommendation from the Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources regarding how best to manage subsurface agriculture tile drainage in the State in order to mitigate and prevent the contribution of tile drainage to waters of the State.

No. 64
2015

Page 13 of 135

(b) On or before January 15, 2016, the Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources shall submit an interim report that summarizes the progress of the Secretaries in preparing the report required by this section. The Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources shall submit the final report required by this section on or before January 15, 2017.

* * * Agricultural Water Quality; Permit Fees * * *

Sec. 5a. 6 V.S.A. § 4803 is added to read:

§ 4803. AGRICULTURAL WATER QUALITY SPECIAL FUND

(a) There is created an Agricultural Water Quality Special Fund to be administered by the Secretary of Agriculture, Food and Markets. Fees collected under this chapter, including fees for permits or certifications issued under the chapter, shall be deposited in the Fund.

(b) The Secretary may use monies deposited in the Fund for the Secretary's implementation and administration of agricultural water quality programs or requirements established by this chapter, including to pay salaries of Agency staff necessary to implement the programs and requirements of this chapter.

(c) Notwithstanding the requirements of 32 V.S.A. § 588(3), interest earned by the Fund shall be retained in the Fund from year to year.

No. 64
2015

Page 14 of 135

Sec. 6. 6 V.S.A. § 4851 is amended to read:

§ 4851. PERMIT REQUIREMENTS FOR LARGE FARM OPERATIONS

(a) No person shall, without a permit from the ~~secretary~~ Secretary, construct a new barn, or expand an existing barn, designed to house more than 700 mature dairy animals, 1,000 cattle or cow/calf pairs, 1,000 veal calves, 2,500 swine weighing over 55 pounds, 10,000 swine weighing less than 55 pounds, 500 horses, 10,000 sheep or lambs, 55,000 turkeys, 30,000 laying hens or broilers with a liquid manure handling system, 82,000 laying hens without a liquid manure handling system, 125,000 chickens other than laying hens without a liquid manure handling system, 5,000 ducks with a liquid manure handling system, or 30,000 ducks without a liquid manure handling system. No permit shall be required to replace an existing barn in use for livestock or domestic fowl production at its existing capacity. The ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets, in consultation with the ~~secretary of natural resources~~ Secretary of Natural Resources, shall review any application for a permit under this section with regard to water quality impacts and, prior to approval of a permit under this subsection, shall issue a written determination regarding whether the applicant has established that there will be no unpermitted discharge to waters of the ~~state~~ State pursuant to the federal regulations for concentrated animal feeding operations. If upon review of an application for a permit under this subsection, the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets

No. 64
2015

Page 15 of 135

determines that the permit applicant may be discharging to waters of the ~~state~~ State, the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets and the ~~secretary of natural resources~~ Secretary of Natural Resources shall respond to the discharge in accordance with the memorandum of understanding regarding concentrated animal feeding operations under ~~subsection 4810(b)~~ section 4810 of this title. The ~~secretary of natural resources~~ Secretary of Natural Resources may require a large farm to obtain a permit under 10 V.S.A. § 1263 pursuant to federal regulations for concentrated animal feeding operations.

* * *

(h) The Secretary may inspect a farm permitted under this section at any time, but no less frequently than once per year.

(i) A person required to obtain a permit under this section shall submit an annual operating fee of \$2,500.00 to the Secretary. The fees collected under this section shall be deposited in the Agricultural Water Quality Special Fund under section 4803 of this title.

Sec. 7. 6 V.S.A. § 4858 is amended to read:

§ 4858. ~~ANIMAL WASTE PERMITS~~ MEDIUM FARM OPERATION

PERMITS

(a) No person shall operate a medium farm without authorization from the ~~secretary~~ Secretary pursuant to this section. Under exceptional conditions,

No. 64
2015

Page 16 of 135

specified in subsection ~~(e)~~(d) of this section, authorization from the ~~secretary~~
Secretary may be required to operate a small farm.

(b) Rules; general and individual permits. The ~~secretary~~ Secretary shall establish by rule, pursuant to 3 V.S.A. chapter 25 ~~of Title 3~~, requirements for a “general permit” and “individual permit” to ~~ensure~~ assure that medium and small farms generating animal waste comply with the water quality standards of the ~~state~~ State.

* * *

(2) The rules adopted under this section shall also address permit administration, public notice and hearing, permit enforcement, permit transition, revocation, and appeals consistent with provisions of sections 4859, ~~4860~~, and 4861 of this title and subchapter 10 of this chapter.

(3) Each general permit issued pursuant to this section shall have a term of no more than five years. Prior to the expiration of each general permit, the ~~secretary~~ Secretary shall review the terms and conditions of the general permit and may issue subsequent general permits with the same or different conditions as necessary to carry out the purposes of this subchapter. Each general permit shall include provisions that require public notice of the fact that a medium farm has sought coverage under a general permit adopted pursuant to this section. Each general permit shall provide a process by which interested persons can obtain detailed information about the nature and extent of the activity proposed to receive coverage under the general permit. The Secretary

No. 64
2015

Page 17 of 135

may inspect each farm seeking coverage under the general permit at any time, but no less frequently than once every three years.

(c)(1) Medium farm general permit. The owner or operator of a medium farm seeking coverage under a general permit adopted pursuant to this section shall certify to the ~~secretary~~ Secretary within a period specified in the permit, and in a manner specified by the ~~secretary~~ Secretary, that the medium farm does comply with permit requirements regarding an adequately sized and designed manure management system to accommodate the wastes generated and a nutrient management plan to dispose of wastes in accordance with ~~accepted~~ required agricultural practices adopted under this chapter. Any certification or notice of intent to comply submitted under this subdivision shall be kept on file at the ~~agency of agriculture, food and markets~~ Agency of Agriculture, Food and Markets. The ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets, in consultation with the ~~secretary of natural resources~~ Secretary of Natural Resources, shall review any certification or notice of intent to comply submitted under this subdivision with regard to the water quality impacts of the medium farm for which the owner or operator is seeking coverage, and, within 18 months of receiving the certification or notice of intent to comply, shall verify whether the owner or operator of the medium farm has established that there will be no unpermitted discharge to waters of the ~~state~~ State pursuant to the federal regulations for concentrated animal feeding operations. If upon review of a medium farm

No. 64
2015

Page 18 of 135

granted coverage under the general permit adopted pursuant to this subsection, the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets determines that the permit applicant may be discharging to waters of the ~~state~~ State, the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets and the ~~secretary of natural resources~~ Secretary of Natural Resources shall respond to the discharge in accordance with the memorandum of understanding regarding concentrated animal feeding operations under ~~subsection 4810(b)~~ section 4810 of this title.

* * *

(e) A person required to obtain a permit or coverage under this section shall submit an annual operating fee of \$1,500.00 to the Secretary. The fees collected under this section shall be deposited in the Agricultural Water Quality Special Fund under section 4803 of this title.

Sec. 8. [Deleted.]

Sec. 9. 6 V.S.A. § 328 is amended to read:

§ 328. TONNAGE REPORTING

(a) Every person who registers a commercial feed pursuant to the provisions of this chapter shall report to the ~~agency of agriculture, food and markets~~ Agency of Agriculture, Food and Markets annually the total amount of combined feed which is distributed within the ~~state~~ State and which is intended for use within the ~~state~~ State. The report shall be made on forms and in a

No. 64
2015

Page 19 of 135

manner to be prescribed ~~by rules~~ by the ~~secretary~~ Secretary for calendar years ~~1986~~ 2016 and ~~1987~~ 2017.

(b) This reporting requirement shall not apply to pet foods, within the meaning of subdivisions 323(16) and (19) of this title, and shall not apply to feeds intended for use outside ~~of the state~~ State.

Sec. 10. 6 V.S.A. § 366 is amended to read:

§ 366. TONNAGE FEES

(a) There shall be paid annually to the ~~secretary~~ Secretary for all fertilizers distributed to a nonregistrant consumer in this ~~state~~ State an annual ~~inspection~~ fee at a rate of \$0.25 cents per ton.

(b) Persons distributing fertilizer shall report annually by January 15 for the previous year ending December 31 to the ~~secretary~~ Secretary revealing the amounts of each grade of fertilizer and the form in which the fertilizer was distributed within this ~~state~~ State. Each report shall be accompanied with payment and written permission allowing the ~~secretary~~ Secretary to examine the person's books for the purpose of verifying tonnage reports.

(c) No information concerning tonnage sales furnished to the ~~secretary~~ Secretary under this section shall be disclosed in such a way as to divulge the details of the business operation to any person unless it is necessary for the enforcement of the provisions of this chapter.

(d) ~~A \$50.00 minimum tonnage fee shall be assessed on all distributors who distribute fertilizers in this state. [Repealed.]~~

(e) Agricultural limes, including agricultural lime mixed with wood ash, are exempt from the tonnage fees required in this section.

(f) Lime and wood ash mixtures may be registered as agricultural liming materials and guaranteed for potassium or potash provided that the wood ash totals less than 50 percent of the mixture.

(g) All fees collected under subsection (a) of this section shall be deposited in the revolving fund created by section 364(e) of this title and used in accordance with its provisions.

(h) There shall be paid annually to the Secretary for all nonagricultural fertilizers distributed to a nonregistrant consumer in this State an annual fee at a rate of \$30.00 per ton of nonagricultural fertilizer for the purpose of supporting agricultural water quality programs in Vermont.

(1) Persons distributing any fertilizer in the State shall report annually on or before January 15 for the previous year ending December 31 to the Secretary revealing the amounts of each grade of fertilizer and the form in which the fertilizer was distributed within this State. Each report shall be accompanied with payment of the fees under this section and written permission allowing the Secretary to examine the person's books for the purpose of verifying tonnage reports.

(2) No information concerning tonnage sales furnished to the Secretary under this section shall be disclosed in such a way as to divulge the details of the business operation to any person unless it is necessary for the enforcement

of the provisions of this chapter.

(3) A \$150.00 minimum tonnage fee shall be assessed on all distributors who distribute nonagricultural fertilizers in this State.

(4) Agricultural limes, including agricultural lime mixed with wood ash, are exempt from the tonnage fees required under this subsection.

(5) All fees collected under this subsection shall be deposited in the Agricultural Water Quality Special Fund created under section 4803 of this title.

Sec. 11. 6 V.S.A. § 918 is amended to read:

§ 918. REGISTRATION

(a) Every economic poison which is distributed, sold, or offered for sale within this State or delivered for transportation or transported in intrastate commerce or between points within this State through any point outside this State shall be registered in the Office of the Secretary, and such registration shall be renewed annually; provided, that products which have the same formula, are manufactured by the same person, the labeling of which contains the same claims, and the labels of which bear a designation identifying the product as the same economic poison may be registered as a single economic poison; and additional names and labels shall be added by supplement statements during the current period of registration. It is further provided that any economic poison imported into this State, which is subject to the provisions of any federal act providing for the registration of economic poisons

No. 64
2015

Page 22 of 135

and which has been duly registered under the provisions of this chapter, may, in the discretion of the Secretary, be exempted from registration under this chapter, when sold or distributed in the unbroken immediate container in which it was originally shipped. The registrant shall file with the Secretary a statement including:

(1) The name and address of the registrant and the name and address of the person whose name will appear on the label, if other than the registrant.

(2) The name of the economic poison.

(3) A complete copy of the labeling accompanying the economic poison and a statement of all claims to be made for it, including directions for use.

(4) If requested by the Secretary, a full description of the tests made and the results thereof upon which the claims are based. In the case of renewal of registration, a statement shall be required only with respect to information which is different from that furnished when the economic poison was registered or last ~~re-registered~~ reregistered.

(b) The registrant shall pay an annual fee of ~~\$110.00~~ \$125.00 for each product registered, and \$110.00 of that amount shall be deposited in the special fund created in section 929 of this title, of which \$5.00 from each product registration shall be used for an educational program related to the proper purchase, application, and disposal of household pesticides, and \$5.00 from each product registration shall be used to collect and dispose of obsolete and unwanted pesticides. Of the registration fees collected under this subsection,

No. 64
2015

Page 23 of 135

\$15.00 of the amount collected shall be deposited in the Agricultural Water Quality Special Fund under section 4803 of this title. The annual registration year shall be from December 1 to November 30 of the following year.

* * *

* * * Agricultural Water Quality; Required Agricultural Practices; Best Management Practices * * *

Sec. 12. 6 V.S.A. § 4810 is amended to read:

§ 4810. AUTHORITY; COOPERATION; COORDINATION

(a) Agricultural land use practices. In accordance with 10 V.S.A. § 1259(i), the ~~secretary~~ Secretary shall adopt by rule, pursuant to 3 V.S.A. chapter 25 of Title 3, and shall implement and enforce agricultural land use practices in order to ~~reduce the amount of agricultural pollutants entering the waters of the state~~ satisfy the requirements of 33 U.S.C. § 1329 that the State identify and implement best management practices to control nonpoint sources of agricultural waste to waters of the State. These agricultural land use practices shall be created in two categories, pursuant to ~~subdivisions (1) and (2) of this subsection~~ subsections (b) and (c) of this section.

~~(1)(b) Required Agricultural Practices. "Accepted Agricultural Practices"~~ Required Agricultural Practices (RAPs) shall be management standards to be followed in conducting agricultural activities by all persons engaged in farming in this state ~~State~~. These standards shall address activities which have a potential for causing agricultural pollutants to

No. 64
2015

Page 24 of 135

enter the groundwater and waters of the ~~state~~ State, including dairy and other livestock operations plus all forms of crop and nursery operations and on-farm or agricultural fairground, registered pursuant to 20 V.S.A. § 3902, livestock and poultry slaughter and processing activities. The ~~AAPs~~ RAPs shall include, as well as promote and encourage, practices for farmers in preventing agricultural pollutants from entering the groundwater and waters of the ~~state~~ State when engaged in, ~~but not limited to~~, animal waste management and disposal, soil amendment applications, plant fertilization, and pest and weed control. Persons engaged in farming, ~~as defined in 10 V.S.A. § 6001~~, who ~~follow~~ are in compliance with these practices shall be presumed ~~to be in compliance with water quality standards~~ to not have a discharge of agricultural pollutants to waters of the State. ~~AAPs~~ RAPs shall be designed to protect water quality and shall be practical and ~~cost-effective~~ cost-effective to implement, as determined by the Secretary. Where the Secretary determines, after inspection of a farm, that a person engaged in farming is complying with the RAPs but there still exists the potential for agricultural pollutants to enter the waters of the State, the Secretary shall require the person to implement additional, site-specific on-farm conservation practices designed to prevent agricultural pollutants from entering the waters of the State. When requiring implementation of a conservation practice under this subsection, the Secretary shall inform the person engaged in farming of the resources available to assist the person in implementing the conservation practice and complying with the

No. 64
2015

Page 25 of 135

requirements of this chapter. The ~~AAPs~~ RAPs for groundwater shall include a process under which the ~~agency~~ Agency shall receive, investigate, and respond to a complaint that a farm has contaminated the drinking water or groundwater of a property owner. A farmer may petition the Secretary to reduce the size of a perennial buffer or change the perennial buffer type based on site-specific conditions.

~~(2)(c) Best Management Practices. “Best Management Practices” (BMPs) may be required by the secretary on a case by case basis. Before requiring BMPs, the secretary shall determine that sufficient financial assistance is available to assist farmers in achieving compliance with applicable BMPs. Best management practices (BMPs) are site-specific on-farm conservation practices implemented in order to address the potential for agricultural pollutants to enter the waters of the State. The Secretary may require any person engaged in farming to implement a BMP. When requiring implementation of a BMP, the Secretary shall inform a farmer of financial resources available from State or federal sources, private foundations, public charities, or other sources, including funding from the Clean Water Fund established under 10 V.S.A. § 1388, to assist the person in implementing BMPs and complying with the requirements of this chapter. BMPs shall be practical and cost effective to implement, as determined by the Secretary, and shall be designed to achieve compliance with the requirements of this chapter. The Secretary may require soil monitoring or innovative manure management~~

No. 64
2015

Page 26 of 135

as a BMP under this subsection. Soil monitoring or innovative manure management implemented as a BMP shall be eligible for State assistance under the Clean Water Fund established under 10 V.S.A. chapter 47, subchapter 7. If a perennial buffer of trees or other woody vegetation is required as a BMP, the Secretary shall pay the farmer for a first priority easement on the land on which the buffer is located.

~~(b)~~(e) Cooperation and coordination. ~~The secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets shall coordinate with the ~~secretary of natural resources~~ Secretary of Natural Resources in implementing and enforcing programs, plans, and practices developed for reducing and eliminating agricultural non-point source pollutants and discharges from concentrated animal feeding operations. ~~The secretary of agriculture, food and markets~~ On or before July 1, 2016, the Secretary of Agriculture, Food and Markets and the ~~secretary of natural resources~~ Secretary of Natural Resources shall ~~develop a~~ revise the memorandum of understanding for the non-point program describing program administration, grant negotiation, grant sharing, and how they will coordinate watershed planning activities to comply with Public Law 92-500. The memorandum of understanding shall describe how the agencies will implement the antidegradation implementation policy, including how the agencies will apply the antidegradation implementation policy to new sources of agricultural non-point source pollutants. The ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and

No. 64
2015

Page 27 of 135

Markets and the ~~secretary of the agency of natural resources~~ Secretary of Natural Resources shall also develop a memorandum of understanding according to the public notice and comment process of 10 V.S.A. § 1259(i) regarding the implementation of the federal concentrated animal feeding operation program and the relationship between the requirements of the federal program and the ~~state~~ State agricultural water quality requirements for large, medium, and small farms under this chapter ~~215 of this title~~. The memorandum of understanding shall describe program administration, permit issuance, an appellate process, and enforcement authority and implementation. The memorandum of understanding shall be consistent with the federal National Pollutant Discharge Elimination System permit regulations for discharges from concentrated animal feeding operations. The allocation of duties under this chapter between the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets and the ~~secretary of natural resources~~ Secretary of Natural Resources shall be consistent with the ~~secretary's~~ Secretary's duties, established under the provisions of 10 V.S.A. § 1258(b), to comply with Public Law 92-500. The ~~secretary of natural resources~~ Secretary of Natural Resources shall be the ~~state~~ State lead person in applying for federal funds under Public Law 92-500, but shall consult with the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets during the process. The agricultural non-point source program may compete with other programs for competitive watershed projects funded from

No. 64
2015

Page 28 of 135

federal funds. The ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets shall be represented in reviewing these projects for funding. Actions by the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets under this chapter concerning agricultural non-point source pollution shall be consistent with the water quality standards and water pollution control requirements of 10 V.S.A. chapter 47 of Title 10 and the federal Clean Water Act as amended. In addition, the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets shall coordinate with the ~~secretary of natural resources~~ Secretary of Natural Resources in implementing and enforcing programs, plans, and practices developed for the proper management of composting facilities when those facilities are located on a farm. On or before January 15, 2016, the Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources shall each develop three separate measures of the performance of the agencies under the memorandum of understanding required by this subsection. Beginning on January 15, 2017, and annually thereafter, the Secretary of Agriculture, Food and Markets and the Secretary of Natural Resources shall submit separate reports to the Senate Committee on Agriculture, the House Committee on Agriculture and Forest Products, the Senate Committee on Natural Resources and Energy, and the House Committee on Fish, Wildlife and Water Resources regarding the success of

No. 64
2015

Page 29 of 135

each agency in meeting the performance measures for the memorandum of understanding.

Sec. 13. LEGISLATIVE COUNCIL STATUTORY REVISION

AUTHORITY; REQUIRED AGRICULTURAL PRACTICES

The Office of Legislative Council, in its statutory revision capacity, is directed to make amendments to the cumulative supplements of the Vermont Statutes Annotated to change the terms “accepted agricultural practices” to “required agricultural practices” and “AAPs” to “RAPs” where appropriate. These changes shall also be made when new legislation is proposed or when there is a republication of the Vermont Statutes Annotated.

Sec. 14. 6 V.S.A. § 4813 is amended to read:

§ 4813. BASIN MANAGEMENT; APPEALS TO THE WATER

~~RESOURCES BOARD~~ ENVIRONMENTAL DIVISION

(a) ~~The secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets shall cooperate with the ~~secretary of natural resources~~ Secretary of Natural Resources in the basin planning process with regard to the agricultural non-point source waste component of each basin plan. Any person with an interest in the agricultural non-point source component of the basin planning process may petition the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets to require, and the ~~secretary~~ Secretary may require, best management practices in the individual basin beyond ~~accepted~~ required agricultural practices adopted by rule, in order to

No. 64
2015

Page 30 of 135

achieve compliance with the water quality goals in 10 V.S.A. § 1250 and any duly adopted basin plan. The ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets shall hold a public hearing within 60 days and shall issue a timely written decision that sets forth the facts and reasons supporting the decision.

(b) Any person engaged in farming that has been required by the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets to implement best management practices or any person who has petitioned the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets under subsection (a) of this section may appeal the ~~secretary of agriculture, food and market's~~ Secretary of Agriculture, Food and Markets' decision to the ~~environmental division~~ Environmental Division de novo.

(c) ~~Before requiring best management practices under this section, the secretary of agriculture, food and markets or the board shall determine that sufficient financial assistance is available to assist farmers in achieving compliance with applicable best management practices~~ When requiring implementation of a best management practice, the Secretary shall inform a farmer of the resources available to assist the farmer in implementing the best management practice and complying with the requirements of this chapter.

* * * Agricultural Water Quality; Training * * *

Sec. 15. 6 V.S.A. chapter 215, subchapter 8 is added to read:

Subchapter 8. Agricultural Water Quality Training

§ 4981. AGRICULTURAL WATER QUALITY TRAINING

(a) On or before July 1, 2016, as part of the revisions of the required agricultural practices, the Secretary of Agriculture, Food and Markets shall adopt by rule requirements for training classes or programs for owners or operators of small farms, medium farms, or large farms certified or permitted under this chapter regarding:

(1) the prevention of discharges, as that term is defined in 10 V.S.A.

§ 1251(3); and

(2) the mitigation and management of stormwater runoff, as that term is defined in 10 V.S.A. § 1264, from farms.

(b) Any training required under this section shall address:

(1) the existing statutory and regulatory requirements for operation of a large, medium, or small farm in the State;

(2) the management practices and technical and financial resources available to assist in compliance with statutory or regulatory agricultural requirements;

(3) the land application of manure or nutrients, methods or techniques to minimize the runoff of land-applied manure or nutrients to waters of the State;

and identification of weather or soil conditions that increase the risk of runoff of land-applied manure or nutrients to waters of the State; and

(4) standards required for nutrient management, including nutrient management planning.

(c) The Secretary shall include the training required by this section as a condition of a large farm permit, medium farm permit, or small farm certification required under this chapter. The Secretary may phase in training requirements under this section based on farm size, permit or certification category, or available staffing. On or before July 1, 2017, the Secretary shall establish a schedule by which all owners or operators of small farms, medium farms, or large farms shall complete the training required by this section.

(d) The Secretary may approve or authorize the training required by this section to be conducted by other entities, including the University of Vermont Extension Service and the natural resources conservation districts.

(e) The Secretary shall not charge the owner or operator of a large, medium, or small farm for the training required by this section. The Secretary shall pay for the training required under this section from funds available to the Agency of Agriculture, Food and Markets for water quality initiatives.

* * * Agricultural Water Quality;

Certification of Custom Applicators * * *

Sec. 16. 6 V.S.A. chapter 215, subchapter 9 is added to read:

Subchapter 9. Certification of Custom Applicators of Manure
or Nutrients

§ 4987. DEFINITIONS

As used in this subchapter, “custom applicator” means a person who is engaged in the business of applying manure or nutrients to land and who charges or collects other consideration for the service. Custom applicator shall include full-time employees of a person engaged in the business of applying manure or nutrients to land, when the employees apply manure or nutrients to land.

§ 4988. CERTIFICATION OF CUSTOM APPLICATOR

(a) On or before July 1, 2016, as part of the revision of the required agricultural practices, the Secretary of Agriculture, Food and Markets shall adopt by rule a process by which a custom applicator shall be certified to operate within the State. The certification process shall require a custom applicator to complete eight hours of training over each five-year period regarding:

(1) application methods or techniques to minimize the runoff of land-applied manure or nutrients to waters of the State; and

(2) identification of weather or soil conditions that increase the risk of runoff of land-applied manure or nutrients to waters of the State.

(b) A custom applicator shall not apply manure or nutrients unless certified by the Secretary of Agriculture, Food and Markets.

(c) A custom applicator certified under this section shall train seasonal employees in methods or techniques to minimize runoff to surface waters and to identify weather or soil conditions that increase the risk of runoff. A custom applicator that trains a seasonal employee under this subsection shall be liable for damages done and liabilities incurred by a seasonal employee who improperly applies manure or nutrients.

(d) The requirements of this section shall not apply to an owner or operator of a farm applying manure or nutrients to a field that he or she owns or controls, provided that the owner or operator has completed the agricultural water quality training required under section 4981 of this title.

* * * Agricultural Water Quality; Enforcement; Corrective Actions * * *

Sec. 17. 6 V.S.A. chapter 215, subchapter 10 is added to read:

Subchapter 10. Enforcement

§ 4991. PURPOSE

The purpose of this subchapter is to provide the Secretary of Agriculture, Food and Markets with the necessary authority to enforce the agricultural water quality requirements of this chapter. When the Secretary of Agriculture, Food and Markets determines that a person subject to the requirements of the

chapter is violating a requirement of this chapter, the Secretary shall respond to and require discontinuance of the violation. The Secretary may respond to a violation of the requirements of this chapter by:

- (1) issuing a corrective action order under section 4992 of this title;
- (2) issuing a cease and desist order under section 4993 of this title;
- (3) issuing an emergency order under section 4993 of this title;
- (4) revoking or conditioning coverage under a permit or certification under section 4994 of this title;
- (5) bringing a civil enforcement action under section 4995 of this title;
- (6) referring the violation to the Secretary of Natural Resources for enforcement under 10 V.S.A. chapter 201; or
- (7) pursuing other action, such as consulting with a farmer, within the authority of the Secretary to assure discontinuance of the violation and remediation of any harm caused by the violation.

§ 4992. CORRECTIVE ACTIONS; ADMINISTRATIVE ENFORCEMENT

(a) When the Secretary of Agriculture, Food and Markets receives a complaint and determines that a farmer is in violation of the requirements of this chapter, rules adopted under this chapter, or a permit or certification issued under this chapter, the Secretary shall notify the farmer of the complaint, including the alleged violation. The Secretary shall not be required to identify the source of the complaint.

(b) When the Secretary of Agriculture, Food and Markets determines that a person is violating the requirements of this chapter, rules adopted under this chapter, or a permit or certification issued under this chapter, the Secretary may issue a written warning that shall be served in person or by certified mail, return receipt requested. A warning issued under this subsection shall include:

(1) a description of the alleged violation;

(2) identification of this section;

(3) identification of the applicable statute, rule, or permit condition violated;

(4) the required corrective actions that the person shall take to correct the violation; and

(5) a summary of federal and State assistance programs that may be utilized by the person to assist in correcting the violation.

(c) A person issued a warning under this section shall have 30 days to respond to the written warning and shall provide an abatement schedule for curing the violation and a description of the corrective action to be taken to cure the violation.

(d) If a person who receives a warning under this subsection fails to respond in a timely manner to the written warning or to take corrective action, the Secretary may act pursuant to section 4993 or section 4995 of this section in order to protect water quality.

§ 4993. ADMINISTRATIVE ENFORCEMENT; CEASE AND DESIST

ORDERS; EMERGENCY ORDERS

(a) Notwithstanding the requirements of section 4992 of this title, the Secretary at any time may pursue one or more of the following enforcement actions:

(1) Issue a cease and desist order in accordance with the requirements of subsection (b) of this section to a person the Secretary believes to be in violation of the requirements of this chapter.

(2) Issue emergency administrative orders to protect water quality when an alleged violation, activity, or farm practice:

(A) presents an immediate threat of substantial harm to the environment or immediate threat to the public health or welfare;

(B) is likely to result in an immediate threat of substantial harm to the environment or immediate threat to the public health or welfare; or

(C) requires a permit or amendment to a permit issued under this chapter and a farm owner or operator has commenced an activity or is continuing an activity without a permit or permit amendment.

(3) Institute appropriate proceedings on behalf of the Agency of Agriculture, Food and Markets to enforce the requirements of this chapter, rules adopted under this chapter, or a permit or certification issued under this chapter.

(4) Order mandatory corrective actions, including a requirement that the owner or operator of a farm sell or otherwise remove livestock from a farm or production area when the volume of waste produced by livestock on the farm exceeds the infrastructure capacity of the farm or the production area to manage the waste or waste leachate and prevent runoff or leaching of wastes to waters of the State or groundwater, as required by this chapter.

(5) Seek administrative or civil penalties in accordance with the requirements of section 15, 16, 17, or 4995 of this title. Notwithstanding the requirements of section 15 of this title to the contrary, the maximum administrative penalty issued by the Secretary under this section shall not exceed \$5,000.00 for each violation, and the maximum amount of any administrative penalty assessed for separate and distinct violations of this chapter shall not exceed \$50,000.00.

(b) A person may request that the Secretary hold a hearing on a cease and desist order or an emergency order issued under this section within five days of receipt of the order. Upon receipt of a request for a hearing, the Secretary promptly shall set a date and time for a hearing. A request for a hearing on a cease and desist order or emergency order issued under this section shall not stay the order.

§ 4994. PERMIT OR CERTIFICATION; REVOCATION; ENFORCEMENT

The Secretary may, after due notice and hearing, revoke or condition coverage under a general permit, an individual permit, a small farm

No. 64
2015

Page 39 of 135

certification, or other permit or certification issued under this chapter or rules adopted under this chapter when the person subject to the permit or certification fails to comply with a requirement of this chapter or any term, provision, or requirements of a permit or certification required by this chapter.

The Secretary may also seek enforcement remedies and penalties under this subchapter against any person who fails to comply with any term, provision, or requirement of a permit or certification required by this chapter or who violates the terms or conditions of coverage under any general permit, any individual permit, or any certification issued under this chapter.

§ 4995. CIVIL ENFORCEMENT

(a) The Secretary may bring an action in the Civil Division of the Superior Court to enforce the requirements of this chapter, or rules adopted under this chapter, or any permit or certification issued under this chapter, to assure compliance, and to obtain penalties in the amounts described in subsection (b) of this section. The action shall be brought by the Attorney General in the name of the State.

(b) The Court may grant temporary and permanent injunctive relief, and may:

(1) Enjoin future activities.

(2) Order corrective actions to be taken to mitigate or curtail any violation and to protect human health or the environment, including a requirement that the owner or operator of a farm sell or otherwise remove

No. 64
2015

Page 40 of 135

livestock from the farm or production area when the volume of wastes produced by livestock exceeds the infrastructure capacity of the farm or its production area to manage the waste or waste leachate to prevent runoff or leaching of wastes to waters of the State or groundwater as required by the standards in this chapter.

(3) Order the design, construction, installation, operation, or maintenance of facilities designed to mitigate or prevent a violation of this chapter or to protect human health or the environment or designed to assure compliance.

(4) Fix and order compensation for any public or private property destroyed or damaged.

(5) Revoke coverage under any permit or certification issued under this chapter.

(6) Order reimbursement from any person who caused governmental expenditures for the investigation, abatement, mitigation, or removal of a hazard to human health or the environment.

(7) Levy a civil penalty as provided in this subdivision. A civil penalty of not more than \$85,000.00 may be imposed for each violation. In addition, in the case of a continuing violation, a penalty of not more than \$42,500.00 may be imposed for each day the violation continues. In fixing the amount of the penalty, the Court shall apply the criteria set forth in subsections (e) and (f)

of this section. The cost of collection of penalties or other monetary awards shall be assessed against and added to a penalty assessed against a respondent.

(c)(1) In any civil action brought under this section in which a temporary restraining order or preliminary injunction is sought, relief shall be obtained upon a showing that there is the probability of success on the merits and that:

(A) a violation exists; or

(B) a violation is imminent and substantial harm is likely to result.

(2) In a civil action brought under this section in which a temporary restraining order or preliminary injunction is sought, the Secretary need not demonstrate immediate and irreparable injury, loss, or damage.

(d) Any balancing of the equities in actions under this section may affect the time by which compliance shall be attained, but not the necessity of compliance within a reasonable period of time.

(e)(1) In determining the amount of the penalty provided in subsection (b) of this section, the Court shall consider the following:

(A) the degree of actual or potential impact on public health, safety, welfare, and the environment resulting from the violation;

(B) the presence of mitigating circumstances, including unreasonable delay by the Secretary in seeking enforcement;

(C) whether the respondent knew or had reason to know the violation existed;

(D) the respondent's record of compliance;

(E) the deterrent effect of the penalty;

(F) the State's actual costs of enforcement; and

(G) the length of time the violation has existed.

(2) In determining the amount of the penalty provided in subsection (b) of this section, the Court may consider additional relevant factors.

(f) In addition to any penalty assessed under subsection (b) of this section, the Secretary may also recapture economic benefit resulting from a violation.

§ 4996. APPEALS; ENFORCEMENT

(a) Any person subject, under this subchapter, to an administrative enforcement order, an administrative penalty, or revocation of a permit or certification who is aggrieved by a final decision of the Secretary may appeal to the Civil Division of Superior Court within 30 days of the decision. The Chief Superior judge may specially assign an environmental judge to the Civil Division of Superior Court for the purpose of hearing an appeal.

(b) If the Secretary issues an emergency order under this chapter, the person subject to the order may request a hearing before the Civil Division of Superior Court. Notice of the request for hearing under this subdivision shall be filed with the Civil Division of Superior Court and the Secretary within five days of receipt of the order. A hearing on the emergency order shall be held at the earliest possible time and shall take precedence over all other hearings. The hearing shall be held within five days of receipt of the notice of the request for hearing. A request for hearing on an emergency order shall not stay the

No. 64
2015

Page 43 of 135

order. The Civil Division of the Superior Court shall issue a decision within five days from the conclusion of the hearing, and no later than 30 days from the date the notice of request for hearing was received by the person subject to the order.

(c) The Civil Division of the Superior Court shall review appeals under this section on the record pursuant to Rule 74 of the Vermont Rules of Civil Procedure.

Sec. 18. 6 V.S.A. § 4812 is amended to read:

§ 4812. ~~CORRECTIVE ACTIONS~~

~~(a) When the Secretary of Agriculture, Food and Markets determines that a person engaged in farming is managing a farm using practices which are inconsistent with the requirements of this chapter or rules adopted under this subchapter, the Secretary may issue a written warning which shall be served in person or by certified mail, return receipt requested. The warning shall include a brief description of the alleged violation, identification of this statute and applicable rules, a recommendation for corrective actions that may be taken by the person, along with a summary of federal and State assistance programs which may be utilized by the person to remedy the violation. The person shall have 30 days to respond to the written warning and shall provide an abatement schedule for curing the violation and a description of the corrective action to be taken to cure the violation. If the person fails to respond to the written warning within this period or to take corrective action to change the practices, the~~

No. 64
2015

Page 44 of 135

~~Secretary may act pursuant to subsection (b) of this section in order to protect water quality.~~

~~(b) The Secretary may:~~

~~(1) issue cease and desist orders and administrative penalties in accordance with the requirements of sections 15, 16, and 17 of this title; and~~

~~(2) institute appropriate proceedings on behalf of the Agency to enforce this subchapter.~~

~~(c) Whenever the Secretary believes that any person engaged in farming is in violation of this subchapter or rules adopted thereunder, an action may be brought in the name of the Agency in a court of competent jurisdiction to restrain by temporary or permanent injunction the continuation or repetition of the violation. The court may issue temporary or permanent injunctions, and other relief as may be necessary and appropriate to curtail any violations.~~

~~(d) [Repealed.]~~

~~(e) Any person subject to an enforcement order or an administrative penalty who is aggrieved by the final decision of the Secretary may appeal to the Superior Court within 30 days of the decision. The administrative judge may specially assign an Environmental judge to Superior Court for the purpose of hearing an appeal. [Repealed.]~~

No. 64
2015

Page 45 of 135

Sec. 19. 6 V.S.A. § 4854 is amended to read:

§ 4854. ~~REVOCATION; ENFORCEMENT~~

~~The secretary may revoke a permit issued under this subchapter after following the same process prescribed by section 2705 of this title regarding the revocation of a handler's license. The secretary may also seek enforcement remedies under sections 1, 12, 13, 16, and 17 of this title as well as assess an administrative penalty under section 15 of this title to any person who fails to apply for a permit as required by this subchapter, or who violates the terms or conditions of a permit issued under this subchapter. However, notwithstanding the provisions of section 15 of this title to the contrary, the maximum administrative penalty assessed for a violation of this subchapter shall not exceed \$5,000.00 for each violation, and the maximum amount of any penalty assessed for separate and distinct violations of this chapter shall not exceed \$50,000.00. [Repealed.]~~

Sec. 20. 6 V.S.A. § 4860 is amended to read:

§ 4860. ~~REVOCATION; ENFORCEMENT~~

~~(a) The secretary may revoke coverage under a general permit or an individual permit issued under this subchapter after following the same process prescribed by section 2705 of this title regarding the revocation of a handler's license. The secretary may also seek enforcement remedies under sections 1, 11, 12, 13, 16, and 17 of this title as well as assess an administrative penalty under section 15 of this title from any person who fails to comply with any~~

No. 64
2015

Page 46 of 135

~~permit provision as required by this subchapter or who violates the terms or conditions of coverage under any general permit or any individual permit issued under this subchapter. However, notwithstanding provisions of section 15 of this title to the contrary, the maximum administrative penalty assessed for a violation of this subchapter shall not exceed \$5,000.00 for each violation, and the maximum amount of any penalty assessed for separate and distinct violations of this chapter shall not exceed \$50,000.00.~~

~~(b) Any person who violates any provision of this subchapter or who fails to comply with any order or the terms of any permit issued in accordance with this subchapter shall be fined not more than \$10,000.00 for each violation. Each violation may be a separate offense and, in the case of a continuing violation, each day's continuance may be deemed a separate offense.~~

~~(c) Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained by this subchapter or by any permit, rule, regulation, or order issued under this subchapter, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained by this subchapter or by any permit, rule, regulation, or order issued under this subchapter shall upon conviction be punished by a fine of not more than \$5,000.00 for each violation. Each violation may be a separate offense and, in the case of a continuing violation, each day's continuance may be deemed a separate offense. [Repealed.]~~

No. 64
2015

Page 47 of 135

Sec. 21. 10 V.S.A. § 8003(d) is added to read:

(d) Upon the request of the Secretary of Agriculture, Food and Markets, the Secretary may take action under this chapter to enforce the agricultural water quality requirements of, rules adopted under, and permits and certifications issued under 6 V.S.A. chapter 215. The Secretary of Natural Resources and the Secretary of Agriculture, Food and Markets shall enter into a memorandum of understanding to implement this subsection.

* * * Stream Alteration; Agricultural Activities * * *

Sec. 22. 10 V.S.A. § 1021 is amended to read:

§ 1021. ALTERATION PROHIBITED; EXCEPTIONS

(a) A person shall not change, alter, or modify the course, current, or cross section of any watercourse or of designated outstanding resource waters, within or along the boundaries of this State either by movement, fill, or excavation of ten cubic yards or more of instream material in any year, unless authorized by the Secretary. A person shall not establish or construct a berm in a flood hazard area or river corridor, as those terms are defined in subdivisions 752(3) and (11) of this title, unless permitted by the Secretary or constructed as an emergency protective measure under subsection (b) of this section.

* * *

(f) This subchapter shall not apply to ~~accepted agricultural or silvicultural practices, as defined by the Secretary of Agriculture, Food and Markets, or the Commissioner of Forests, Parks and Recreation, respectively;~~

(1) accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation, including practices which are in compliance with the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation; or

(2) a farm that is implementing an approved U.S. Department of Agriculture Natural Resource Conservation Service streambank stabilization project or a streambank stabilization project approved by the Secretary of Agriculture, Food and Markets that is consistent with policies adopted by the Secretary of Natural Resources to reduce fluvial erosion hazards.

* * *

* * * Use Value Appraisal; Compliance with Agricultural Water Quality Requirements * * *

Sec. 23. 32 V.S.A. § 3756(i) is amended to read:

(i)(1) The Director shall remove from use value appraisal an entire parcel of managed ~~forest land~~ forestland and notify the owner ~~in accordance with the procedure in subsection (b) of this section~~ when the ~~Department~~ Commissioner of Forests, Parks and Recreation has not received a management activity report or has received an adverse inspection report, unless the lack of conformance consists solely of the failure to make prescribed planned cutting. In that case, the Director may delay removal from use value appraisal for a period of one year at a time to allow time to bring the parcel into conformance with the plan.

(2)(A) The Director shall remove from use value appraisal an entire parcel or parcels of agricultural land and farm buildings identified by the Secretary of Agriculture, Food and Markets as being used by a person:

(i) found, after administrative hearing, or contested judicial hearing or motion, to be in violation of water quality requirements established under 6 V.S.A. chapter 215, or any rules adopted or any permit or certification issued under 6 V.S.A. chapter 215; or

(ii) who is not in compliance with the terms of an administrative or court order issued under 6 V.S.A. chapter 215, subchapter 10 to remedy a violation of the requirements of 6 V.S.A. chapter 215 or any rules adopted or any permit or certification issued under 6 V.S.A. chapter 215.

(B) The Director shall notify the owner that agricultural land or a farm building has been removed from use value appraisal by mailing notification of removal to the owner or operator's last and usual place of abode. After removal of agricultural land or a farm building from use value appraisal under this section, the Director shall not consider a new application for use value appraisal for the agricultural land or farm building until the Secretary of Agriculture, Food and Markets submits to the Director a certification that the owner or operator of the agricultural land or farm building is complying with the water quality requirements of 6 V.S.A. chapter 215 or an order issued under 6 V.S.A. chapter 215. After submission of a certification by the Secretary of Agriculture, Food and Markets, an owner or operator shall be

No. 64
2015

Page 50 of 135

eligible to apply for enrollment of the agricultural land or farm building according to the requirements of section 3756 of this title.

Sec. 24. 32 V.S.A. § 3758 is amended to read:

§ 3758. APPEALS

(a) Whenever the Director denies in whole or in part any application for classification as agricultural land or managed forestland or farm buildings, or grants a different classification than that applied for, or the Director or assessing officials fix a use value appraisal or determine that previously classified property is no longer eligible or that the property has undergone a change in use, the aggrieved owner may appeal the decision of the Director to the Commissioner within 30 days of the decision, and from there to Superior Court in the county in which the property is located.

* * *

(e) When the Director removes agricultural land or a farm building pursuant to notification from the Secretary of Agriculture, Food and Markets under section 3756 of this title, the exclusive right of appeal shall be as provided in 6 V.S.A. § 4996(a).

Sec. 25. 32 V.S.A. § 3752(5) is amended to read:

(5) “Development” means, for the purposes of determining whether a land use change tax is to be assessed under section 3757 of this chapter, the construction of any building, road, or other structure, or any mining, excavation, or landfill activity. “Development” also means the subdivision of

No. 64
2015

Page 51 of 135

a parcel of land into two or more parcels, regardless of whether a change in use actually occurs, where one or more of the resulting parcels contains less than 25 acres each; but if subdivision is solely the result of a transfer to one or more of a spouse, parent, grandparent, child, grandchild, niece, nephew, or sibling of the transferor, or to the surviving spouse of any of the foregoing, then “development” shall not apply to any portion of the newly created parcel or parcels which qualifies for enrollment and for which, within 30 days following the transfer, each transferee or transferor applies for reenrollment in the use value appraisal program. “Development” also means the cutting of timber on property appraised under this chapter at use value in a manner contrary to a forest or conservation management plan as provided for in subsection 3755(b) of this title during the remaining term of the plan, or contrary to the minimum acceptable standards for forest management if the plan has expired; or a change in the parcel or use of the parcel in violation of the conservation management standards established by the Commissioner of Forests, Parks and Recreation. “Development” also means notification of the Director by the Secretary of Agriculture, Food and Markets under section 3756 of this title that the owner or operator of agricultural land or a farm building is violating the water quality requirements of 6 V.S.A. chapter 215 or is failing to comply with the terms of an order issued under 6 V.S.A. chapter 215, subchapter 10. The term “development” shall not include the construction, reconstruction, structural alteration, relocation, or enlargement of any building, road, or other

No. 64
2015

Page 52 of 135

structure for farming, logging, forestry, or conservation purposes, but shall include the subsequent commencement of a use of that building, road, or structure for other than farming, logging, or forestry purposes.

* * * Agency of Natural Resources Basin Planning * * *

Sec. 26. 10 V.S.A. § 1253 is amended to read:

§ 1253. CLASSIFICATION OF WATERS DESIGNATED,
RECLASSIFICATION

* * *

(d)(1) ~~The~~ Through the process of basin planning, the Secretary shall determine what degree of water quality and classification should be obtained and maintained for those waters not classified by the Board before 1981 following the procedures in sections 1254 and 1258 of this title. Those waters shall be classified in the public interest. The Secretary shall prepare and maintain an overall surface water management plan to assure that the State water quality standards are met in all State waters. The surface water management plan shall include a schedule for updating the basin plans. The Secretary, in consultation with regional planning commissions and natural resource conservation districts, shall revise all ~~17~~ 15 basin plans ~~by January 1, 2006,~~ and update ~~them every five years thereafter~~ the basin plans on a five-year rotating basis. On or before January ~~1~~ 15 of each year, the Secretary shall report to the House Committees on Agriculture and Forest Products, on Natural Resources and Energy, and on Fish, Wildlife and Water Resources,

No. 64
2015

Page 53 of 135

and to the Senate Committees on Agriculture and on Natural Resources and Energy regarding the progress made and difficulties encountered in revising basin plans. ~~By January 1, 1993, the Secretary shall prepare an overall management plan to ensure that the water quality standards are met in all State waters. The report shall include a summary of basin planning activities in the previous calendar year, a schedule for the production of basin plans in the subsequent calendar year, and a summary of actions to be taken over the subsequent three years. The provisions of 2 V.S.A. § 20(d) (expiration of required reports) shall not apply to the report to be made under this subsection.~~

(2) In developing a basin plan under this subsection, the Secretary shall:

(A) identify waters that should be reclassified as Class A waters or outstanding resource waters;

(B) identify wetlands that should be reclassified as Class I wetlands;

(C) identify projects or activities within a basin that will result in the protection and enhancement of water quality;

(D) assure that municipal officials, citizens, watershed groups, and other interested groups and individuals are involved in the basin planning process;

(E) assure regional and local input in State water quality policy development and planning processes;

(F) provide education to municipal officials and citizens regarding the basin planning process;

(G) develop, in consultation with the applicable regional planning commission, an analysis and formal recommendation on conformance with the goals and objectives of applicable regional plans;

(H) provide for public notice of a draft basin plan; and

(I) provide for the opportunity of public comment on a draft basin plan.

(3) The Secretary shall, contingent upon the availability of funding, contract with a regional planning commission to assist in or to produce a basin plan under the schedule set forth in subdivision (1) of this subsection. When contracting with a regional planning commission to assist in or produce a basin plan, the Secretary may require the regional planning commission to:

(A) conduct any of the activities required under subdivision (2) of this subsection;

(B) provide technical assistance and data collection activities to inform municipal officials and the State in making water quality investment decisions;

(C) coordinate municipal planning and adoption or implementation of municipal development regulations to better meet State water quality policies and investment priorities; or

(D) assist the Secretary in implementing a project evaluation process to prioritize water quality improvement projects within the region to assure cost effective use of State and federal funds.

(e) In determining the question of public interest, the Secretary shall give due consideration to, and explain his or her decision with respect to, the following:

- (1) existing and obtainable water qualities;
- (2) existing and potential use of waters for public water supply, recreational, agricultural, industrial, and other legitimate purposes;
- (3) natural sources of pollution;
- (4) public and private pollution sources and the alternative means of abating the same;
- (5) consistency with the State water quality policy established in 10 V.S.A. § 1250;
- (6) suitability of waters as habitat for fish, aquatic life, and wildlife;
- (7) need for and use of minimum streamflow requirements;
- (8) federal requirements for classification and management of waters;
- (9) consistency with applicable municipal, regional, and State plans; and
- (10) any other factors relevant to determine the maximum beneficial use and enjoyment of waters.

(f) Notwithstanding the provisions of subsection (c) of this section, when reclassifying waters to Class A, the Secretary need find only that the reclassification is in the public interest.

No. 64
2015

Page 56 of 135

(g) The Secretary under the reclassification rule may grant permits for only a portion of the assimilative capacity of the receiving waters, or may permit only indirect discharges from on-site disposal systems, or both.

Sec. 27. 24 V.S.A. § 4302 is amended to read:

§ 4302. PURPOSE; GOALS

* * *

(b) It is also the intent of the Legislature that municipalities, regional planning commissions, and State agencies shall engage in a continuing planning process that will further the following goals:

* * *

(c) In addition, this chapter shall be used to further the following specific goals:

* * *

(6) To maintain and improve the quality of air, water, wildlife, and land resources.

(A) Vermont's air, water, wildlife, mineral and land resources should be planned for use and development according to the principles set forth in 10 V.S.A. § 6086(a).

(B) Vermont's water quality should be maintained and improved according to the policies and actions developed in the basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253.

* * *

No. 64
2015

Page 57 of 135

Sec. 28. 24 V.S.A. § 4348(c) is amended to read:

(c) At least 30 days prior to the first hearing, a copy of the proposed plan or amendment, with a request for general comments and for specific comments with respect to the extent to which the plan or amendment is consistent with the goals established in section 4302 of this title, shall be delivered with proof of receipt, or sent by certified mail, return receipt requested, to each of the following:

(1) the chair of the legislative body of each municipality within the region;

(2) the executive director of each abutting regional planning commission;

(3) the Department of Housing and Community Development within the Agency of Commerce and Community Development; ~~and~~

(4) business, conservation, ~~low-income~~ low-income advocacy, and other community or interest groups or organizations that have requested notice in writing prior to the date the hearing is warned; and

(5) the Agency of Natural Resources and the Agency of Agriculture, Food and Markets.

Sec. 29. 24 V.S.A. § 4348a(a) is amended to read:

(a) A regional plan shall be consistent with the goals established in section 4302 of this title and shall include the following:

* * *

No. 64
2015

Page 58 of 135

(6) A statement of policies on the:

(A) preservation of rare and irreplaceable natural areas, scenic and historic features and resources; and

(B) protection and improvement of the quality of waters of the State to be used in the development and furtherance of the applicable basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253;

* * *

* * * Antidegradation Policy Implementation Rule * * *

Sec. 30. 10 V.S.A. § 1251a(c) is amended to read:

(c) On or before ~~January 15, 2008~~ July 1, 2016, the Secretary of Natural Resources shall ~~propose draft rules for~~ adopt by rule an implementation process for the antidegradation policy in the water quality standards of the State. The implementation process for the antidegradation policy shall be consistent with the State water quality policy established in section 1250 of this title, the Vermont Water Quality Standards, and any applicable requirements of the federal Clean Water Act. ~~On or before July 1, 2008, a final proposal of the rules for an implementation process for the antidegradation policy shall be filed with the Secretary of State under 3 V.S.A. § 841~~ The Secretary of Natural Resources shall apply the antidegradation implementation policy to all new discharges that require a permit under this chapter.

* * * Stormwater Management * * *

Sec. 31. 10 V.S.A. § 1264 is amended to read:

§ 1264. STORMWATER MANAGEMENT

~~(a) The General Assembly finds that the management of stormwater runoff is necessary to reduce stream channel instability, pollution, siltation, sedimentation, and local flooding, all of which have adverse impacts on the water and land resources of the State. The General Assembly intends, by enactment of this section, to reduce the adverse effects of stormwater runoff. The General Assembly determines that this intent may best be attained by a process that: assures broad participation; focuses upon the prevention of pollution; relies on structural treatment only when necessary; establishes and maintains accountability; tailors strategies to the region and the locale; assures an adequate funding source; builds broadbased programs; provides for the evaluation and appropriate evolution of programs; is consistent with the federal Clean Water Act and the State water quality standards; and accords appropriate recognition to the importance of community benefits that accompany an effective stormwater runoff management program. In furtherance of these purposes, the Secretary shall implement two stormwater permitting programs. The first program is based on the requirements of the federal National Pollutant Discharge Elimination System (NPDES) permit program in accordance with section 1258 of this title. The second program is a State permit program based on the requirements of this section for the discharge of~~

~~“regulated stormwater runoff” as that term is defined in subdivision (11) of this subsection. As used in this section:~~

~~(1) “2002 Stormwater Management Manual” means the Agency of Natural Resources’ Stormwater Management Manual dated April 2002, as amended from time to time by rule.~~

~~(2) “Best management practice” (BMP) means a schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce water pollution.~~

~~(3) “Development” means the construction of impervious surface on a tract or tracts of land where no impervious surface previously existed.~~

~~(4) “Existing stormwater discharge” means a discharge of regulated stormwater runoff which first occurred prior to June 1, 2002 and that is subject to the permitting requirements of this chapter.~~

~~(5) “Expansion” and “the expanded portion of an existing discharge” mean an increase or addition of impervious surface, such that the total resulting impervious area is greater than the minimum regulatory threshold. Expansion does not mean an increase or addition of impervious surface of less than 5,000 square feet.~~

~~(6) “Impervious surface” means those manmade surfaces, including paved and unpaved roads, parking areas, roofs, driveways, and walkways, from which precipitation runs off rather than infiltrates.~~

~~(7) “New stormwater discharge” means a new or expanded discharge of regulated stormwater runoff, subject to the permitting requirements of this chapter, which first occurs after June 1, 2002 and has not been previously authorized pursuant to this chapter.~~

~~(8) “Offset” means a State permitted or approved action or project within a stormwater impaired water that a discharger or a third person may complete to mitigate the impacts that a discharge of regulated stormwater runoff has on the stormwater impaired water.~~

~~(9) “Offset charge” means the amount of sediment load or hydrologic impact that an offset must reduce or control in the stormwater impaired water in which the offset is located.~~

~~(10) “Redevelopment” means the construction or reconstruction of an impervious surface where an impervious surface already exists when such new construction involves substantial site grading, substantial subsurface excavation, or substantial modification of existing stormwater conveyance, such that the total of impervious surface to be constructed or reconstructed is greater than the minimum regulatory threshold. Redevelopment does not mean the construction or reconstruction of impervious surface where impervious surface already exists when the construction or reconstruction involves less than 5,000 square feet. Redevelopment does not mean public road management activities, including any crack sealing, patching, coldplaning,~~

No. 64
2015

Page 62 of 135

~~resurfacing, reclaiming, or grading treatments used to maintain pavement, bridges, and unpaved roads.~~

~~(11) “Regulated stormwater runoff” means precipitation, snowmelt, and the material dissolved or suspended in precipitation and snowmelt that runs off impervious surfaces and discharges into surface waters or into groundwater via infiltration.~~

~~(12) “Stormwater impact fee” means the monetary charge assessed to a permit applicant for the discharge of regulated stormwater runoff to a stormwater impaired water that mitigates a sediment load level or hydrologic impact that the discharger is unable to control through on-site treatment or completion of an offset on a site owned or controlled by the permit applicant.~~

~~(13) “Stormwater impaired water” means a State water that the Secretary determines is significantly impaired by discharges of regulated stormwater runoff.~~

~~(14) “Stormwater runoff” means precipitation and snowmelt that does not infiltrate into the soil, including material dissolved or suspended in it, but does not include discharges from undisturbed natural terrain or wastes from combined sewer overflows.~~

~~(15) “Total maximum daily load” (TMDL) means the calculations and plan for meeting water quality standards approved by the U.S. Environmental Protection Agency (EPA) and prepared pursuant to 33 U.S.C. § 1313(d) and federal regulations adopted under that law.~~

~~(16) “Water quality remediation plan” means a plan, other than a TMDL or sediment load allocation, designed to bring an impaired water body into compliance with applicable water quality standards in accordance with 40 C.F.R. § 130.7(b)(1)(ii) and (iii).~~

~~(17) “Watershed improvement permit” means a general permit specific to a stormwater impaired water that is designed to apply management strategies to existing and new discharges and that includes a schedule of compliance no longer than five years reasonably designed to assure attainment of the Vermont water quality standards in the receiving waters.~~

~~(18) “Stormwater system” means the storm sewers; outfall sewers; surface drains; manmade wetlands; channels; ditches; wet and dry bottom basins; rain gardens; and other control equipment necessary and appurtenant to the collection, transportation, conveyance, pumping, treatment, disposal, and discharge of regulated stormwater runoff.~~

~~(19) “Net zero standard” means:~~

~~(A) A new discharge or the expanded portion of an existing discharge meets the requirements of the 2002 Stormwater Management Manual and does not increase the sediment load in the receiving stormwater impaired water; or~~

~~(B) A discharge from redevelopment; from an existing discharge operating under an expired stormwater discharge permit where the property owner applies for a new permit; or from any combination of development, redevelopment, and expansion meets on site the water quality, recharge, and~~

No. 64
2015

Page 64 of 135

~~channel protection criteria set forth in Table 1.1 of the 2002 Stormwater Management Manual that are determined to be technically feasible by an engineering feasibility analysis conducted by the Agency and if the sediment load from the discharge approximates the natural runoff from an undeveloped field or open meadow that is not used for agricultural activity.~~

~~(b) The Secretary shall prepare a plan for the management of collected stormwater runoff found by the Secretary to be deleterious to receiving waters. The plan shall recognize that the runoff of stormwater is different from the discharge of sanitary and industrial wastes because of the influence of natural events of stormwater runoff, the variations in characteristics of those runoffs, and the increased stream flows and natural degradation of the receiving water quality at the time of discharge. The plan shall be cost effective and designed to minimize any adverse impact of stormwater runoff to waters of the State. By no later than February 1, 2001, the Secretary shall prepare an enhanced stormwater management program and report on the content of that program to the House Committees on Fish, Wildlife and Water Resources and on Natural Resources and Energy and to the Senate Committee on Natural Resources and Energy. In developing the program, the Secretary shall consult with the Board, affected municipalities, regional entities, other State and federal agencies, and members of the public. The Secretary shall be responsible for implementation of the program. The Secretary's stormwater management program shall include, at a minimum, provisions that:~~

- ~~(1) Indicate that the primary goals of the State program will be to assure compliance with the Vermont Water Quality Standards and to maintain after development, as nearly as possible, the predevelopment runoff characteristics.~~
- ~~(2) Allow for differences in hydrologic characteristics in different parts of the State.~~
- ~~(3) Incorporate stormwater management into the basin planning process conducted under section 1253 of this title.~~
- ~~(4) Assure consistency with applicable requirements of the federal Clean Water Act.~~
- ~~(5) Address stormwater management in new development and redevelopment.~~
- ~~(6) Control stormwater runoff from construction sites and other land disturbing activities.~~
- ~~(7) Indicate that water quality mitigation practices may be required for any redevelopment of previously developed sites, even when preredevlopment runoff characteristics are proposed to be maintained.~~
- ~~(8) Specify minimum requirements for inspection and maintenance of stormwater management practices.~~
- ~~(9) Promote detection and elimination of improper or illegal connections and discharges.~~
- ~~(10) Promote implementation of pollution prevention during the conduct of municipal operations.~~

~~(11) Provide for a design manual that includes technical guidance for the management of stormwater runoff.~~

~~(12) Encourage municipal governments to utilize existing regulatory and planning authority to implement improved stormwater management by providing technical assistance, training, research and coordination with respect to stormwater management technology, and by preparing and distributing a model local stormwater management ordinance.~~

~~(13) Promote public education and participation among citizens and municipalities about cost-effective and innovative measures to reduce stormwater discharges to the waters of the State.~~

~~(c) The Secretary shall submit the program report to the House Committees on Agriculture and Forest Products, on Transportation, and on Natural Resources and Energy and to the Senate Committees on Agriculture and on Natural Resources and Energy.~~

~~(d)(1) The Secretary shall initiate rulemaking by October 15, 2004, and shall adopt a rule for a stormwater management program by June 15, 2005. The rule shall be adopted in accordance with 3 V.S.A. chapter 25 and shall include:~~

~~(A) the regulatory elements of the program identified in subsection (b) of this section, including the development and use of offsets and the establishment and imposition of stormwater impact fees to apply when issuing permits that allow regulated stormwater runoff to stormwater impaired waters;~~

~~(B) requirements concerning the contents of permit applications that include, at a minimum, for regulated stormwater runoff, the permit application requirements contained in the Agency's 1997 stormwater management procedures;~~

~~(C) a system of notifying interested persons in a timely way of the Agency's receipt of stormwater discharge applications, provided any alleged failures with respect to such notice shall not be relevant in any Agency permit decision or any appeals brought pursuant to section 1269 of this chapter;~~

~~(D) requirements concerning a permit for discharges of regulated stormwater runoff from the development, redevelopment, or expansion of impervious surfaces equal to or greater than one acre or any combination of development, redevelopment, and expansion of impervious surfaces equal to or greater than one acre; and~~

~~(E) requirements concerning a permit for discharges of regulated stormwater runoff from an impervious surface of any size to stormwater impaired waters if the Secretary determines that treatment is necessary to reduce the adverse impact of such stormwater discharges due to the size of the impervious surface, drainage patterns, hydraulic connectivity, existing stormwater treatment, or other factors identified by the Secretary.~~

~~(2) Notwithstanding 3 V.S.A. § 840(a), the Secretary shall hold at least three public hearings in different areas of the State regarding the proposed rule.~~

No. 64
2015

Page 68 of 135

~~(e)(1) Except as otherwise may be provided in subsection (f) of this section, the Secretary shall, for new stormwater discharges, require a permit for discharge of, regulated stormwater runoff consistent with, at a minimum, the 2002 Stormwater Management Manual. The Secretary may issue, condition, modify, revoke, or deny discharge permits for regulated stormwater runoff, as necessary to assure achievement of the goals of the program and compliance with State law and the federal Clean Water Act. The permit shall specify the use of best management practices to control regulated stormwater runoff. The permit shall require as a condition of approval, proper operation, and maintenance of any stormwater management facility and submittal by the permittee of an annual inspection report on the operation, maintenance and condition of the stormwater management system. The permit shall contain additional conditions, requirements, and restrictions as the Secretary deems necessary to achieve and maintain compliance with the water quality standards, including requirements concerning recording, reporting, and monitoring the effects on receiving waters due to operation and maintenance of stormwater management facilities.~~

~~(2) As one of the principal means of administering an enhanced stormwater program, the Secretary may issue and enforce general permits. To the extent appropriate, such permits shall include the use of certifications of compliance by licensed professional engineers practicing within the scope of their engineering specialty. The Secretary may issue general permits for~~

No. 64
2015

Page 69 of 135

~~classes of regulated stormwater runoff permittees and may specify the period of time for which the permit is valid other than that specified in subdivision 1263(d)(4) of this title when such is consistent with the provisions of this section. General permits shall be adopted and administered in accordance with the provisions of subsection 1263(b) of this title. No permit is required under this section for:~~

~~(A) Stormwater runoff from farms subject to accepted agricultural practices adopted by the Secretary of Agriculture, Food and Markets;~~

~~(B) Stormwater runoff from concentrated animal feeding operations that require a permit under subsection 1263(g) of this chapter; or~~

~~(C) Stormwater runoff from silvicultural activities subject to accepted management practices adopted by the Commissioner of Forests, Parks and Recreation.~~

~~(3) Prior to issuing a permit under this subsection, the Secretary shall review the permit applicant's history of compliance with the requirements of this chapter. The Secretary may, at his or her discretion and as necessary to assure achievement of the goals of the program and compliance with State law and the federal Clean Water Act, deny an application for the discharge of regulated stormwater under this subsection if review of the applicant's compliance history indicates that the applicant is discharging regulated stormwater in violation of this chapter or is the holder of an expired permit for an existing discharge of regulated stormwater.~~

No. 64
2015

Page 70 of 135

~~(f)(1) In a stormwater impaired water, the Secretary may issue:~~

~~(A) An individual permit in a stormwater impaired water for which no TMDL, water quality remediation plan, or watershed improvement permit has been established or issued, provided that the permitted discharge meets the following discharge standard: prior to the issuance of a general permit to implement a TMDL or a water quality remediation plan, the discharge meets the net zero standard;~~

~~(B) An individual permit or a general permit to implement a TMDL or water quality remediation plan in a stormwater impaired water, provided that the permitted discharge meets the following discharge standard:~~

~~(i) a new stormwater discharge or the expansion of an existing discharge shall meet the treatment standards for new development and expansion in the 2002 Stormwater Management Manual and any additional requirements deemed necessary by the Secretary to implement the TMDL or water quality remediation plan;~~

~~(ii) for a discharge of regulated stormwater runoff from redeveloped impervious surfaces:~~

~~(I) the existing impervious surface shall be reduced by 20 percent, or a stormwater treatment practice shall be designed to capture and treat 20 percent of the water quality volume treatment standard of the 2002 Stormwater Management Manual from the existing impervious surface; and~~

No. 64
2015

Page 71 of 135

~~(ii) any additional requirements deemed necessary by the Secretary to implement the TMDL or the water quality remediation plan;~~

~~(iii) an existing stormwater discharge shall meet the treatment standards deemed necessary by the Secretary to implement a TMDL or a water quality remediation plan;~~

~~(iv) if a permit is required for an expansion of an existing impervious surface or for the redevelopment of an existing impervious surface, discharges from the expansion or from the redeveloped portion of the existing impervious surface shall meet the relevant treatment standard of the 2002 Stormwater Management Manual, and the existing impervious surface shall meet the treatment standards deemed necessary by the Secretary to implement a TMDL or the water quality remediation plan;~~

~~(C) A watershed improvement permit, provided that the watershed improvement permit provides reasonable assurance of compliance with the Vermont water quality standards in five years;~~

~~(D) A general or individual permit that is implementing a TMDL or water quality remediation plan; or~~

~~(E) A statewide general permit for new discharges that the Secretary deems necessary to assure attainment of the Vermont Water Quality Standards.~~

~~(2) An authorization to discharge regulated stormwater runoff pursuant to a permit issued under this subsection shall be valid for a time period not to exceed five years. A person seeking to discharge regulated stormwater runoff~~

No. 64
2015

Page 72 of 135

~~after the expiration of that period shall obtain an individual permit or coverage under a general permit, whichever is applicable, in accordance with subsection 1263(e) of this title.~~

~~(3) By January 15, 2010, the Secretary shall issue a watershed improvement permit, issue a general or individual permit implementing a TMDL approved by the EPA, or issue a general or individual permit implementing a water quality remediation plan for each of the stormwater impaired waters on the Vermont Year 2004 Section 303(d) List of Waters required by 33 U.S.C. 1313(d). In developing a TMDL or a water quality remediation plan for a stormwater impaired water, the Secretary shall consult “A Scientifically Based Assessment and Adaptive Management Approach to Stormwater Management” and “Areas of Agreement about the Scientific Underpinnings of the Water Resources Board’s Original Seven Questions” set out in appendices A and B, respectively, of the final report of the Water Resources Board’s “Investigation Into Developing Cleanup Plans For Stormwater Impaired Waters, Docket No. Inv 03-01,” issued March 9, 2004.~~

~~(4) Discharge permits issued under this subsection shall require BMP-based stormwater treatment practices. Permit compliance shall be judged on the basis of performance of the terms and conditions of the discharge permit, including construction and maintenance in accordance with BMP specifications. Any permit issued for a new stormwater discharge or for the~~

No. 64
2015

Page 73 of 135

~~expanded portion of an existing discharge pursuant to this subsection shall require compliance with BMPs for stormwater collection and treatment established by the 2002 Stormwater Management Manual, and any additional requirements for stormwater treatment and control systems as the Secretary determines to be necessary to ensure that the permitted discharge does not cause or contribute to a violation of the Vermont Water Quality Standards.~~

~~(5) In addition to any permit condition otherwise authorized under subsection (e) of this section, in any permit issued pursuant to this subsection, the Secretary may require an offset or stormwater impact fee as necessary to ensure the discharge does not cause or contribute to a violation of the Vermont Water Quality Standards. Offsets and stormwater impact fees, where utilized, shall incorporate an appropriate margin of safety to account for the variability in quantifying the load of pollutants of concern. To facilitate utilization of offsets and stormwater impact fees, the Secretary shall identify by January 1, 2005 a list of potential offsets in each of the waters listed as a stormwater impaired water under this subsection.~~

~~(g)(1) The Secretary may issue a permit consistent with the requirements of subsection (f) of this section, even where a TMDL or wasteload allocation has not been prepared for the receiving water. In any appeal under this chapter an individual permit meeting the requirements of subsection (f) of this section shall have a rebuttable presumption in favor of the permittee that the discharge does not cause or contribute to a violation of the Vermont Water Quality~~

No. 64
2015

Page 74 of 135

~~Standards for the receiving waters with respect to the discharge of regulated stormwater runoff. This rebuttable presumption shall only apply to permitted discharges into receiving waters that are principally impaired by sources other than regulated stormwater runoff.~~

~~(2) This subsection shall apply to stormwater permits issued under the federally delegated NPDES program only to the extent allowed under federal law.~~

~~(h) The rebuttable presumption specified in subdivision (g)(1) of this section shall also apply to permitted discharges into receiving waters that meet the water quality standards of the State, provided the discharge meets the requirements of subsection (e) of this section.~~

~~(i) A residential subdivision may transfer a pretransition stormwater discharge permit or a stormwater discharge permit implementing a total maximum daily load plan to a municipality, provided that the municipality assumes responsibility for the permitting of the stormwater system that serves the residential subdivision. As used in this section:~~

~~(1) "Pretransition stormwater discharge permit" means any permit issued by the Secretary of Natural Resources pursuant to this section on or before June 30, 2004 for a discharge of stormwater.~~

~~(2) "Residential subdivision" means land identified and demarcated by recorded plat or other device that a municipality has authorized to be used primarily for residential construction.~~

No. 64
2015

Page 75 of 135

~~(j) Notwithstanding any other provision of law, if an application to discharge stormwater runoff pertains to a telecommunications facility as defined in 30 V.S.A. § 248a and is filed before July 1, 2017 and the discharge will be to a water that is not principally impaired by stormwater runoff:~~

~~(1) The Secretary shall issue a decision on the application within 40 days of the date the Secretary determines the application to be complete, if the application seeks authorization under a general permit.~~

~~(2) The Secretary shall issue a decision on the application within 60 days of the date the Secretary determines the application to be complete, if the application seeks or requires authorization under an individual permit.~~

~~(k) The Secretary may adopt rules regulating stormwater discharges and stormwater infrastructure repair or maintenance during a state of emergency declared under 20 V.S.A. chapter 1 or during flooding or other emergency conditions that pose an imminent risk to life or a risk of damage to public or private property. Any rule adopted under this subsection shall comply with National Flood Insurance Program requirements. A rule adopted under this subsection shall include a requirement that an activity receive an individual stormwater discharge emergency permit or receive coverage under a general stormwater discharge emergency permit.~~

~~(1) A rule adopted under this subsection shall establish:~~

~~(A) criteria for coverage under an individual or general emergency permit;~~

~~(B) criteria for different categories of activities covered under a general emergency permit;~~

~~(C) requirements for public notification of permitted activities, including notification after initiation or completion of a permitted activity;~~

~~(D) requirements for coordination with State and municipal authorities;~~

~~(E) requirements that the Secretary document permitted activity, including, at a minimum, requirements for documenting permit terms, documenting permit duration, and documenting the nature of an activity when the rules authorize notification of the Secretary after initiation or completion of the activity.~~

~~(2) A rule adopted under this section may:~~

~~(A) establish reporting requirements for categories of activities;~~

~~(B) authorize an activity that does not require reporting to the Secretary; or~~

~~(C) authorize an activity that requires reporting to the Secretary after initiation or completion of an activity.~~

(a) Findings and intent.

(1) Findings. The General Assembly finds that the management of stormwater runoff is necessary to reduce stream channel instability, pollution, siltation, sedimentation, and flooding, all of which have adverse impacts on the water and land resources of the State.

(2) Intent. The General Assembly intends, by enactment of this section to:

(A) Reduce the adverse effects of stormwater runoff.

(B) Direct the Agency of Natural Resources to develop a process that assures broad participation; focuses upon the prevention of pollution; relies on structural treatment only when necessary; establishes and maintains accountability; tailors strategies to the region and the locale; builds broad-based programs; provides for the evaluation and appropriate evolution of programs; is consistent with the federal Clean Water Act and the State water quality standards; and accords appropriate recognition to the importance of community benefits that accompany an effective stormwater runoff management program. In furtherance of these purposes, the Secretary shall implement a stormwater permitting program. The stormwater permitting program developed by the Secretary shall recognize that stormwater runoff is different from the discharge of sanitary and industrial wastes because of the influence of natural events of stormwater runoff, the variations in characteristics of those runoffs, and the increased stream flows causing degradation of the quality of the receiving water at the time of discharge.

(b) Definitions. As used in this section:

(1) “Best management practice” (BMP) means a schedule of activities, prohibitions or practices, maintenance procedures, green infrastructure, and other management practices to prevent or reduce water pollution.

(2) “Development” means the construction of impervious surface on a tract or tracts of land where no impervious surface previously existed.

(3) “Expansion” and “the expanded portion of an existing discharge” mean an increase or addition of impervious surface, such that the total resulting impervious area is greater than the minimum regulatory threshold.

(4) “Green infrastructure” means a wide range of multi-functional, natural and semi-natural landscape elements that are located within, around, and between developed areas, that are applicable at all spatial scales, and that are designed to control or collect stormwater runoff.

(5) “Healthy soil” means soil that has a well-developed, porous structure, is chemically balanced, supports diverse microbial communities, and has abundant organic matter.

(6) “Impervious surface” means those manmade surfaces, including paved and unpaved roads, parking areas, roofs, driveways, and walkways, from which precipitation runs off rather than infiltrates.

(7) “New stormwater discharge” means a new or expanded discharge of regulated stormwater runoff, subject to the permitting requirements of this chapter that has not been previously authorized pursuant to this chapter.

(8) “Offset” means a State-permitted or -approved action or project within a stormwater-impaired water, Lake Champlain, or a water that contributes to the impairment of Lake Champlain that a discharger or a third person may complete to mitigate the impacts that a discharge of regulated

stormwater runoff has on the stormwater-impaired water, or the impacts of phosphorus on Lake Champlain, or a water that contributes to the impairment of Lake Champlain.

(9) “Redevelopment” or “redevelop” means the construction or reconstruction of an impervious surface where an impervious surface already exists when such new construction involves substantial site grading, substantial subsurface excavation, or substantial modification of an existing stormwater conveyance, such that the total of impervious surface to be constructed or reconstructed is greater than the minimum regulatory threshold.

Redevelopment does not mean public road management activities, including any crack sealing, patching, coldplaning, resurfacing, reclaiming, or grading treatments used to maintain pavement, bridges, and unpaved roads.

(10) “Regulated stormwater runoff” means precipitation, snowmelt, and the material dissolved or suspended in precipitation and snowmelt that runs off impervious surfaces and discharges into surface waters or into groundwater via infiltration.

(11) “Stormwater impact fee” means the monetary charge assessed to a permit applicant for the discharge of regulated stormwater runoff to a stormwater-impaired water or for the discharge of phosphorus to Lake Champlain or a water that contributes to the impairment of Lake Champlain in order to mitigate a sediment load level, hydrologic impact, or other impact that

the discharger is unable to control through on-site treatment or completion of an offset on a site owned or controlled by the permit applicant.

(12) “Stormwater-impaired water” means a State water that the Secretary determines is significantly impaired by discharges of regulated stormwater runoff.

(13) “Stormwater Management Manual” means the Agency of Natural Resources’ Stormwater Management Manual, as adopted and amended by rule.

(14) “Stormwater runoff” means precipitation and snowmelt that does not infiltrate into the soil, including material dissolved or suspended in it, but does not include discharges from undisturbed natural terrain or wastes from combined sewer overflows.

(15) “Stormwater system” includes the storm sewers; outfall sewers; surface drains; manmade wetlands; channels; ditches; wet and dry bottom basins; rain gardens; and other control equipment necessary and appurtenant to the collection, transportation, conveyance, pumping, treatment, disposal, and discharge of regulated stormwater runoff.

(16) “Total maximum daily load” (TMDL) means the calculations and plan for meeting water quality standards approved by the U.S. Environmental Protection Agency (EPA) and prepared pursuant to 33 U.S.C. § 1313(d) and federal regulations adopted under that law.

(17) “Water quality remediation plan” means a plan, other than a TMDL, designed to bring an impaired water body into compliance with

applicable water quality standards in accordance with 40 C.F.R.

§ 130.7(b)(1)(ii) and (iii).

(18) “Watershed improvement permit” means a general permit specific to a stormwater-impaired water that is designed to apply management strategies to existing and new discharges and that includes a schedule of compliance no longer than five years reasonably designed to assure attainment of the Vermont water quality standards in the receiving waters.

(c) Prohibitions.

(1) A person shall not commence the construction or redevelopment of one acre or more of impervious surface without first obtaining a permit from the Secretary.

(2) A person shall not discharge from a facility that has a standard industrial classification identified in 40 C.F.R. § 122.26 without first obtaining a permit from the Secretary.

(3) A person that has been designated by the Secretary as requiring coverage for its municipal separate storm sewer system may not discharge without first obtaining a permit from the Secretary.

(4) A person shall not commence a project that will result in an earth disturbance of one acre or greater, or less than one acre if part of a common plan of development, without first obtaining a permit from the Secretary.

(5) A person shall not expand existing impervious surface by more than 5,000 square feet, such that the total resulting impervious area is greater than one acre, without first obtaining a permit from the Secretary.

(6)(A) In accordance with the schedule established under subdivision (g)(2) of this section, a municipality shall not discharge stormwater from a municipal road without first obtaining:

(i) an individual permit;

(ii) coverage under a municipal road general permit; or

(iii) coverage under a municipal separate storm sewer system

permit that implements the technical standards and criteria established by the Secretary for stormwater improvements of municipal roads.

(B) As used in this subdivision (6), “municipality” means a city, town, or village.

(7) In accordance with the schedule established under subdivision (g)(3), a person shall not discharge stormwater from impervious surface of three or more acres in size without first obtaining an individual permit or coverage under a general permit issued under this section if the discharge was never previously permitted or was permitted under an individual permit or general permit that did not incorporate the requirements of the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual.

(d) Exemptions.

(1) No permit is required under this section for:

(A) Stormwater runoff from farms in compliance with agricultural practices adopted by the Secretary of Agriculture, Food and Markets, provided that this exemption shall not apply to construction stormwater permits required by subdivision (c)(4) of this section.

(B) Stormwater runoff from concentrated animal feeding operations permitted under subsection 1263(g) of this chapter.

(C) Stormwater runoff from accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation, including practices which are in compliance with the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation.

(D) Stormwater runoff permitted under section 1263 of this title.

(2) No permit is required under subdivision (c)(1), (5), or (7) of this section and for which a municipality has assumed full legal responsibility as part of a permit issued to the municipality by the Secretary. As used in this subdivision, “full legal responsibility” means legal control of the stormwater system, including a legal right to access the stormwater system, a legal duty to properly maintain the stormwater system, and a legal duty to repair and replace the stormwater system when it no longer adequately protects waters of the State.

No. 64
2015

Page 84 of 135

(e) State designation. The Secretary shall require a permit under this section for a discharge or stormwater runoff from any size of impervious surfaces upon a determination by the Secretary that the treatment of the discharge or stormwater runoff is necessary to reduce the adverse impacts to water quality of the discharge or stormwater runoff taking into consideration any of the following factors: the size of the impervious surface, drainage patterns, hydraulic connectivity, existing stormwater treatment, stormwater controls necessary to implement the wasteload allocation of a TMDL, or other factors. The Secretary may make this determination on a case-by-case basis or according to classes of activities, classes of runoff, or classes of discharge. The Secretary may make a determination under this subsection based on activities, runoff, discharges, or other information identified during the basin planning process.

(f) Rulemaking. On or before December 31, 2017, the Secretary shall adopt rules to manage stormwater runoff. At a minimum, the rules shall:

(1) Establish as the primary goals of the rules:

(A) assuring compliance with the Vermont Water Quality Standards; and

(B) maintenance after development, as nearly as possible, of the predevelopment runoff characteristics.

(2) Establish criteria for the use of the basin planning process to establish watershed-specific priorities for the management of stormwater runoff.

(3) Assure consistency with applicable requirements of the federal Clean Water Act.

(4) Include technical standards and best management practices that address stormwater discharges from existing development, new development, and redevelopment.

(5) Specify minimum requirements for inspection and maintenance of stormwater management practices.

(6) Include standards for the management of stormwater runoff from construction sites and other land disturbing activities.

(7) Allow municipal governments to assume the full legal responsibility for a stormwater system permitted under these rules as a part of a permit issued by the Secretary.

(8) Include standards with respect to the use of offsets and stormwater impact fees.

(9) Include minimum standards for the issuance of stormwater permits during emergencies for the repair or maintenance of stormwater infrastructure during a state of emergency declared under 20 V.S.A. chapter 1 or during flooding or other emergency conditions that pose an imminent risk to life or a risk of damage to public or private property. Minimum standards adopted

under this subdivision shall comply with National Flood Insurance Program requirements.

(10) To the extent appropriate, authorize in the permitting process use of certifications of compliance by licensed professional engineers practicing within the scope of their engineering specialty.

(11) Include standards for alternative best management practices for stormwater permitting of renewable energy projects and telecommunication facilities located in high-elevation settings, provided that the alternative best management practices shall be designed to:

(A) minimize the extent and footprint of stormwater-treatment practices in order to preserve vegetation and trees;

(B) adapt to and minimize impact to ecosystems, shallow soils, and sensitive streams found in high-elevation settings;

(C) account for the temporary nature and infrequent use of construction and access roads for high-elevation projects; and

(D) maintain the predevelopment runoff characteristics, as nearly as possible, after development.

(12) Establish best management practices for improving healthy soils in order to improve the capacity of soil to retain water, improve flood resiliency, reduce sedimentation, and prevent stormwater runoff.

No. 64
2015

Page 87 of 135

(g) General permits.

(1) The Secretary may issue general permits for classes of stormwater runoff that shall be adopted and administered in accordance with the provisions of subsection 1263(b) of this title.

(2)(A) The Secretary shall issue on or before December 31, 2017, a general permit for discharges of regulated stormwater from municipal roads. Under the municipal roads stormwater general permit, the Secretary shall:

(i) Establish a schedule for implementation of the general permit by each municipality in the State. Under the schedule, the Secretary shall establish:

(I) the date by which each municipality shall apply for coverage under the municipal roads general permit;

(II) the date by which each municipality shall inventory necessary stormwater management projects on municipal roads;

(III) the date by which each municipality shall establish a plan for implementation of stormwater improvements that prioritizes stormwater improvements according to criteria established by the Secretary under the general permit; and

(IV) the date by which each municipality shall implement stormwater improvements of municipal roads according to a municipal implementation plan.

(ii) Establish criteria and technical standards, such as best management practices, for implementation of stormwater improvements of municipal roads.

(iii) Establish criteria for municipal prioritization of stormwater improvements of municipal roads. The Secretary shall base the criteria on the water quality impacts of a stormwater discharge, the current state of a municipal road, the priority of a municipal road or stormwater project in any existing transportation capital plan developed by a municipality, and the benefits of the stormwater improvement to the life of the municipal road.

(iv) Require each municipality to submit to the Secretary and periodically update its implementation plan for stormwater improvements.

(B) The Secretary may require an individual permit for a stormwater improvement at any time under subsection (e) of this section. An individual permit shall include site-specific standards for the stormwater improvement.

(C) All municipalities shall apply for coverage under the municipal road general permit on or before July 1, 2021.

(D) As used in this subdivision (g)(2), “municipality” means a city, town, or village.

(3) On or before January 1, 2018, the Secretary shall issue a general permit under this section for discharges of stormwater from impervious surface of three or more acres in size, when the stormwater discharge previously was not permitted or was permitted under an individual permit or general permit

that did not incorporate the requirements of the 2002 Stormwater Management Manual or any subsequently adopted Stormwater Management Manual. Under the general permit, the Secretary shall:

(A) Establish a schedule for implementation of the general permit by geographic area of the State. The schedule shall establish the date by which an owner of impervious surface shall apply for coverage under subdivision (g)(3) of this section. The schedule established by the Secretary shall require an owner of impervious surface subject to permitting under this subdivision to obtain coverage by the following dates:

(i) for impervious surface located within the Lake Champlain watershed, no later than October 1, 2023; and

(ii) for impervious surface located within all other watersheds of the State, no later than October 1, 2028.

(B) Establish criteria and technical standards, such as best management practices, for implementation of stormwater improvements for the retrofitting of impervious surface subject to permitting under this subdivision.

(C) Require that a discharge of stormwater from impervious surface subject to the requirements of this section comply with the standards of subsection (h) of this section for redevelopment of or renewal of a permit for existing impervious surface.

(D) Allow the use of stormwater impact fees, offsets, and phosphorus credit trading within the watershed of the water to which the stormwater discharges or runs off.

(h) Permit requirements. An individual or general stormwater permit shall:

(1) Be valid for a period of time not to exceed five years.

(2) For discharges of regulated stormwater to a stormwater impaired water, for discharges of phosphorus to Lake Champlain, or for discharges of phosphorus to a water that contributes to the impairment of Lake Champlain:

(A) In which no TMDL, watershed improvement permit, or water quality remediation plan has been approved, require that the discharge shall comply with the following discharge standards:

(i) A new discharge or the expanded portion of an existing discharge shall satisfy the requirements of the Stormwater Management Manual and shall not increase the pollutant load in the receiving water for stormwater.

(ii) For redevelopment of or renewal of a permit for existing impervious surface, the discharge shall satisfy on-site the water quality, recharge, and channel protection criteria set forth in the Stormwater Management Manual that are determined to be technically feasible by an engineering feasibility analysis conducted by the Agency and the discharge shall not increase the pollutant load in the receiving water for stormwater.

(B) In which a TMDL or water quality remediation plan has been adopted, require that the discharge shall comply with the following discharge standards:

(i) For a new discharge or the expanded portion of an existing discharge, the discharge shall satisfy the requirements of the Stormwater Management Manual, and the Secretary shall determine that there is sufficient pollutant load allocations for the discharge.

(ii) For redevelopment of or renewal of a permit for existing impervious surface, the Secretary shall determine that there is sufficient pollutant load allocations for the discharge and the Secretary shall include any requirements that the Secretary deems necessary to implement the TMDL or water quality remediation plan.

(3) Contain requirements necessary to comply with the minimum requirements of the rules adopted under this section, the Vermont water quality standards, and any applicable provision of the Clean Water Act.

(i) Disclosure of violations. The Secretary may, at his or her discretion and as necessary to assure achievement of the goals of the program and compliance with State law and the federal Clean Water Act, deny an application for the discharge of regulated stormwater under this section if review of the applicant's compliance history indicates that the applicant is discharging regulated stormwater in violation of this chapter or is the holder of an expired permit for an existing discharge of regulated stormwater.

(j) Presumption. In any appeal under this chapter, an individual permit issued under subdivisions (c)(1) and (c)(5) of this section shall have a rebuttable presumption in favor of the permittee that the discharge does not cause or contribute to a violation of the Vermont Water Quality Standards for the receiving waters with respect to the discharge of regulated stormwater runoff, provided that the discharge is to a water that is not principally impaired due to stormwater.

Sec. 32. ANR REPORT ON REGULATORY THRESHOLD FOR
PERMITTING STORMWATER RUNOFF FROM IMPERVIOUS
SURFACES

(a) On or before January 15, 2016, the Secretary of Natural Resources shall submit to the House Committee on Fish, Wildlife and Water Resources and the Senate Committee on Natural Resources and Energy a report regarding whether and how the State should lower from one acre to one-half acre of impervious surface the regulatory permitting threshold for an operating permit for stormwater runoff from new development, redevelopment, or expansion.

The report shall include:

(1) a recommendation as to whether the State should lower the regulatory permitting threshold from one acre to one-half acre of impervious surface;

(2) an estimate of the number of additional development projects that would require an operating permit for stormwater runoff if the regulatory

No. 64
2015

Page 93 of 135

permitting threshold were lowered from one acre to one-half acre of impervious surface;

(3) an estimate of the environmental benefit of reducing the regulatory permitting threshold from one acre to one-half acre of impervious surface;

(4) an estimate of the number of staff that would be needed by the Agency of Natural Resources to effectively implement a stormwater operating permit program with a regulatory permitting threshold of one-half acre of impervious surface; and

(5) a recommendation for regulating construction, redevelopment, or expansion of impervious surface based on a tiered system of acreage, square footage, or other measure.

(b) The definitions provided in 10 V.S.A. § 1264 shall apply to this section.

Sec. 33. STORMWATER MANAGEMENT PRACTICES HANDBOOK

On or before January 1, 2016, the Secretary of Natural Resources shall publish as a handbook a suite of practical and cost-effective best management practices for the control of stormwater runoff and reduction of adverse water quality effects from the construction, redevelopment, or expansion of impervious surface that does not require a permit under 10 V.S.A. § 1264. The best management practices shall address activities that control, mitigate, or eliminate stormwater runoff to waters of the State. The stormwater management practices handbook shall be advisory and shall not be mandatory.

No. 64
2015

Page 94 of 135

Sec. 34. AGENCY OF NATURAL RESOURCES REPORT ON THE LAND
APPLICATION OF SEPTAGE AND SLUDGE

(a) As used in this section:

(1) “Septage” means the liquid and solid materials pumped from a septic tank or cesspool during cleaning.

(2) “Sludge” means any solid, semisolid, or liquid generated from a municipal, commercial, or industrial wastewater treatment plant or process, water supply treatment plant, air pollution control facility, or any other such waste having similar characteristics and effects.

(b) On or before January 15, 2016, the Secretary of Natural Resources shall submit to the Senate Committee on Natural Resources and Energy and the House Committee on Fish, Wildlife and Water Resources a report regarding the land application of septage and sludge in the State. The report shall include:

(1) a summary of the current law regarding the land application of septage or sludge, including any permit requirements;

(2) a summary of how current law for the land application of septage and sludge is designed to protect groundwater or water quality;

(3) an analysis of the feasibility of treating or disposing of septage or sludge in a manner other than land application that is at least as protective of groundwater or water quality as land application; and

(4) an estimate of the cost of treating or disposing of septage or sludge in a manner other than land application.

* * * Water Quality Data Coordination * * *

Sec. 35. 10 V.S.A. § 1284 is added to read:

§ 1284. WATER QUALITY DATA COORDINATION

(a) To facilitate attainment or accomplishment of the purposes of this chapter, the Secretary shall coordinate and assess all available data and science regarding the quality of the waters of the State, including:

(1) light detection and ranging information data (LIDAR);

(2) stream gauge data;

(3) stream mapping, including fluvial erosion hazard maps;

(4) water quality monitoring or sampling data;

(5) cumulative stressors on a watershed, such as the frequency an activity is conducted within a watershed or the number of stormwater or other permits issued in a watershed; and

(6) any other data available to the Secretary.

(b) After coordination of the data required under subsection (a) of this section, the Secretary shall:

(1) assess where additional data are needed and the best methods for collection of such data;

No. 64
2015

Page 96 of 135

(2) identify and map on a watershed basis areas of the State that are significant contributors to water quality problems or are in critical need of water quality remediation or response.

(c) The Secretary shall post all data compiled under this section on the website of the Agency of Natural Resources.

* * * Lake Champlain TMDL Implementation Plan* * *

Sec. 36. 10 V.S.A. § 1386 is amended to read:

§ 1386. IMPLEMENTATION PLAN FOR THE LAKE CHAMPLAIN
TOTAL MAXIMUM DAILY LOAD PLAN

(a) Within ~~12~~ three months after the issuance of a phosphorus total maximum daily load plan (TMDL) for Lake Champlain by the U.S. Environmental Protection Agency, the Secretary of Natural Resources shall ~~issue a Vermont-specific implementation plan for the Lake Champlain TMDL. Every four years after issuance of the Lake Champlain TMDL by the U.S. Environmental Protection Agency, the Secretary of Natural Resources shall amend and update the Vermont-specific implementation plan for the Lake Champlain TMDL. Prior to issuing, amending, or updating the implementation plan, the Secretary shall consult with the Agency of Agriculture, Food and Markets, all statewide environmental organizations that express an interest in the plan, the Vermont League of Cities and Towns, all business organizations that express an interest in the plan, the University of Vermont Rubenstein Ecosystem Science Laboratory, and other interested parties. The~~

No. 64
2015

Page 97 of 135

~~implementation plan shall include a comprehensive strategy for implementing the Lake Champlain TMDL plan and for the remediation of Lake Champlain.~~

~~The implementation plan shall be issued as a document separate from the Lake Champlain TMDL. The implementation plan shall:~~

~~(1) Include or reference the elements set forth in 40 C.F.R. § 130.6(e) for water quality management plans;~~

~~(2) Comply with the requirements of section 1258 of this title and administer a permit program to manage discharges to Lake Champlain consistent with the federal Clean Water Act;~~

~~(3) Develop a process for identifying critical source areas for non-point source pollution in each subwatershed. As used in this subdivision, “critical source area” means an area in a watershed with high potential for the release, discharge, or runoff of phosphorus to the waters of the State;~~

~~(4) Develop site-specific plans to reduce point source and non-point source load discharges in critical source areas identified under subdivision (3) of this subsection;~~

~~(5) Develop a method for identifying and prioritizing on public and private land pollution control projects with the potential to provide the greatest water quality benefits to Lake Champlain;~~

~~(6) Develop a method of accounting for changes in phosphorus loading to Lake Champlain due to implementation of the TMDL and other factors;~~

~~(7) Develop phosphorus reduction targets related to phosphorus reduction for each water quality program and for each segment of Lake Champlain, including benchmarks for phosphorus reduction that shall be achieved. The implementation plan shall explain the methodology used to develop phosphorus reduction targets under this subdivision;~~

~~(8) Establish a method for the coordination and collaboration of water quality programs within the State;~~

~~(9) Develop a method for offering incentives or disincentives to wastewater treatment plants for maintaining the 2006 levels of phosphorus discharge to Lake Champlain;~~

~~(10) Develop a method of offering incentives or disincentives for reducing the phosphorus contribution of stormwater discharges within the Lake Champlain basin~~ update the State of Vermont's phase I TMDL implementation plan to reflect the elements that the State determines are necessary to meet the allocations established in the final TMDL for Lake Champlain. The update of the phase I TMDL implementation plan for Lake Champlain shall explain how basin plans will be used to implement the updated phase I TMDL implementation plan, and shall include a schedule for the adoption of basin plans within the Lake Champlain basin. In addition to the requirements of subsection 1253(d) of this title, a basin plan for a basin within the Lake Champlain basin shall include the following:

No. 64
2015

Page 99 of 135

(1) phosphorus reduction strategies within the basin that will achieve the State's obligations under the phase I TMDL implementation plan for Lake Champlain;

(2) a schedule for the issuance of permits to control phosphorus discharges from wastewater treatment facilities as necessary to implement the State's obligations under the phase I TMDL implementation plan for Lake Champlain;

(3) a schedule for the issuance of permits to control stormwater discharges as necessary to implement the State's obligations under the phase I TMDL implementation plan for Lake Champlain;

(4) wetland and river corridor restoration and protection projects that will achieve the State's obligations under the phase I TMDL implementation plan for Lake Champlain;

(5) a table of non-point source activities that will achieve the State's obligations under the phase I TMDL implementation plan for Lake Champlain; and

(6) other strategies and activities that the Secretary determines to be necessary to achieve the State's obligations under the phase I TMDL implementation plan for Lake Champlain.

~~(b) In amending the Vermont-specific implementation plan of the Lake Champlain TMDL under this section, the Secretary of Natural Resources shall comply with the public participation requirements of 40 C.F.R.~~

No. 64
2015

Page 100 of 135

~~§ 130.7(e)(1)(ii)~~ The Secretary shall develop and implement a method of tracking and accounting for actions implemented to achieve the Lake Champlain TMDL.

(c) Prior to finalizing the update to the phase I TMDL implementation plan for Lake Champlain, the Secretary shall provide notice to the public of the proposed revisions and a comment period of no less than 30 days.

(d) On or before January 15 in the year following issuance of the updated phase I TMDL implementation plan for Lake Champlain under subsection (a) of this section and every four years thereafter, the Secretary shall report to the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, the House Committee on Agriculture and Forest Products, and the Senate Committee on Agriculture regarding the execution of the updated phase I TMDL implementation plan for Lake Champlain. The report shall include:

(1) ~~The amendments or revisions to the implementation plan for the Lake Champlain TMDL required by subsection (a) of this section. Prior to submitting a report required by this subsection that includes amendments to revisions to the implementation plan, the Secretary shall hold at least three public hearings in the Lake Champlain watershed to describe the amendments and revisions to the implementation plan for the Lake Champlain TMDL. The Secretary shall prepare a responsiveness summary for each public hearing~~ A

No. 64
2015

Page 101 of 135

summary of the efforts undertaken to implement the phase I TMDL implementation plan for Lake Champlain.

(2) An assessment of the implementation plan for the Lake Champlain TMDL based on available data, including an evaluation of the efficacy of the phase I TMDL implementation plan for Lake Champlain.

~~(3) Recommendations, if any, for amending the implementation plan or for reopening the Lake Champlain TMDL.~~

~~(d)~~(e) Beginning on February 1, 2014 2016, and annually thereafter, the Secretary, after consultation with the Secretary of Agriculture, Food and Markets and the Secretary of Transportation, shall submit to the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, the House Committee on Agriculture and Forest Products, and the Senate Committee on Agriculture a summary of activities and measures of progress of water quality ecosystem restoration programs.

* * * Water Quality Funding; Clean Water Fund; Clean Water Board * * *

Sec. 37. 10 V.S.A. chapter 47, subchapter 7 is added to read:

Subchapter 7. Vermont Clean Water Fund

§ 1387. PURPOSE

The General Assembly establishes in this subchapter a Vermont Clean Water Fund as a mechanism for financing the improvement of water quality in the State. The Clean Water Fund shall be used to:

No. 64
2015

Page 102 of 135

(1) assist the State in complying with water quality requirements and construction or implementation of water quality projects or programs;

(2) fund staff positions at the Agency of Natural Resources, Agency of Agriculture, Food and Markets, or Agency of Transportation when the positions are necessary to achieve or maintain compliance with water quality requirements and existing revenue sources are inadequate to fund the necessary positions; and

(3) provide funding to nonprofit organizations, regional associations, and other entities for implementation and administration of community-based water quality programs or projects.

§ 1388. CLEAN WATER FUND

(a) There is created a special fund to be known as the “Clean Water Fund” to be administered by the Secretary of Administration. The Fund shall consist of:

(1) revenues dedicated for deposit into the Fund by the General Assembly, including the Property Transfer Tax surcharge established under 32 V.S.A. § 9602a; and

(2) other gifts, donations, and impact fees received from any source, public or private, dedicated for deposit into the Fund and approved by the Secretary of Administration.

(b) Notwithstanding any contrary provisions of 32 V.S.A. chapter 7, subchapter 5, unexpended balances and any earnings shall remain in the Fund from year to year.

§ 1389. CLEAN WATER FUND BOARD

(a) Creation. There is created a Clean Water Fund Board which shall recommend to the Secretary of Administration expenditures from the Clean Water Fund. The Clean Water Fund Board shall be attached to the Agency of Administration for administrative purposes.

(b) Organization of the Board. The Clean Water Fund Board shall be composed of:

(1) the Secretary of Administration or designee;

(2) the Secretary of Natural Resources or designee;

(3) the Secretary of Agriculture, Food and Markets or designee;

(4) the Secretary of Commerce and Community Development or designee; and

(5) the Secretary of Transportation or designee.

(c) Officers; committees; rules. The Clean Water Fund Board shall annually elect a chair from its members. The Clean Water Fund Board may elect additional officers from its members, establish committees or subcommittees, and adopt procedural rules as necessary and appropriate to perform its work.

(d) Powers and duties of the Clean Water Fund Board. The Clean Water Fund Board shall have the following powers and authority:

(1) The Clean Water Fund Board shall recommend to the Secretary of Administration the appropriate allocation of funds from the Clean Water Fund for the purposes of developing the State budget required to be submitted to the General Assembly under 32 V.S.A. § 306. All recommendations from the Board should be intended to achieve the greatest water quality gain for the investment.

(2) The Clean Water Fund Board may pursue and accept grants, gifts, donations, or other funding from any public or private source and may administer such grants, gifts, donations, or funding consistent with the terms of the grant, gift, or donation.

(3) The Clean Water Fund Board shall:

(A) establish a process by which watershed organizations, State agencies, and other interested parties may propose water quality projects or programs for financing from the Clean Water Fund;

(B) develop an annual revenue estimate and proposed budget for the Clean Water Fund;

(C) establish measures for determining progress and effectiveness of expenditures for clean water restoration efforts;

(D) issue the annual clean water investment report required under section 1389a of this title; and

No. 64
2015

Page 105 of 135

(E) solicit, consult with, and accept public comment from organizations interested in improving water quality in Vermont regarding recommendations under this subsection for the allocation of funds from the Clean Water Fund.

(e) Priorities.

(1) In making recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Board shall prioritize:

(A) funding to programs and projects that address sources of water pollution in waters listed as impaired on the list of waters established by 33 U.S.C. § 1313(d);

(B) funding to projects that address sources of water pollution identified as a significant contributor of water quality pollution, including financial assistance to grant recipients at the initiation of a funded project;

(C) funding to programs or projects that address or repair riparian conditions that increase the risk of flooding or pose a threat to life or property;

(D) assistance required for State and municipal compliance with stormwater requirements for highways and roads;

(E) funding for education and outreach regarding the implementation of water quality requirements, including funding for education, outreach, demonstration, and access to tools for the implementation of the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in

No. 64
2015

Page 106 of 135

Vermont, as adopted by the Commissioner of Forests, Parks and Recreation; and

(F) funding for innovative or alternative technologies or practices designed to improve water quality or reduce sources of pollution to surface waters, including funding for innovative nutrient removal technologies and community-based methane digesters that utilize manure, wastewater, and food residuals to produce energy; and

(G) funding to purchase agricultural land in order to take that land out of practice when the State water quality requirements cannot be remediated through agricultural Best Management Practices.

(2) In developing its recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Clean Water Fund Board shall, during the first three years of its existence and within the priorities established under subdivision (1) of this subsection (e), prioritize awards or assistance to municipalities for municipal compliance with water quality requirements.

(3) In developing its recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Board shall, after satisfaction of the priorities established under subdivision (1) of this subsection (e), attempt to provide for equitable apportionment of awards from the Fund to all regions of the State and for control of all sources of point and non-point sources of pollution in the State.

No. 64
2015

Page 107 of 135

(f) The Clean Water Fund Board shall have the administrative, technical, and legal assistance of the Agency of Administration, the Agency of Natural Resources, the Agency of Agriculture, Food and Markets, the Agency of Transportation, and the Agency of Commerce and Community Development for those issues or services within the jurisdiction of the respective agency. The cost of the services provided by agency staff shall be paid from the budget of the agency providing the staff services.

§ 1389a. CLEAN WATER INVESTMENT REPORT

(a) Beginning on January 15, 2017, and annually thereafter, the Clean Water Fund Board shall publish a clean water investment report. The report shall summarize all investments, including their cost-effectiveness, made by the Clean Water Fund Board and other State agencies for clean water restoration over the past calendar year. The report shall include expenditures from the Clean Water Fund, the General Fund, the Transportation Fund, and any other State expenditures for clean water restoration, regardless of funding source. The report shall document progress or shortcomings in meeting established indicators for clean water restoration. The report shall include a summary of additional funding sources pursued by the Board, including whether those funding sources were attained; if it was not attained, why it was not attained; and where the money was allocated from the Fund. The report may also provide an overview of additional funding necessary to meet objectives established for clean water restoration and recommendations for

No. 64
2015

Page 108 of 135

additional revenue to meet those restoration objectives. The provisions of 2 V.S.A. § 20(d) (expiration of required reports) shall not apply to the report required by this section.

(b) The Board shall develop and use a results-based accountability process in publishing the annual report required by subsection (a) of this section.

§ 1389b. CLEAN WATER FUND AUDIT

(a) On or before January 15, 2021, the Secretary of Administration shall submit to the House and Senate Committees on Appropriations, the Senate Committee on Finance, the House Committee on Ways and Means, the Senate Committee on Agriculture, the House Committee on Agriculture and Forest Products, the Senate Committee on Natural Resources and Energy, and the House Committee on Fish, Wildlife and Water Resources a program audit of the Clean Water Fund. The report shall include:

(1) a summary of the expenditures from the Clean Water Fund, including the water quality projects and programs that received funding;

(2) an analysis and summary of the efficacy of the water quality projects and programs funded from the Clean Water Fund or implemented by the State;

(3) an evaluation of whether water quality projects and programs funded or implemented by the State are achieving the intended water quality benefits;

(4) an assessment of the capacity of the Agency of Agriculture, Food and Markets to effectively administer and enforce agricultural water quality requirements on farms in the State; and

(5) a recommendation of whether the General Assembly should authorize the continuation of the Clean Water Fund and, if so, at what funding level.

(b) The audit required by this section shall be conducted by a qualified, independent environmental consultant or organization with knowledge of the federal Clean Water Act, State water quality requirements and programs, the Lake Champlain Total Maximum Daily Load plan, and the program elements of the State clean water initiative.

(c) Notwithstanding provisions of section 1389 of this title to the contrary, the Secretary of Administration shall pay for the costs of the audit required under this section from the Clean Water Fund, established under section 1388 of this title.

* * * Property Transfer Tax Surcharge; Water Quality Long-Term

Financing Report * * *

Sec. 38. 32 V.S.A. § 9602a is added to read:

§ 9602a. CLEAN WATER SURCHARGE

There shall be a surcharge of 0.2 percent on the value of property subject to the property transfer tax under section 9602 of this title, except that there shall be no surcharge on the first \$100,000.00 in value of property to be used for the principal residence of the transferee or the first \$200,000.00 in value of property transferred if the purchaser obtains a purchase money mortgage funded in part with a homeland grant through the Vermont Housing and

No. 64
2015

Page 110 of 135

Conservation Trust Fund or which the Vermont Housing and Finance Agency or U.S. Department of Agriculture and Rural Development has committed to make or purchase. The surcharge shall be in addition to any tax assessed under section 9602 of this title. The surcharge assessed under this section shall be paid, collected, and enforced under this chapter in the same manner as the tax assessed under section 9602 of this title. The Commissioner shall deposit the surcharge collected under this section in the Clean Water Fund under 10 V.S.A. § 1388.

Sec. 39. REPEAL OF CLEAN WATER SURCHARGE

32 V.S.A. § 9602a (Clean Water Surcharge) shall be repealed on July 1, 2018.

Sec. 40. STATE TREASURER REPORT ON LONG-TERM FINANCING
OF STATEWIDE WATER QUALITY IMPROVEMENT

On or before January 15, 2017, the State Treasurer, after consultation with the Secretary of Administration, the Commissioner of Environmental Conservation, and the Commissioner of Taxes, shall submit to the Senate and House Committees on Appropriations, the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, the House Committee on Agriculture and Forest Products, the Senate Committee on Agriculture, the House Committee on Ways and Means, and the Senate Committee on Finance a recommendation for financing water quality improvement programs in the State. The recommendation shall include:

(1) Proposed revenue sources for water quality improvement programs that will replace the Property Transfer Tax surcharge established under 32 V.S.A. § 9602a. The proposed revenue sources shall be designed to assess fees, taxes, or other revenue sources from a property, parcel use, parcel, type, or an activity in proportion to the negative impacts of property, parcel use, parcel type, or activity on the water quality in the State.

(2) A recommendation for rewarding or incentivizing best management practices for a property or activity that is subject to the proposed fee, tax, or revenue source.

(3) An estimate of the amount of revenue to be generated from each proposed revenue source.

(4) A summary of how assessment of the proposed revenue source will be administered, collected, and enforced.

(5) A recommendation of whether the State should bond for the purposes of financing water quality improvement programs, including whether a proposed revenue source would be sufficient for issuance of water quality revenue bonds.

(6) A legislative proposal to implement each of the revenue sources proposed under this section.

* * * Agency Staff; Establishment; Appropriation * * *

Sec. 41. WATER QUALITY STAFF POSITIONS

(a) The establishment of the following new permanent classified positions is authorized in fiscal year 2016 as follows:

(1) In the Agency of Agriculture, Food and Markets—three (3) Water Quality Specialists, one (1) Chief Policy Enforcement Officer, one (1) Agriculture Systems Specialist, one (1) Financial Administrator II, one (1) GIS Project Supervisor, and one (1) Senior Agricultural Development Coordinator;

(2) In the Department of Environmental Conservation – thirteen (13) water quality and TMDL (water quality/Total Maximum Daily Load) positions.

(b) The positions established in this section shall be transferred and converted from existing vacant positions in the Executive Branch, and shall not increase the total number of authorized State positions.

Sec. 42. APPROPRIATIONS FOR AGENCY OF AGRICULTURE, FOOD
AND MARKETS STAFF

In addition to any other funds appropriated to the Agency of Agriculture, Food and Markets in fiscal year 2016, there is appropriated from the Agricultural Water Quality Special Fund created under 6 V.S.A. § 4803 to the Agency of Agriculture, Food and Markets \$2,114,000.00 in fiscal year 2016 for the purpose of hiring eight employees for implementation and administration of agricultural water quality programs in the State.

No. 64
2015

Page 113 of 135

Sec. 43. APPROPRIATIONS FOR DEPARTMENT OF ENVIRONMENTAL
CONSERVATION STAFF

In addition to any other funds appropriated to the Department of Environmental Conservation in fiscal year 2016, there is appropriated from the Environmental Permit Fund created under 3 V.S.A § 2805 to the Department of Environmental Conservation \$1,545,116.00 in fiscal year 2016 for the purpose of hiring 13 employees for implementation and administration of water quality programs in the State and for contracting with regional planning commissions as authorized by 10 V.S.A. § 1253.

Sec. 43a. FUND TO FUND TRANSFER

In Fiscal Year 2016, \$450,000.00 is transferred from the Clean Water Fund established by 10 V.S.A. § 1388 to the Agricultural Water Quality Special Fund created under 6 V.S.A. § 4803.

* * * Department of Environmental Conservation Water
Quality Fees * * *

Sec. 44. 3 V.S.A. § 2822 is amended to read:

§ 2822. BUDGET AND REPORT; POWERS

* * *

(i) The Secretary shall not process an application for which the applicable fee has not been paid unless the Secretary specifies that the fee may be paid at a different time or unless the person applying for the permit is exempt from the permit fee requirements pursuant to 32 V.S.A. § 710. ~~In addition, the persons~~

No. 64
2015

Page 114 of 135

~~who are exempt under 32 V.S.A. § 710 are also exempt from the application fees for stormwater operating permits specified in subdivisions (j)(2)(A)(iii)(I) and (II) of this section if they otherwise meet the requirements of 32 V.S.A. § 710.~~ Municipalities shall be exempt from the payment of fees under this section except for those fees prescribed in subdivisions (j)(1), ~~(2)~~, (7), (8), (14), and (15) of this section for which a municipality may recover its costs by charging a user fee to those who use the permitted services. Municipalities shall pay fees prescribed in subdivisions (j)(2), (10), (11), (12), and (26), except that a municipality shall also be exempt from those fees for orphan stormwater systems prescribed in subdivision (j)(2)(A)(iii)(I), (II), or (IV) and (j)(2)(B)(iv)(I), (II), or (V) of this section when the municipality agrees to become an applicant or co-applicant for an orphan stormwater system under 10 V.S.A. § 1264e for which a municipality has assumed full legal responsibility under 10 V.S.A. § 1264.

(j) In accordance with subsection (i) of this section, the following fees are established for permits, licenses, certifications, approvals, registrations, orders, and other actions taken by the Agency of Natural Resources.

* * *

(2) For discharge permits issued under 10 V.S.A. chapter 47 and orders issued under 10 V.S.A. § 1272, an administrative processing fee of ~~\$120.00~~ \$240.00 shall be paid at the time of application for a discharge permit in addition to any application review fee and any annual operating fee, except for

permit applications under subdivisions (2)(A)(iii)(III) and (V) of this subsection:

(A) Application review fee.

(i) Municipal, industrial, noncontact cooling water, and thermal discharges.

(I) Individual permit: original application; amendment for increased flows; amendment for change in treatment process;	\$0.0023 <u>\$0.003</u> per gallon design <u>permitted</u> flow; minimum \$50.00 <u>\$100.00</u> per outfall; maximum <u>\$30,000.00</u> per application.
--	--

(II) Renewal, transfer, or minor amendment of individual permit;	\$0.00 <u>\$0.002</u> per gallon <u>permitted flow; minimum \$50.00</u> per outfall; <u>maximum \$5,000.00</u> per application.
--	--

(III) General permit;	\$0.00
-----------------------	-------------------

(ii) Pretreatment discharges.

(I) Individual permit: original application; amendment for increased flows; amendment for	\$0.12 <u>\$0.20</u> per gallon design flow; minimum \$50.00 <u>\$100.00</u> per
---	--

change in treatment process;	outfall.
(II) Renewal, transfer, or minor amendment of individual permit;	\$0.00 <u>\$0.002 per gallon design flow; minimum \$50.00 per outfall.</u>
(iii) Stormwater discharges.	
(I) Individual operating permit or application to operate under general operating permit for collected stormwater runoff which is discharged to Class B waters: original application; amendment for increased flows; amendment for change in treatment process;	\$430.00 <u>\$860.00 per acre impervious area; minimum \$220.00 \$440.00 per application.</u>
(II) Individual operating permit or application to operate under general operating permit for collected stormwater runoff which is discharged to Class A waters; original application; amendment for increased flows; amendment for change in treatment process.	\$1,400.00 per acre impervious area; minimum \$1,400.00 per application.

(III) Individual permit or application to operate under general permit for construction activities; original application; amendment for increased acreage.

(aa) ~~Projects with low risk to waters of the State;~~ ~~\$50.00~~ five acres or less: \$100.00 per project; original application.

(bb) Projects with low risk to waters of the State; greater than five acres: \$220.00 per project.

(cc) ~~Projects with moderate risk to waters of the State;~~ ~~\$360.00;~~ five acres or less: \$480.00 per project original application.

~~(cc) Projects that require an individual permit.~~ ~~\$720.00 per project original application.~~

(dd) Projects with moderate risk to waters of the State; greater than five acres: \$640.00.

(ee) Projects that require an individual permit; ten acres \$1,200.00.

or less:

(ff) Projects that require an \$1,800.00.

individual permit; greater than

10 acres:

(IV) Individual permit or ~~\$220.00~~ \$440.00 per
application to operate under facility.

general permit for stormwater
runoff associated with industrial

activities with specified SIC

codes; original application;

amendment for change in activities;

(V) Individual permit or ~~\$1,200.00~~ \$2,400.00
application to operate under per system.

general permit for stormwater

runoff associated with

municipal separate storm sewer

systems; original application; amendment

for change in activities;

No. 64
2015

Page 119 of 135

(VI) Individual operating permit or application to operate under a general permit for a residually designated stormwater discharge original application; amendment; for increased flows amendment; for change in treatment process.

(aa) For discharges to Class B water; ~~\$430.00~~ \$860.00 per acre of impervious area, minimum ~~\$220.00~~ \$280.00.

(bb) For discharges to Class A water; ~~\$1,400.00~~ \$1,700.00 per acre of impervious area, minimum ~~\$1,400.00~~ \$1,700.00.

(VII) Renewal, transfer, or \$0.00₂

minor amendment of individual permit or approval under general permit;

(VIII) Application for coverage \$400.00 per application.

under the municipal roads

stormwater general permit:

(IX) Application for coverage \$1,200.00.

under the State roads stormwater

general permit:

* * *

(B) Annual operating fee.

(i) Industrial, noncontact cooling ~~\$0.004~~ \$0.0015 per gallon

water and thermal discharges; design capacity. ~~\$150.00~~

No. 64
2015

Page 121 of 135

(III) Individual permit or ~~\$80.00~~ \$160.00

approval under general permit per facility.

for stormwater runoff from

industrial facilities with

specified SIC codes;

(IV) Individual permit or ~~\$80.00 per system~~

application to operate under \$10.00 per acre of

general permit for stormwater impervious surface within

runoff associated with municipal the municipality; annually.

separate storm sewer systems;

(V) Individual permit or approval under general permit for residually designated stormwater discharges.

(aa) For discharges to Class A water; ~~\$255.00~~ \$310.00 per acre of impervious area, minimum ~~\$255.00~~ \$310.00.

(bb) For discharges to Class B water; ~~\$80.00~~ \$160.00 per acre of impervious area, minimum ~~\$80.00~~ \$160.00.

(VI) Application to operate under a general permit for stormwater runoff associated with municipal roads: \$2,000.00 per authorization annually.

(VII) Application to operate under a general permit for stormwater runoff associated with State roads: \$90,000.00 per authorization annually.

* * *

(11) For stream alteration and flood hazard area permits issued under 10 V.S.A. ~~chapter~~ chapters 41 and 32: ~~\$225.00 per application.~~

(A) Stream alteration; individual permit: \$350.00.

(B) Stream alteration; general permit; reporting category: \$200.00.

(C) Stream alteration; individual permit; municipal bridge, culvert, and unimproved property protection: \$350.00.

(D) Stream alteration; general permit; municipal bridge, culvert, and unimproved property protection: \$200.00.

(E) Stream alteration; Agency of Transportation reviews; bridge, culvert, and high risk projects: \$350.00.

(F) Flood hazard area; individual permit; State facilities; hydraulic and hydrologic modeling required: \$350.00.

(G) Flood hazard area; individual permit; State facilities; hydraulic and hydrologic modeling not required: \$200.00.

(H) Flood hazard area; municipal reviews; reviews requiring hydraulic and hydrologic modeling, compensatory storage volumetric analysis, or river corridor equilibrium: \$350.00.

(I) Flood hazard area; municipal review; projects not requiring hydraulic or hydrologic modeling: \$200.00.

(J) River corridor; major map amendments: \$350.00.

No. 64
2015

Page 123 of 135

(12) For dam permits issued under 10 V.S.A. chapter 43: ~~0.525~~ 1.00
percent of construction costs, minimum fee of ~~\$200.00~~ \$1,000.00.

* * *

(14) For certification of sewage treatment plant operators issued under
10 V.S.A. chapter 47:

(A) original application: ~~\$110.00~~ \$125.00.

(B) renewal application: ~~\$110.00~~ \$125.00.

(15) For sludge or septage facility certifications issued under 10 V.S.A.
chapter 159:

(A) land application sites; facilities that further reduce pathogens;
disposal facilities: ~~\$950.00~~ \$1,000.00 per
application.

(B) all other types of facilities: ~~\$110.00~~ \$125.00 per
application.

* * *

(26) For individual conditional use determinations, for individual
wetland permits, for general conditional use determinations issued under
10 V.S.A. § 1272, or for wetland authorizations issued under a general permit,
an administrative processing fee assessed under subdivision (2) of this
subsection (j) and an application fee of:

(A) \$0.75 per square foot of proposed impact to Class I or II
wetlands;

No. 64
2015

Page 124 of 135

(B) \$0.25 per square foot of proposed impact to Class I or II wetland buffers;

(C) maximum fee, for the conversion of Class II wetlands or wetland buffers to cropland use, \$200.00 per application. ~~For purposes of~~ As used in this subdivision, “cropland” means land that is used for the production of agricultural crops, including row crops, fibrous plants, pasture, fruit-bearing bushes, trees, or vines and the production of Christmas trees;

(D) \$0.25 per square foot of proposed impact to Class I or II wetlands or Class I or II wetland buffer for utility line, pipeline, and ski trail projects when the proposed impact is limited to clearing forested wetlands in a corridor and maintaining a cleared condition in that corridor for the project life;

(E) \$1.50 per square foot of impact to Class I or II wetlands when the permit is sought after the impact has taken place;

(F) \$100.00 per revision to an application for an individual wetland permit or authorization under a general permit when the supplement is due to a change to the project that was not requested by the Secretary; and

(G) minimum fee, \$50.00 per application.

* * *

(33) \$10.00 per 1,000 gallons based on the rated capacity of the tank being pumped rounded to the nearest 1,000 gallon.

* * *

No. 64
2015

Page 125 of 135

Sec. 45. 32 V.S.A. § 710 is amended to read:

§ 710. PAYMENT OF STATE AGENCY FEES

(a) Notwithstanding any other provision of law, the Agency of Transportation, any cooperating municipalities, and their contractors or agents shall be exempt from the payment of fee charges for reviews, inspections, or nonoperating permits issued by the Department of Public Safety, a District Environmental Commission, and the Agency of Natural Resources for any projects undertaken by or for the Agency and any cooperating municipalities for which all or a portion of the funds are authorized by a legislatively approved transportation construction, rehabilitation, or paving program within a general appropriation act introduced pursuant to section 701 of this title except for those fees established under 3 V.S.A. § 2822(j)(2)(A)(iii), (j)(10), (j)(11), and (j)(26).

(b) Notwithstanding any other provision of law, no fees shall be charged for reviews, inspections, or nonoperating permits issued by the Department of Public Safety, a District Environmental Commission, and the Agency of Natural Resources for:

(1) Any project undertaken by the Department of Buildings and General Services, the Agency of Natural Resources, or the Agency of Transportation which is authorized or funded in whole or in part by the capital construction act introduced pursuant to section 701a of this title except for those fees established under 3 V.S.A. § 2822(j)(2)(A)(iii), (j)(10), (j)(11), and (j)(26).

(2) Any project undertaken by a municipality, which is funded in whole or in part by a grant or loan from the Agency of Natural Resources or the Agency of Transportation financed by an appropriation of a capital construction act introduced pursuant to section 701a of this title except for those fees established under 3 V.S.A. § 2822(j)(2)(A)(iii), (j)(7)(A) and (B), (j)(10), (j)(11), and (j)(26). However, all such fees shall be paid for reviews, inspections, or permits required by municipal solid waste facilities developed by a solid waste district which serves, or is expected to serve, in whole or in part, parties located outside its own district boundaries pursuant to 10 V.S.A. chapter 159.

Sec. 46. ASSESSMENT OF DEC FEES ON STATE AGENCIES AND
MUNICIPALITIES

When applicable, the Agency of Natural Resources shall assess fees established under 3 V.S.A. § 2822(j)(2)(A)(iii), (j)(7)(A) and (B), (j)(10), (j)(11), and (j)(26) on municipalities at the end of the most recent applicable municipal fiscal year in order to avoid potential effects on approved municipal budgets.

* * * Wastewater Treatment Plants; Financial Assistance for
Phosphorus Reduction * * *

Sec. 47. 10 V.S.A. § 1266a is amended to read:

§ 1266a. DISCHARGES OF PHOSPHORUS

(a) No person directly discharging into the drainage basins of Lake Champlain or Lake Memphremagog shall discharge any waste that contains a phosphorus concentration in excess of 0.80 milligrams per liter on a monthly average basis. Discharges of less than 200,000 gallons per day, permitted on or before July 1, 1991, shall not be subject to the requirements of this subsection. Discharges from a municipally owned aerated lagoon type secondary sewage treatment plant in the Lake Memphremagog drainage basin, permitted on or before July 1, 1991 shall not be subject to the requirements of this subsection unless the plant is modified to use a technology other than aerated lagoons.

(b) Notwithstanding any provision of subsection (a) of this section to the contrary, the Secretary shall establish effluent phosphorus wasteload allocations or concentration limits within any drainage basin in Vermont, as needed to achieve wasteload allocations in a total maximum daily load document approved by the U.S. Environmental Protection Agency, or as needed to attain compliance with water quality standards adopted by the Secretary pursuant to chapter 47 of this title.

No. 64
2015

Page 128 of 135

~~(c) The Secretary of Natural Resources shall establish a schedule for municipalities that requires compliance with this section at a rate that corresponds to the rate at which funds are provided under subsection 1625(e) of this title. To the extent that funds are not provided to municipalities eligible under that subsection, municipal compliance with this section shall not be required. [Repealed.]~~

Sec. 48. 10 V.S.A. § 1625 is amended to read:

§ 1625. AWARDS FOR POLLUTION ABATEMENT PROJECTS TO
ABATE DRY WEATHER SEWAGE FLOWS

(a) When the Department finds that a proposed water pollution abatement project is necessary to maintain water quality standards during dry weather sewage flows, and that the proposed type, kind, quality, size, and estimated cost, including operation cost and sewage disposal charges, of the project are suitable for abatement of pollution, and the project or the prescribed project phases are necessary to meet the intent of the water quality classifications established by the Secretary or by statute under chapter 47 of this title, the Department may award to municipalities a State assistance grant of up to 25 percent of the eligible project cost, provided that in no case shall the total of the State and federal grants exceed 90 percent of the eligible project costs:

(1) except that the 90 percent limitation shall not apply when the municipality provides, as their local share, federal funds allocated to them for

the purpose of matching other federal grant programs having a matching requirement; and

(2) except that the total of ~~state~~ State and federal grants issued under P.L. 92-500 section 202(a)(2) may equal up to 95 percent of the eligible costs for innovative or alternative wastewater treatment processes and techniques.

(b) In carrying out the purposes of this subchapter, the Department shall define the purpose and scope of an eligible project, including a determination of the area to be served, type of treatment, effluent limitations, eligible construction costs, cost accounting procedures and methods and other such project construction, operation and fiscal elements necessary to meet federal aid requirements. The Department shall, as a part of the administration of this grant program, encourage municipalities to undertake capital development planning and to establish water and sewer charges along public utility concepts.

(c) Any municipality having proceeded with construction of facilities with a State grant of 25 percent since July 1, 1984 shall be eligible for an increase in the State grant to a total of 35 percent of the eligible project costs.

(d) The Department may award a State assistance grant of up to 50 percent of the eligible costs of an approved pollution abatement project or a portion thereof not eligible for federal financial assistance in a municipality that is certified by the Secretary of Commerce and Community Development to be within the designated job development zone. To achieve the objectives of

No. 64
2015

Page 130 of 135

chapter 29, subchapter 2 of this title, the eligibility and priority provisions of this chapter do not apply to municipalities within a designated job development zone.

~~(e) If the Department finds that a proposed municipal water pollution control project is necessary to reduce effluent phosphorus concentration or mass loading to the level required in section 1266a of this title, the Department shall award to the municipality, subject to the availability of funds, a state assistance grant. Such grants shall be for 100 percent of the eligible project cost. This funding shall not be available for phosphorus removal projects where the effluent concentration must be reduced in order to maintain a previously permitted mass loading of phosphorus. [Repealed.]~~

* * * Acceptable Management Practices for Maintaining Water Quality on
Logging Jobs in Vermont * * *

Sec. 49. 10 V.S.A. § 2622 is amended to read:

§ 2622. RULES; HARVESTING TIMBER; FORESTS; ACCEPTABLE
MANAGEMENT PRACTICES FOR MAINTAINING WATER
QUALITY

(a) Silvicultural practices. The commissioner shall adopt rules to establish methods by which the harvest and utilization of timber in private and public ~~forest land~~ forestland will be consistent with continuous forest growth, including reforestation, will prevent wasteful and dangerous forestry practices, will regulate heavy cutting, will encourage good forestry management, will

No. 64
2015

Page 131 of 135

enable and assist landowners to practice good forestry management, and will conserve the natural resources consistent with the purposes and policies of this chapter, giving due consideration to the need to assure continuous supplies of forest products and to the rights of the owner or operator of the land. ~~Such~~The rules adopted under this subsection shall be advisory, and not mandatory except that the rules adopted under section 2625 of this title for the regulation of heavy cutting shall be mandatory as shall other rules specifically authorized to be mandatory.

(b) Acceptable management practices. On or before July 1, 2016, the Commissioner shall revise by rule the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont. The revised acceptable management practices shall ensure that all logging operations, on both public and private forestland, are designed to: prevent or minimize discharges of sediment, petroleum products, and woody debris (logging slash) from entering streams and other bodies of water; improve soil health of forestland; protect aquatic habitat and aquatic wildlife; and prevent erosion and maintain natural water temperature. The purpose of the acceptable management practices is to provide measures for loggers, foresters, and landowners to utilize, before, during, and after logging operations to comply with the Vermont Water Quality Standards and minimize the potential for a discharge from logging operations in Vermont in accordance with section 1259

No. 64
2015

Page 132 of 135

of this title. The rules adopted under this subsection shall be advisory and not mandatory.

Sec. 50. DEPARTMENT OF FORESTS, PARKS AND RECREATION
REPORT; ACCEPTABLE MANAGEMENT PRACTICES;
MAPLE SYRUP PRODUCTION UNDER USE VALUE
APPRAISAL

On or before January 15, 2016, the Commissioner of Forests, Parks and Recreation shall submit to the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, and the House Committee on Natural Resources and Energy a recommendation and supporting basis as to how:

(1) to implement the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont as mandatory practices for all logging operations on public and private forestland;

(2) the Department of Forests, Parks and Recreation will enforce Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont; and

(3) whether maple syrup production on forestland should be required to enroll in the use value appraisal program under 32 V.S.A. chapter 124 as managed forestland and not agricultural land.

Sec. 51. 10 V.S.A. § 1259(f) is amended to read:

(f) The provisions of subsections (c), (d), and (e) of this section shall not

No. 64
2015

Page 133 of 135

regulate ~~accepted~~ required agricultural ~~or silvicultural~~ practices, as ~~such are~~ defined adopted by rule by the ~~secretary of agriculture, food and markets and the commissioner of forests, parks and recreation, respectively, after an opportunity for a public hearing~~ Secretary of Agriculture, Food and Markets, or accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation, including practices which are in compliance with the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation; nor shall these provisions regulate discharges from concentrated animal feeding operations that require a permit under section 1263 of this title; nor shall those provisions prohibit stormwater runoff or the discharge of nonpolluting wastes, as defined by the ~~secretary~~ Secretary.

Sec. 52. 24 V.S.A. § 4413(d) is amended to read:

(d) A bylaw under this chapter shall not regulate ~~accepted~~ required agricultural ~~and silvicultural~~ practices, including the construction of farm structures, as those practices are defined by the ~~secretary of agriculture, food and markets~~ Secretary of Agriculture, Food and Markets or the ~~commissioner of forests, parks and recreation, respectively, under 10 V.S.A. §§ 1021(f) and 1259(f) and 6 V.S.A. § 4810~~ accepted silvicultural practices, as defined by the Commissioner of Forests, Parks and Recreation, including practices which are in compliance with the Acceptable Management Practices for Maintaining

No. 64
2015

Page 134 of 135

Water Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation.

* * *

* * * Eligibility for Ecosystem Restoration Program Assistance * * *

Sec. 53. ECOSYSTEM RESTORATION PROGRAM; CLEAN WATER FUND; ELIGIBILITY FOR FINANCIAL ASSISTANCE

It is the policy of the State of Vermont that all municipal separate storm sewer system (MS4) communities in the State shall be eligible for grants and other financial assistance from the Agency of Natural Resources' Ecosystem Restoration Program, the Clean Water Fund, or any other State water quality financing program. A project or proposal that is the subject of an application for a grant or other assistance from the Agency of Natural Resources shall not be denied solely on the basis that the project or proposal may be construed as a regulatory requirement of the MS4 permit program.

* * * Effective Dates * * *

Sec. 54. EFFECTIVE DATES

(a) This section and Secs. 37 (Clean Water Fund) and 38 (Property Transfer Tax surcharge) shall take effect on passage.

(b) The remainder of the bill shall take effect on July 1, 2015, except that:

(1) In Sec. 16, 6 V.S.A. § 4988(b) (custom applicator certification) shall take effect 45 days after the effective date of rules adopted under 6 V.S.A. § 4988(a).

No. 64
2015

Page 135 of 135

(2) In Sec. 31, the permit requirements under 10 V.S.A. § 1264(h)(2) for discharges of regulated stormwater to Lake Champlain or to a water that contributes to the impairment of Lake Champlain shall take effect on October 1, 2015.

Date Governor signed bill: June 16, 2015

Note: See Act No. 58 (H.490), Sec. E.222, which amends Act No. 64 (H.35).

**APPENDIX F – AGENCY OF AGRICULTURE, FOOD AND
MARKETS AND CONSERVATION LAW FOUNDATION
SETTLEMENT AGREEMENT, JANUARY 15, 2016**

STATE OF VERMONT

SUPERIOR COURT

ENVIRONMENTAL DIVISION
Docket No. 175-12-14 Vtec

In re: CLF Petition to Require Mandatory)
Best Management Practices for)
Agricultural Non-point Sources)
Identified in the Missisquoi)
Basin Plan,)
AAFM Docket # 2014-06-04 ARM.)

STIPULATION OF THE PARTIES FOR REMAND

In order to resolve the appeal filed in the above-captioned matter, the parties, Appellant Conservation Law Foundation (CLF), by and through their attorney, and Respondent, Vermont Agency of Agriculture, Food and Markets (AAFM), by and through Vermont Attorney General William H. Sorrell, pursuant to V.R.E.C.P. 5(i), hereby stipulate and agree as follows:

WHEREAS, on May 22, 2014, CLF filed a Petition with the Secretary of AAFM (the Secretary) under 6 V.S.A. § 4813(a) to require that agricultural operations located in critical source areas identified in the Lake Champlain Basin Program report, titled "*Identification of Critical Source Areas of Phosphorus within the Vermont Sector of the Missisquoi Bay Basin*" (Study), be subject to mandatory best management practices (BMPs) in addition to the requirements of the Vermont Accepted Agricultural Practices (AAPs);

WHEREAS, on July 18, 2014, the Secretary held a public hearing on the initial Petition, as required by 6 V.S.A. § 4813, in St. Albans to provide farmers and other affected citizens with an opportunity to be heard and extended the public hearing process until August 18, 2014 to enable farmers and interested persons additional opportunity to provide written comments;

WHEREAS, on November 17, 2014, the Secretary issued his *Secretary's Decision* denying the request to impose mandatory BMPs on farms in the Missisquoi Bay basin;

WHEREAS, on December 16, 2014, CLF filed an appeal of the *Secretary's Decision* in Vermont Superior Court, Environmental Division;

WHEREAS, while the appeal of the *Secretary's Decision* was pending in the Environmental Court, the Vermont Legislature passed comprehensive water quality legislation in the form of House Bill 35 (H. 35), Act 64 (2015 Sess.);

WHEREAS, Act 64 changes a number of the considerations underlying the Secretary's November 14, 2014 *Secretary's Decision*;

WHEREAS, the parties are in agreement on a number of issues raised by the initial CLF Petition including that water quality in the Missisquoi Bay suffers from an abundance of phosphorus and that historical and current land uses, including agriculture, transportation, development, forestry and others, have contributed and continue to contribute to on-going phosphorous loading that impairs the water quality of the Bay;

WHEREAS, on August 31, 2015, the parties reached a resolution and agreed on substantive terms of a proposed revised decision by the Secretary on CLF's Petition to require BMPs in the Missisquoi Bay basin, subject to the Secretary's consideration of public input as contemplated by 6 V.S.A. § 4813 and the *BMP Rules*;

WHEREAS, the above-captioned matter was held in abeyance to allow the Secretary to conduct appropriate notice and receive public input on the Secretary's proposed *Revised Secretary's Decision* on the CLF Petition;

WHEREAS, the parties agreed that the Secretary would consider any public input he received in making his final determination of the *Revised Secretary's Decision* on CLF's

Petition, and that the Secretary could withdraw the proposed *Revised Secretary's Decision* based on such public input;

WHEREAS, the parties agreed that if, after considering public input, the Secretary then decided to enter the *Revised Secretary's Decision* as proposed and noticed to the public, the parties would request through Stipulation that the Court remand this matter to the Secretary for final action on the *Revised Secretary's Decision*;

WHEREAS, the parties further agreed that within 14 days of such remand, the Secretary shall withdraw the *Secretary's Decision* dated November 17, 2014 and shall issue the *Revised Secretary's Decision* as proposed or as approved by Petitioner CLF if subsequent revisions are non-substantive or *de minimus*;

WHEREAS, the Secretary already has issued proper notice and provided opportunity for public input on the *Revised Secretary's Decision*;

WHEREAS, the public input period was extended from September 4, 2015 to October 20, 2015;

WHEREAS, after consideration of the public input expressed during the 2014 CLF Petition process, public input on the proposed *Revised Secretary's Decision*, the statutory changes in Act 64 and the impact that Act 64 will have on Vermont's water quality and farms and on the statutory obligations of AAFM, the Secretary has decided to enter the proposed *Revised Secretary's Decision* as noticed;

WHEREAS, the *Revised Secretary's Decision* sets out findings of fact and rationale that supports the revised decision;

WHEREAS, the Attorney General believes that this *Stipulation of the Parties for Remand* and settlement of the appeal is in the State's interests as it fairly resolves the Petition; and

WHEREAS, this *Stipulation of the Parties for Remand* has been negotiated by the AAFM and the CLF in good faith;

NOW, THEREFORE, the parties hereby stipulate and agree as follows:

1. The parties respectfully request that, pursuant to V.R.E.C.P. 5 (i), the Court remand the CLF Appeal back to the Secretary of AAFM for reconsideration under the law, including Act 64 (2015) and further action in accord with this stipulation;
2. Within 14 calendar days of such remand, the Secretary shall withdraw his November 17, 2014 *Secretary's Decision* and issue the *Revised Secretary's Decision* (copy attached);
3. The Secretary shall defend the *Revised Secretary's Decision* in the event that it is appealed by another party, and shall implement the *Revised Secretary's Decision* in accord with the terms set forth therein, unless its implementation is stayed by judicial order of a court of competent jurisdiction;
4. So long as the AAFM follows all schedules and other terms set forth in the *Revised Secretary's Decision*, CLF agrees not to file or assist any third-party in preparing or filing a petition under 6 V.S.A. § 4813 as to BMPs for phosphorus in the Missisquoi Bay Watershed for a period of 10 years from the date that this Stipulation is accepted by the Court and the matter is remanded to the Secretary.

5. AAFM further agrees that as it implements 6 V.S.A. § 4810 under Act 64 to assess BMPs needed on farms in the St. Albans, Otter Creek, and South Lake watersheds,¹ it will follow the same or similar methodology set forth in the *Revised Secretary's Decision* for the Missisquoi Bay Watershed. In return, CLF agrees not to file or assist any third-party in preparing or filing a petition for implementation of BMPs to reduce phosphorus under 6 V.S.A. § 4813 as to those other three watersheds, for a period of 4 years from the effective date of the *Revised Secretary's Decision* on the Missisquoi Bay Watershed.
6. If the AAFM implements the same or similar methodology to assess and require BMPs on farms in the St. Albans, Otter Creek, or South Lake watersheds within 4 years of the effective date of the *Revised Secretary's Decision*, as demonstrated by AAFM issuing the first annual notice pursuant to ¶7, and following all other schedules and timeframes as described in the *Revised Secretary's Decision* for the Missisquoi Bay Watershed for such noticed watershed, CLF further agrees not to file or assist any third-party in preparing or filing a petition for implementation of BMPs for phosphorus under 6 V.S.A. § 4813 for such watershed for a period of 10 years from the date AAFM issues its first annual notice for that watershed.
7. CLF agrees that it will communicate to the federal Environmental Protection Agency ("EPA"), in writing within 10 days of the effective date of the *Revised Secretary's Decision*, that CLF believes the methodology set forth in the *Revised Secretary's Decision* constitutes the "reasonable assurances" that EPA requires for the federal

¹ A map of Vermont's watersheds is available at: <http://www.watershedmanagement.vt.gov/planning/html/plbasis.htm> (last accessed August 26, 2015).

Clean Water Act for agricultural non-point source pollution sources subject to the provisions of this stipulation in the Missisquoi, and/or the St. Albans, Otter Creek, and South Lake watersheds of Lake Champlain.

8. The parties agree to meet and confer as needed and upon request of a party, to avoid disputes concerning the *Revised Secretary's Decision*, and in the event of a dispute between the parties regarding their obligations and covenants, attempt to resolve those disputes in the manner set forth below. The parties agree to the following conference schedule and dispute resolution procedure:
 - a. The parties shall meet and confer one year after the commencement of education, outreach, and compliance activities as set forth in Section III, paragraph 6 of the *Revised Secretary's Decision*, and then meet and confer semi-annually thereafter to identify and informally resolve implementation challenges, if any.
 - b. Either party may at any time initiate dispute resolution procedures by providing written notice to the other party identifying the matter in dispute. The parties shall attempt to resolve the dispute through informal discussions by telephone or in person, within 30 calendar days after receipt of such notice.
 - c. If the parties are unable to resolve the dispute by informal discussion as set forth in paragraph 8b of this *Stipulation*, within 15 days thereafter the party initiating the dispute process shall prepare and submit to the other party a detailed summary of the matter(s) in dispute and a statement of its position, including any data, analysis, or opinion supporting its positions and all supporting documentation. The responding party shall have 30 days thereafter to prepare and submit its summary, statement, and supporting documentation. The parties shall thereafter meet, confer, and attempt to resolve the dispute within 15 days of the response.
 - d. If the parties are unable to resolve the dispute within the 90 day time frame set forth above, either party may seek remedies available to it as provided by law.
 - e. The time periods for dispute resolution may be extended or shortened by mutual agreement of the parties, provided that the parties agree to use reasonable efforts to resolve the dispute at the earliest possible time, taking

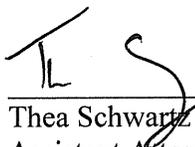
into consideration the primary objective of protecting public health, safety, welfare, and actual harm to the environment.

9. The AAFM recognizes that, under 6 V.S.A. §4813, CLF is a person with an interest in the *Revised Secretary's Decision* and agrees that it shall not contest standing of CLF as a party in any future action brought in a court of competent jurisdiction to challenge the Secretary's compliance with the *Revised Secretary's Decision*;
10. The AAFM and CLF hereby waive all rights to contest or appeal the Court's *Order of Remand* and they shall not challenge, in this or any other proceeding, the validity of any of the terms of this *Stipulation* or this Court's jurisdiction to enter the *Order of Remand*.

[remainder of page intentionally left blank]

DATED at Montpelier, Vermont this 15th day of January, 2016.

WILLIAM H. SORRELL
ATTORNEY GENERAL

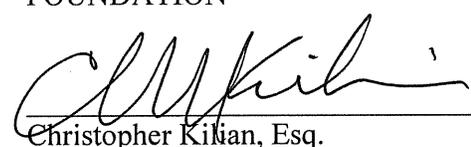
By: 

Thea Schwartz
Assistant Attorney General
Office of the Attorney General
109 State Street
Montpelier, Vermont 05609
(802) 828-3193

Attorney for the Vermont
Agency of Agriculture, Food and
Markets

DATED at Montpelier, Vermont this 15th day of January, 2016.

CONSERVATION LAW
FOUNDATION

By: 

Christopher Kilian, Esq.
Conservation Law Foundation
15 East State Street, Suite 4
Montpelier, VT 05602-3010
(802) 223-5992

**APPENDIX G – LEGISLATIVE REPORT ON STATEWIDE WATER
QUALITY IMPROVEMENT PROGRAMS, AS REQUIRED BY
STATUTE (2014 ACTS AND RESOLVES NO. 97, SEC. 1(C) AS
AMENDED BY H.650)**

Vermont's Clean Water Initiative



November 17, 2014

Prepared for the Vermont General Assembly in Accordance with No. 97 of the Acts and Resolves of 2013 (Adj. Sess. 2014), as modified by No. 172 of the Acts and Resolves of 2013 (Adj. Sess. 2014).

Table of Contents

Introduction.....	3
Abstract.....	4
The Value of Clean Water	6
I. Overview and Background.....	8
Building on Lessons Learned.....	9
II. Critical Priorities	12
Priority No. 1: Implementing Agriculture Best Management Practices.....	12
Priority No. 2: Treating Stormwater Runoff and Erosion from Developed Lands.....	14
Priority No. 3: Installing Pollution Controls on State and Municipal Roads.....	15
Priority No. 4: Restoring and Protecting Natural Infrastructure for Flood Resiliency and Water Quality Improvements.....	15
Priority No. 5: Increasing Investments in Municipal Wastewater Treatment Infrastructure....	18
III. Achieving Vermont’s Clean Water Initiative: Funding and Revenue Sources by Stage	19
Stage One – Building Capacity.....	20
Vermont Clean Water Fund.....	20
Federal Funding to Support Clean Water Initiatives in Vermont.....	21
Key Partners in Delivering Assistance to Municipalities, Farms, and Small Businesses.....	22
Stage One Needs at the Agencies of Natural Resources, Agriculture, Food and Markets and Transportation	24
Stages Two and Three – Moving Projects Forward and Getting Results.....	27
Conclusion	28
Appendix.....	29

Introduction

The State of Vermont¹ submits this report describing Vermont's Clean Water Initiative in order to satisfy a request from the Vermont General Assembly and in response to the growing chorus of Vermonters who are demanding action to protect the streams, rivers, ponds and lakes that they cherish as a vital part of Vermont's landscape of cities, towns and villages surrounded by working forests, farms and mountains.

This report is offered in the context of decades of work to protect the biological, chemical and physical integrity of Vermont's surface waters as required under the federal Clean Water Act. The State of Vermont has taken on the responsibility of implementing this landmark federal law under the supervision of the United State Environmental Protection Agency (EPA). Clean water is a shared resource, belonging to all Vermonters, with a corresponding responsibility that we all bear to protect and restore our waters.

Over the last decade, the State of Vermont has invested millions in the form of grants and low-interest loans to local governments, farmers, watershed groups, conservation districts, regional planning commissions and others to protect and restore water quality. For example, the State of Vermont has invested roughly \$100 million to support municipal wastewater treatment infrastructure,² \$24 million in grants under the Ecosystem Restoration Program and \$26 million in grants and technical assistance to farmers. Vermont has also, over the past decade, strengthened the programs for controlling polluted stormwater runoff for both farms and developed land.

Following EPA's decision to require a new plan for addressing pollution into Lake Champlain in 2011, Governor Shumlin's Administration has elevated this work as a central environmental priority, not just for the Agency of Natural Resources, but across all of the state agencies with responsibility and tools for contributing to clean water. The importance of the state's commitment to ensure the health of our rivers and lakes was further elevated by our experience following the floods of 2011. The state's response to these events has required and contributed to an unprecedented level of collaboration among state agencies and local governments as we work to ensure that we identify and implement opportunities to protect clean water, our communities and our economy.

In spite of years of hard work and investment, the State of Vermont has been unable to support the full set of investments necessary to meet all of the needs associated with clean water – in the Lake Champlain Basin and around the State. Now, for this reason and in response to EPA requirements focused on Lake Champlain, the State is launching this Clean Water Initiative. The goals of this Initiative are to satisfy the State's legal obligations under the federal Clean Water Act, and to protect Vermont's environment, economy and the wellbeing of its citizens.

¹ This report was prepared by the Agency of Natural Resources (ANR), Department of Environmental Conservation (DEC), in collaboration with the Agencies of Agriculture, Food and Markets (VAAF), Transportation (VTrans), and Commerce and Community Development (ACCD).

² Includes State contributions through the Capital Bill for grants directly to municipalities and as a match to Federal funds in the State Revolving Loan program, and funds paid back from loan repayments from SFY2004-2013.

The recommendations in this report rely primarily on the strategies outlined in the State's Lake Champlain Phosphorus Total Maximum Daily Load³ Phase One Implementation Plan (Phase I Plan) submitted to EPA on May 29, 2014. Nearly every body of water in the state faces the same challenge resulting from the discharge of excess nutrients as do the streams, rivers, ponds and lakes within the Lake Champlain watershed. The Phase I Plan describes management strategies, sets timelines and provides accountability measures for reducing phosphorus pollution into Lake Champlain. These recommendations require a comprehensive, multi-sector approach to managing surface water pollution. In this way, the Phase I Plan provides a helpful framework for understanding how the State could use its regulatory, education and outreach, financing and other tools to achieve water quality improvements throughout Vermont.

This report also draws upon ANR's Surface Water Management Strategy, our plan for the protection and management of all pollutants that degrade Vermont's waterways.⁴ The Surface Water Management Strategy describes in detail the full range of current programs to identify and manage stressors and reduce both point and nonpoint sources of surface water pollution in Vermont. ANR uses the Strategy to guide the decision-making to ensure efficient, predictable, consistent and coordinated water resources management actions.

Abstract

The accountability framework proposed by EPA for the Lake Champlain TMDL will require Vermont to establish programs and permits necessary to implement the initial three years of milestones outlined in the Phase I Plan. In the event that Vermont does not achieve these milestones, EPA will use its authority under the Clean Water Act to take direct actions to reduce pollution into Lake Champlain.

The Phase I Plan, in turn, references the tactical basin planning process that ANR uses to achieve the Surface Water Management Strategy. In the tactical basin plans, the state describes the most significant sources of pollution (stressors) and proposes actions designed to strategically focus responses to address those stressors. The actions identified in the tactical basin plans will become subject to EPA's accountability framework once adopted in Phase II of the Lake Champlain TMDL implementation milestones. Outside of the Lake Champlain watershed, tactical basin plans will also drive work, but will not be subject to EPA's accountability framework for Lake Champlain.

Our three-stage proposal for funding this work, described below, is designed to accommodate this iterative process. The three stages for funding clean water work are designed to anticipate and accommodate the synchronized planning process and implementation work being done under both the Lake Champlain TMDL and the Surface Water Management Strategy.

³ A "Total Maximum Daily Load" or "TMDL" is a term in the U.S. Clean Water Act that is used to mean both the maximum amount of a pollutant that a waterbody can assimilate without harm to the uses of that waterbody, and the plan that a state may implement in order to reduce pollutant loading to that level. In the case of Lake Champlain, the state has determined that the levels of phosphorus in the lake exceed state water quality standards and so is required to work with the U.S. Environmental Protection Agency to reduce sources of phosphorus pollution.

⁴ The Surface Water Management Strategy is available at: <http://www.watershedmanagement.vt.gov/swms.html>.

Stage One. In order to meet that first accountability milestone, this report describes priorities and funding options needed to:

- Create a new Clean Water Fund, capable of receiving private donations, impact fees, dedicated state revenue and, where appropriate, federal dollars, and distributing those funds to farmers, municipalities, small businesses and private landowners through existing grant and loan programs at ANR, VAAF, VTrans and ACCD;
- Establish a governance process for clean water funding in order to evaluate annual needs, recommend funding levels, and recommend revenue allocations and potential new sources of revenue annually to the Administration and General Assembly;
- Support coordinated planning, including tactical basin planning, stormwater planning, transportation planning and land use planning, among the State of Vermont Agencies, Regional Planning Commissions (RPCs) and Vermont League of Cities and Towns (VLCT); and
- Enhance or establish new regulatory programs, permits and standards at ANR, VAAF and VTrans, in order to:
 - Update the Accepted Agricultural Practices (AAPs) administered by VAAF;
 - Increase effectiveness of nutrient management planning under the AAPs;
 - Establish small farm certification and manure applicator certification programs at VAAF;
 - Add phosphorus reduction obligations and continue flow monitoring requirements in the municipal separate storm sewer system program (MS4);
 - Establish a new transportation separate storm sewer system permit (TS4);
 - Issue a new general permit with standards for management of stormwater on municipal roads; and
 - Require stormwater retrofit obligations for existing developed lands to the extent not covered under the MS4 or TS4 permits or municipal roads general permit.

Stage Two. Following successful completion of the stage one goals described above, the State of Vermont and its partners will move forward with the additional projects and practices necessary to protect clean water. Clean Water Fund allocations will continue to support coordinated planning, regulatory oversight and technical support from the State of Vermont Agencies, RPCs and VLCT. In addition, the Clean Water Fund will provide enhanced funding for existing grant and loan programs at ANR, VAAF, VTrans and ACCD.

ANR's basin planners will work with the RPCs, VLCT and municipalities to identify strategic priorities and investments for each of the priority sectors described within this report, within the various drainage basins of Lake Champlain, and in other watersheds across Vermont. Other groups, including conservation districts, watershed groups, the UVM Extension program, and the Lake Champlain Basin Program, will participate in the planning process and implementation phase as consultants, grant recipients and contractors. In this way, our "Stage Two" corresponds and overlaps with the "Phase II" planning phase of the Lake Champlain Phosphorus TMDL implementation process as described above.

The Clean Water Fund reporting and governance process will ensure that the Clean Water Initiative continues to receive the resources and support necessary to meet the goals in the Phase I Plan and Surface Water Management Strategy. An annual report from the Fund will

describe projects supported, completed, and outstanding, as well as needs for next fiscal year(s) and recommended funding levels. Increased funding and potential sources of new revenue would be recommended by an Administration steering committee in consultation with an advisory board responsible to the General Assembly and other clean water stakeholders appointed by the Governor.

Stage Three. The primary metrics for measuring the effectiveness of the Clean Water Initiative will be (i) the accountability framework established by EPA for the Lake Champlain TMDL, and (ii) monitoring and mapping efforts established in the basin planning process and carried out by ANR, VAAF and VTrans staff in collaboration with the RPCs, municipalities, farmers and other clean water stakeholders. The Administration will also work with the General Assembly to establish other Results Based Accountability measures to gauge the population level impacts and effectiveness of investments made by the State of Vermont under the Clean Water Initiative. “Lean” government principles will be used to ensure that new and enhanced programs deliver timely and predictable results.

The Value of Clean Water

Our clean water laws, both federal and state, are expressly premised upon a shared state and federal goal to protect the ecological integrity of our waters. This goal is captured in the Clean Water Act objective to eliminate the discharge of pollutants into our waters in order to “restore and maintain the chemical, physical and biological integrity of the Nation’s water.”⁵ Under this law, the State has a legal obligation to ensure that it has programs and standards in place to ensure that our waters provide for a full range of uses – to ensure that our waters are “fishable and swimmable.”⁶ While compliance with federal and state law, and the fundamental importance of protecting our waters for their aesthetic and ecological value alone, these reasons are not the only imperative for action.

Vermont’s economic future is intimately tied to the Clean Water Initiative. As is often described in discussions about water quality in Vermont, this is in part because Vermont’s exceptional natural features—open landscapes, clean water, and rural, agrarian communities—have made Vermont a popular destination for travelers, new businesses and Vermonters alike.

Vermont’s clean water:

- Provides fishing and other recreational uses, bolsters tourism and property values, and protects public health.
- Supports commercial uses, ranging from local farms to international firms.
- Ensures Vermont’s vision of sustainable working landscape, an essential legacy for Vermont’s future generations.

The economic benefits of clean water are not limited to tourism, recreation and attractiveness to new businesses. Some businesses have been able to develop new business models for reducing pollution while generating new products, such as the collaboration between some farmers and

⁵ 33 U.S.C. Section 1251(a).

⁶ 33 U.S.C. Section 1313.

electric generation companies to harness the energy generated from cow manure. Other businesses, particularly in the engineering and environmental consulting fields, are critical to the development of new and emerging pollution control practices and are an essential link between state agencies and business owners. Further, investing in new infrastructure for our water pollution control efforts, including stormwater management and wastewater treatment facilities, will pay dividends for communities both in terms of cleaner water and also in the form of jobs and attracting new economic development.

Vermont's Clean Water Initiative will have benefits beyond water quality. Many of the actions necessary to address nutrient pollution in stormwater runoff provide benefits that go far beyond the immediate benefits to our waterways. For example:

- Improving manure and fertilizer management, together with good soil conservation practices, can reduce farmers' costs and protect the vitality of the soil.
- Reducing the inputs of nutrients like phosphorus and nitrogen into farming practices and treating these important elements as commodities can save costs and reduce pollution.
- Correcting chronic erosion problems at culverts and ditches on gravel roads can save on maintenance costs over the long term.
- Restoring and protecting the stability of Vermont's streambanks and stream channels can reduce the infrastructure damage and property loss that occur during major flooding, while at the same time improving habitat for fish and wildlife and resilience to climate change.
- Using green stormwater infrastructure and low impact development methods to control stormwater pollution can reduce energy costs, reduce risk of flooding, provide aesthetic benefits, and contribute to more livable, walkable communities.

The comprehensive nature of the Clean Water Initiative, combined with the far-reaching benefits of this work, require that this initiative involve collaboration among all levels of government including state, federal, and local agencies and officials. The coalition of state agencies working to implement the Clean Water Initiative includes not just ANR, but VAAF, VTrans and ACCD.

Further, this is not a challenge that the public sector can overcome without broad support from Vermonters from every corner of the state, a broad coalition of conservation organizations, and every business sector. For this reason, we will continue to work with statewide and community based conservation groups, farmers, businesses, and the general public. In the area of businesses, we will continue working across multiple economic sectors including agriculture, consulting, energy, real estate and manufacturing.

We will also continue to work with regional development corporations, regional planning commissions, and business alliances. We have learned that it is critical to include the business community as partners in our efforts to address water pollution as well as environmental advocates, and to include planners as well as investors. We are listening to the people of Vermont – in our meetings, we have learned that Vermonters care deeply about clean water and that we have more in common than differences when it comes to a commitment to action and results.

Only by working together, can we develop a plan that will achieve our clean water goals and the economic benefits associated with clean water. Only by working together we can protect Vermont's surface waters, including Lake Champlain, maintain our working landscape of farms and forests, create jobs, and promote prosperous communities.

I. Overview and Background

This report reflects the commitment of the State of Vermont to improving water quality in surface waters across the state. This report was prepared by the Agency of Natural Resources (ANR), in consultation with the Agency of Agriculture, Food and Markets (VAAF), the Agency of Transportation (VTrans) and the Agency of Commerce and Community Development (ACCD). We prepared this report in accordance with No. 97 of the Acts and Resolves of 2013 (Adj. Sess. 2014), as modified by No. 172 of the Acts and Resolves of 2013 (Adj. Sess. 2014). (Act 97). Act 97 directed the State of Vermont to provide specific recommendations for administering, implementing, and financing water quality improvement in Vermont over the next ten years. This report is also referenced in the State's commitments to EPA, described in the Lake Champlain Phosphorus TMDL Phase One Implementation Plan (Phase I Plan).⁷

Act 97 requires that the State address the following required elements in the report:

- Five priority actions over next ten years to improve water quality, addressing the water quality benefit of each action, the necessity of each action and any impetus to prioritize action.
- Two proposals for financing water quality, sufficient to fund implementation of priority actions and revenue generated from each action.
- Definition of state government role in administering, implementing and overseeing implementation of the priority actions, including staffing, organizational, structural and restructuring needs, and modes of public interface.
- Recommended process for addressing and financing priority actions.

In addition to the requirements set forth in Act 97, this report also examines the lessons learned from our past experience working to reduce phosphorus pollution in Vermont. We have accomplished a great deal since the passage of the Clean Water Act in 1972, particularly in the area of wastewater treatment. Our work in the area of addressing polluted stormwater runoff has accelerated dramatically with the implementation of better controls on runoff from new development, and increased oversight of agricultural sources of water pollution. While there have been important successes, we have also learned that we can do better by reaching a broader range of pollution sources, and by more carefully targeting our collective resources.

⁷ The Phase I Plan is available at: <http://www.watershedmanagement.vt.gov/erp/champlain/docs/LCTMDLphaseIplan.pdf#zoom=100>.

Building on Lessons Learned

During the past decade, the state of Vermont has made significant investments to reduce phosphorus pollution from nonpoint sources going into Lake Champlain, Lake Carmi, Lake Memphremagog and other waters of the state. Despite these efforts, phosphorus levels from its tributary rivers have not measurably declined, and blue-green algae blooms persist in many of our surface waters. While important reductions have been made, the Clean Water Act requires the State to increase regulation, funding and support of the various sectors that contribute pollution to our surface waters.

Reviewing the “lessons learned” from this experience will help us build upon what is already working, stop or modify actions that are not demonstrating results, and in that way, improve how we go about restoring and safeguarding clean water for this and future generations.

Lesson No. 1: We must support Vermont communities to achieve the Clean Water Initiative.

Despite gains during the last decade, the funding and capacities needed to implement a nonpoint source controls statewide and, in particular, phosphorus controls within the Lake Champlain Basin, are much greater than previously estimated. This Initiative will require a statewide level of effort and investments by local governments, community-based conservation groups, and regional planning and development organizations, as well as farms and businesses. Sources of funding and capacity will need to come from an array of sources. The federal government has an obligation to assist Vermont in protecting national resources such as the Connecticut River, Lake Memphremagog and Lake Champlain.

Local governments will be required to contribute resources as will farmers, landowners and businesses. Private philanthropy can play a critical role in supporting innovation, advocacy, and education and outreach. Finally, the state will need to increase its investments across a range of programs, to fill gaps in funding needs left by the patchwork of federal programs, and to ensure a fair allocation of responsibility, so that the burden of clean water does not fall disproportionately on any one sector or region.

Municipalities, businesses, farms and the public at large all benefit from clean water, and each of those groups must also assume some degree of responsibility for sharing the investments needed to implement the management practices needed to safeguard clean water for current and future generations. Implementation of Vermont’s Clean Water Initiative, including the Phase I Plan and the Vermont Surface Water Management Strategy, will require substantial action and investment from a broad spectrum of governmental and non-governmental organizations, including the three implementing agencies, ANR, AAFM and VTrans, federal agency partners, and businesses, farmers and other property owners.

Lesson No. 2: To address the problem cost-effectively, Vermont needs to deal with the sources pollution strategically.

Given the price of restoring and safeguarding water quality, it is imperative that funds be spent in the most strategic and cost-effective manner. We know that investments to reduce polluted

stormwater runoff from farms, fields, roads and developed areas, as well as investments in reducing streambank erosion, are the most cost-effective means to achieve the greatest reductions of nutrients like phosphorus and nitrogen. These “nonpoint sources” of pollution are now the largest contributor to nutrient pollution into Vermont’s waters. About 97 percent of the phosphorus load to Lake Champlain comes from nonpoint sources, and a similar situation exists for phosphorus loading to Lake Memphremagog and for nitrogen loading to the Connecticut River from Vermont.

The prevalence of nonpoint source pollution is overwhelming the progress the state has made in delivering clean water to the public and posing threats to public health and safety. To be successful, a long-term plan for restoring Lake Champlain and the surface waters of the state must address these nonpoint sources.

We have also learned from recent research in the Missisquoi Bay watershed that application of “critical source area” targeting of phosphorus reduction practices based on specific site characteristics can result in two to three times more phosphorus reduction than an untargeted approach.⁸ We will use this type of “critical source area”⁹ targeting method to work to identify and map priority sites for technical, financial, and regulatory assistance.

This lesson should not obscure the fact that an important success story in Vermont and nationally is the water quality improvements from “point sources” of pollution such as wastewater treatment plants. Beginning in the 1970s, Vermont and the rest of the country have made significant gains in controlling pollution through regulatory permit requirements that manage discharges from “point sources.”¹⁰ The State and federal government undertook a shared responsibility to provide Vermonters with clean water, investing over \$600 million for wastewater treatment.¹¹ We cannot rest now and need to ensure that we continue to maintain that investment, and use evolving technologies to continue improvement in this sector.

The most critical lesson learned which is driving the priorities set forth in this report is, however, that Vermont faces the challenge of better controlling precipitation-driven stormwater and nonpoint source pollution.¹²

⁸ Stone Environmental, Inc. 2011. Identification of critical source areas of phosphorus within the Vermont sector of the Missisquoi Bay Basin. Prep. for Lake Champlain Basin Program. Grand Isle, VT., available at: http://www.lcbp.org/techreportPDF/63_Missisquoi_CSA.pdf.

⁹ Critical source areas, also commonly referred to as pollution “hot spots,” are those areas on the landscape that are at risk of disproportionately contributing the pollutant of concern, such as phosphorus, to surface waters.

¹⁰ Point sources are, “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.” 33 U. S. C. § 1362(14).

¹¹ Investment is in total nominal dollars, awarded between 1955 and 2012.

¹² Nonpoint sources of pollution are sources that do not meet the Clean Water Act’s legal definition of point source. U. S. Environmental Protection Agency, Nonpoint Source Pollution: The Nation’s Largest Water Quality Problem, EPA841-F-96-004A, available at: <http://water.epa.gov/polwaste/nps/outreach/point1.cfm>; Smeltzer, E. , Dunlap, F. , and Simoneau, M. 2009. Lake Champlain phosphorus concentrations and loading rates, 1990-2008. Lake Champlain Basin Program Technical Report No. 57. Grand Isle, VT., available at: http://www.lcbp.org/techreportPDF/57_Phosphorus>Loading_1990-2008.pdf

Lesson No. 3: We are not starting from scratch. Efforts to date to Restore Lake Champlain are making an important difference and we should build on this work.

Vermont has made substantial investment over the last twenty years to reduce nonpoint sources of phosphorus and sediment pollution within the Lake Champlain Basin and statewide. Those efforts accelerated substantially as a result of state's work to implement the 2002 Lake Champlain Phosphorus TMDL.

Since that time VAAFMs have significantly improved their ability to direct both state and federal conservation dollars to farms where they are needed, and to improve inspection and compliance with medium and large farm water quality regulations. DEC has built a strong Stormwater Management Program to minimize nonpoint source impacts from developed lands using a variety of stormwater permit programs. VTrans has taken on the Vermont Better Back Roads Program to help municipalities correct physical road conditions. Improved road practices protect road infrastructure, reduce maintenance costs over the long term and reduce the amount of sediment and phosphorus pollution entering waterways.

DEC has also developed an effective State River Management Program, which has provided detailed information about the physical state of our rivers to communities across the state using that information to minimize risks to public safety and property from flooding. This investment of effort will also, over the long-term, result in reduced erosion of our streams and rivers.

DEC has awarded on average of \$2 – \$2.5 million of state capital dollars annually in the form of grants to municipalities, conservation districts, and other partner organizations throughout the state to implement water quality protection and restoration projects at the local level. DEC has also used federal grants from the EPA to award approximately \$10 million dollars per year in the form of low or negative interest loans to municipalities for investments in water pollution control.

While we still have much to do, the work over the past decade has established a firm foundation on which to build the Clean Water Initiative.

Lesson No. 4: Given changing weather conditions, land development pressures, and mistakes of the past, restoring water quality will require time, and patience. Putting off investments in new approaches to ensuring clean water only increases this challenge.

Vermont's increasing frequency of severe weather events has been hampering efforts to deliver clean water. Severe storms and floods bring turbid flood waters that carry enormous amounts of sediment and phosphorus into waterways, which seemingly overwhelm progress made in other areas. Reducing runoff has many solutions, but each comes with its own challenges.

- To promote flood resilience, we must restore natural stream channel movements in our rivers and streams and minimize human alterations and structural encroachments.

River channels are slow to adjust and, for this reason, will require decades to achieve more natural channels.

- Restoring wetlands or vegetated buffers along streams can help reduce phosphorus, but it takes several years for the new plants to grow.
- Proper nutrient management on farms can reverse decades of over-fertilization that has occurred in some areas with associated phosphorus runoff into nearby streams, but the build-up of excess phosphorus in the soil will decline only slowly.
- Thoughtful decisions can be made about land use changes, such as conversion from forest to developed land, from grassland to cropland, or from open land to developed land. Each of these can increase the rate of phosphorus runoff per acre in spite of the application of good water quality management practices.
- Phosphorus runoff into Lake Champlain can be curtailed by implementing a sound and thorough plan, but the accumulation of phosphorus-rich sediment in the bottom of the lake may delay the lake's recovery.

All these challenges can be overcome through a vigorous and sustained effort, but expectations going forward should be realistic about the resources and commitment required to achieve clean water for Vermont's future.

II. Critical Priorities

The State of Vermont will address five priority areas (Clean Water Priorities) over the next twenty years to improve water quality. The Clean Water Priorities reflect the lesson that every Vermonter has a responsibility to protect water quality, across the state and in every land use sector. Farmers have an important role to play, and so do businesses. Regional and municipal planners, state officials, consumers and tax payers – all have an important role to play. Working together to achieve the Clean Water Priorities, Vermonters will bring about benefits to our natural environment and economy. The Clean Water Priorities described in this report are:

1. Implementing agriculture best management practices,
2. Treating stormwater runoff from developed lands,
3. Installing pollution controls on state and municipal roads,
4. Restoring and protect natural infrastructure – river corridors, floodplains, wetlands, and forest cover – for flood resilience and water quality, and
5. Increasing investments in municipal wastewater treatment infrastructure.

Priority No. 1: Implementing Agriculture Best Management Practices

Farms are not just a vital part of Vermont's culture and economy. A well-managed farm can help capture nutrients and stormwater runoff and is far preferable, from the standpoint of clean water, to suburban sprawl. At the same time, modern agricultural practices have evolved without

sufficient consideration to water quality impacts. As estimated by the previously discussed modelling efforts for Lake Champlain, agricultural nonpoint sources of phosphorus account for approximately 40 percent of the overall phosphorus load delivered to the Lake from Vermont. Similar water quality concerns exist statewide.¹³ In order to ensure that new regulations and requirements will achieve better protection for water quality without unduly impacting the economic viability of farms, VAAFM and ANR have convened and continue to work with an advisory group of Vermont farmers (the Agricultural Working Group) to develop the details of implementing the recommendations set forth below.

The Vermont Accepted Agricultural Practice Rule (AAPs), initially adopted in 1995 and updated in 2006, require that all farms in the state, regardless of size and type of operation, adopt and implement a set of minimum conservation practices to protect water quality. The program was previously overseen on a complaint-driven basis due to limited resources. Prior to 2013, VAAFM performed approximately 120 investigations across the state annually. The investigations targeted specific complaints or obvious violations; they did not involve evaluating the entire farm operation to determine extent of AAP compliance. VAAFM also uses medium and large farm operations (MFO and LFO) state permits that impose additional requirements and enforcement authorities.

While oversight of MFOs and LFOs has been extensive and resulted in dramatic farm improvements over the past few years, VAAFM has been limited in its ability to work as effectively with small farms. In addition to the hiring of a Small Farm Operation (SFO) coordinator in 2013, the following actions will strengthen the AAPs and increase oversight and education within the agricultural community.

Actions to Address Priority No. 1: Implementing Agriculture Best Management Practices

- Increase enforcement of state agricultural water quality permit programs;
- Increase education of small farms regarding AAPs;
- Revise the Accepted Agricultural Practices (AAPs) Rule to: (a) require a minimum buffer width of 25 feet along streams and lake shoreland, (b) require a minimum buffer width of 10 feet on field and road-side ditches; (c) require stabilization of eroding gullies; (d) require farms to conduct nutrient management planning — the agronomic planning tool designed to assist farmers in optimizing nutrient application and utilization as part of a cropping system; (e) reduce the soil loss tolerance standard — the accepted amount of soil loss that is allowed to occur from farm fields for each soil type (measured in tons per acre per year); and (f) strengthen livestock exclusion requirements;
- Increase education and training for farmers in the development and implementation of nutrient management plans;
- Implement a manure application certification program;
- Implement a small farm certification program to demonstrate compliance with Accepted Agricultural Practices Rule;
- Increase the capacity of agricultural sector partners to deliver greater technical, educational, and financial assistance to reduce phosphorus pollution from farms;

¹³ There are over 500 shipping dairy farms in Lake Champlain Basin, and nearly 400 shipping dairy farms outside of the Basin. Vermont Agency of Agriculture, Food and Markets.

- Target additional technical, educational, financial, and enforcement resources to watersheds with high phosphorus pollution loading attributed to agricultural operations;
- Implement a pilot program using incentives for farms in watersheds with high phosphorus pollution to increase implementation; and
- Investigate technical and educational options for addressing the impacts of tile drains.

Priority No. 2: Treating Stormwater Runoff and Erosion from Developed Lands

Developed land involves the construction of buildings, roads, parking areas, driveways, sidewalks, and other impervious surfaces. The concern is that impervious surfaces cause rainwater and snowmelt to quickly flow over these surfaces and discharge into surface waters, rather than infiltrate into the ground or be absorbed by plants. The quantity and velocity of stormwater runoff can increase flooding, damage infrastructure, and contribute to stream instability. In addition to nutrient and sediment pollution, stormwater runoff also picks up and delivers other pollutants to surface waters, such as bacteria, pesticides and fertilizers, oils, and heavy metals.

Vermont is a rural state; the percentage of the land area as impervious surface is low. However, developed lands are responsible for significant water quality impacts and generate, on a per acre basis, a large proportion of the phosphorus loading to Vermont's surface waters. Additionally, the majority of existing developed land is not regulated under federal or state stormwater permits and owners are frequently not managing or treating stormwater. For example, only six percent of the impervious surface area in the Lake Champlain basin is currently subject to regulation under a state operational stormwater permit, and only 12 percent of the impervious area is covered by the Municipal Separate Storm Sewer System (MS4) permit.

Actions to Implement Priority No. 2: Treating Stormwater Runoff and Erosion from Developed Lands

- Continue to address the threat of stormwater pollution from new development through existing ANR programs;
- Implement a new general permit to address stormwater pollution from designated existing developed lands, where discharges are currently not regulated;
- Re-issue the existing municipal general permit, referred to as the Municipal Separate Storm Sewer System (MS4) permit to be consistent with requirements of the new Lake Champlain TMDL;
- Further reduce phosphorus pollution from new development by updating the state standards contained in the Vermont State Stormwater Manual — the rulebook for developments that require a state stormwater permit. Updates include improved practices, with an emphasis on green stormwater infrastructure — actions that mimic or utilize natural processes to capture, reuse, or infiltrate stormwater;
- Provide municipalities with greater technical assistance in identifying, prioritizing, and implementing stormwater control needs; and
- Enhance technical assistance to municipalities, developers, and property owners in the application and maintenance of green stormwater infrastructure practices.

Priority No. 3: Installing Pollution Controls on State and Municipal Roads

A major category of developed lands are the state and local highways and roads which contribute significant amounts of phosphorus laden runoff to surface waters. There are over 14,000 miles of public roads in Vermont. Vermont municipalities maintain approximately 11,000 miles of road; three-quarters of these municipal roads need erosion control improvements. Two-thirds of these roads are unpaved gravel or unimproved roads, and nearly all require ditches and culverts for water drainage.

If roads are not properly constructed and maintained, there is significant potential for erosion of sediment carrying phosphorus into the drainage network and adjoining streams and eventually into the major water bodies such as Lake Champlain, Lake Memphremagog, the Connecticut River Basin, and the Hudson River Basin. Stormwater runoff from paved roads can accumulate and deliver debris, oils, salts, and other chemicals, sediment, nutrients, and other pollutants to surface waters. Paved roads can also affect the volume of stormwater runoff being generated, which in turn, can alter the hydrology and ecological health of receiving waters.

Actions to Implement Priority No. 3: Installing Pollution Controls on State and Municipal Roads

- Continue to grow financial assistance through programs such as the Vermont Better Back Roads Program to support municipalities in implementing management practices;
- Continue to support adoption of the VTrans 2013 Road and Bridge Standards across the State;
- Implement a new state highway stormwater general permit to reduce erosion and stormwater discharges from the state-operated transportation system;
- Implement municipal road stormwater standards and management practices to reduce erosion and stormwater discharges from municipal roads within the Lake Champlain Basin;
- Provide technical assistance to municipalities in conducting road inventories that identify and prioritize critical areas in need of erosion and sediment control; and
- Expand technical and educational assistance to municipalities in implementing management practices that protect roads from erosion while prevent the transport and discharge of phosphorus and sediment into streams.

Priority No. 4: Restoring and Protecting Natural Infrastructure for Flood Resiliency and Water Quality Improvements

Healthy and well-functioning natural infrastructure – rivers and their floodplains, wetlands, and forests – provide people and communities with a suite of economic, social, and ecological benefits. The term “natural infrastructure” is sometimes used to describe the importance of these features to our communities. The benefits of restoring and protecting our natural infrastructure include providing resilience to the impacts from future flooding, delivering clean water, supporting recreation and tourism, maintaining property values, protecting public healthy, minimizing water quality treatment, and sustaining aquatic habitat. Restoring and protecting our

natural infrastructure maximize these benefits to society, and can save money by avoiding future treatment costs.

Rivers, Streams, and Floodplains

Extensive stream channel erosion occurs throughout Vermont. Stream channel erosion is largely the result of past and present human activities that alter runoff patterns and stream channel conditions, which lead to stream instability (or disequilibrium). Human activities include channel confinement, straightening, building berms, dredging, and armoring practices. Other human activities contributing to greater stream bank and streambed instability include the stormwater runoff and land drainage activities that can deliver greater volumes of water at faster rates to receiving waters. Another class of human activities are structural controls such as rock armoring (or “riprap”), which may prevent flooding and erosion at one site, but increase erosion downstream.

Activities that cause stream disequilibrium increase the power of floods, thereby threatening public safety and increasing risk of property damages as well as contributing to water quality degradation. Unstable streams can no longer access their floodplains to store sediment and nutrient pollution during flooding. The sediment and nutrient pollution are transported downstream, where they can contribute to water quality problems downstream in receiving waters such as inland lakes and Lake Champlain. An estimated 22 percent of the total nonpoint phosphorus load delivered to Lake Champlain comes from stream erosion and the loss of floodplain function.

Avoiding new buildings, utilities, or public infrastructure in river corridors and floodplains and maintaining native plant-vegetated buffers are essential to attaining and maintaining equilibrium conditions. Avoiding new encroachments decreases adverse river channel modifications and increases the capacity of valley landforms to store floodwaters, sediments, and phosphorus.

Vermont recognizes the importance of maintaining native plant vegetated buffers along streams, lakes, and wetlands to maintain water quality. Buffers filter and absorb nutrients in runoff. Buffers also support the integrity of stream banks to help guard against erosion due to the root strength, root depth, and root density of the vegetation. Healthy vegetated buffers offer additional benefits such as support fish habitat function, provide habitat and movement corridors for wildlife.

Wetlands

Wetlands are one of the most important natural features that protect water quality and abate soil loss and flood damages from flooding in a watershed. Wetlands are natural flood regulators; they store floodwaters, sediments, and nutrients, including phosphorus, during storm events, and slowly release waters downstream. Wetlands remove as much as 80-90 percent of sediments in water moving through them.

The economic benefits that natural wetlands offer can be significant to Vermont communities. For example, the Gund Institute at the University of Vermont estimated that the Otter Creek wetlands complex upstream of Middlebury helped that town avoid five million dollars of flood damages.

Over the decades, wetlands have been lost to a variety of causes including conversion for agricultural production and development. Between 1780 and 1980 Vermont lost over 35 percent of its natural wetlands, subsequently losing phosphorus sinks throughout the State. The potential increase in phosphorus retention from restoring the natural hydrology of these lost wetlands would be substantial for the health of Vermont's waters.

Forests

The Clean Water Initiative must include working forests. Forests produce the cleanest water of any land use. A forest cover strategy of no net forest cover loss supports the creation of a system to promote forest cover goals in priority zones, including riparian and developed areas, coupled with mechanisms to ensure the health, maintenance and conservation of existing cover. Healthy forests translate into functional ecosystems that bind phosphorus and water, preventing additional runoff.

Sediment, which carries phosphorus, is the most common pollutant associated with timber harvesting. Soil is carried by rainwater after timber harvesting equipment and trees dragged or carried over the ground loosen and expose the soil. Bare ground exposed during harvesting operations can be eroded by rainwater and enter nearby streams.

Stream crossing used during harvesting are a particular area of concern. An estimated 14.5 percent of the total nonpoint phosphorus load delivered to the Lake comes from forestland. With forest covering more than 4.6 million acres and representing over 70 percent of Vermont's total land base, forestry is an important area of focus for reducing phosphorus loading to state waters.

Actions to Implement Priority No. 4: Restoring and Protecting Natural Infrastructure for Flood Resiliency and Water Quality Improvements

- Implement the newly adopted state floodplain rule — the Vermont Flood Hazard Area and River Corridor Rule. This rule addresses developments exempt from municipal regulation in flood hazard areas and river corridors. The rule enhances flood resilience statewide, and ensures state compliance with the National Flood Insurance Program (NFIP);
- Further expand technical and regulatory assistance to municipalities in the adoption of enhanced floodplain and river corridor protection bylaws that exceed NFIP minimum requirements;
- Continue to develop and maintain river corridor maps to support floodplain restoration and protection projects;
- Continue floodplain and river corridor restoration and protection projects;
- Support the newly established a Flood Resilient Communities Program that offers municipalities financial and technical assistance incentives to enhance flood resilience at the community level;
- Promote the newly launched “Flood Ready” website to promote municipal flood resiliency planning and adoption of floodplain and river corridor bylaws that minimize flood risks and maximize floodplain function;

- Expand technical, educational, and regulatory assistance to municipalities in stream alterations, including emergency and pre-flood protective measures, to maximize equilibrium (or natural stream stability) conditions;
- Expand technical, educational, financial, and regulatory assistance to landowners in wetland restoration and protection;
- Partner with federal and state agencies, local partners, and landowners to identify and implement wetland restoration projects;
- Increase inspections to achieve greater wetland permit compliance;
- Target critical wetlands for State Class I wetlands protection for flood resilience and phosphorus reduction;
- Revise the existing Forestry Acceptable Management Practices (AMPs) to: (a) specify compliance with standards within the State stream alteration general permit, referencing stream crossing standards, and (b) enhance ditch standards for skid trails and logging truck roads;
- Provide incentive financing via a “Vermont Forestry Direct Link Loan Program” to reduce pollution risks on logging jobs. The Program provides qualified logging professionals access to low-interest financing to support logging best management practices and equipment;
- Increase efforts to reduce soil erosion and sedimentation along logging roads on private lands, in partnership with the U. S. Department of Agriculture Natural Resources Conservation Service’s (NRCS) “forest legacy roads” cost-share program;
- Enhance forest cover to improve watershed health by: (a) supporting forest conservation, (b) restoring river and lake-side forested buffers, (c) expanding developed land forest cover, and (d) mitigating the impacts from invasive tree pests that will cause impacts to forested buffers and developed land forest cover; and
- Promote “climate-smart” forest adaptation strategies. One strategy includes creating funding priorities within the Working Lands Enterprise Fund to support environmentally sound logging technologies to improve forest resilience to climate change impacts.

Priority No. 5: Increasing Investments in Municipal Wastewater Treatment Infrastructure

The State and the federal government have invested over \$600 million since the 1970s to safeguard public health by providing wastewater treatment. There are over 120 municipally and privately owned wastewater collection and treatment facilities in Vermont, serving a population of over 370,000. Those investments continue to pay substantial dividends to public health and safety, local economies, and the environment.

Many municipal wastewater facilities are facing nutrient removal treatment requirements to meet TMDL plans for Lake Champlain (phosphorus), Lake Memphremagog (phosphorus) and the Long Island Sound/Connecticut River (nitrogen). Investments to date have been successful in nutrient pollution removal. For example, since 1991, upgrades to Vermont facilities in the Lake Champlain basin have resulted in an 84 percent decrease in wastewater phosphorus loading to Lake Champlain.

On the other hand, we must maintain this investment to ensure that we do not lose ground or impede future economic development opportunities. Deteriorating wastewater treatment systems pose real threats to human health and the environment. Aging systems also drive up the operation and maintenance costs, compromise service, and force municipalities to continually seek ways to defer maintenance or avoid upgrades.

The needs to address aging wastewater treatment systems are significant. Nearly all municipalities with aging wastewater treatment systems need assistance in managing their assets. Many systems must implement improvements to either maintain or attain compliance with state clean water standards to protect public health and the environment.¹⁴ Some facilities may be required to meet nutrient pollution load reductions as part of the Lake Champlain TMDL underway and future TMDL plans for Lake Memphremagog, and the Long Island Sound/Connecticut River. Additionally, implementing state goals that promote compact village and urban centers to help local economies and protect public health will require adequate water and sewer in those communities.

Actions to Implement Priority No. 5: Increasing Investment in Municipal Wastewater Treatment Infrastructure

- Offer increased technical assistance and financial guidance to municipalities, wastewater treatment governing boards, and plant operators to better manage aging and deteriorating sewer infrastructure systems, map and evaluate systems, plan for future repair and replacement, plan for emergencies and larger projects, and establish appropriate rate structures;
- Provide additional technical assistance to municipalities to improve optimization of operations to maximize phosphorus removal, enhanced protection of public health, and improved environmental protection associated with reductions in phosphorus loadings;
- Reissue Clean Water Act permits for direct discharge facilities in a manner that maximizes available opportunities for flexibility under federal law and policy; and
- Further maximize the use of federal loans and grants from agencies such as the U.S. Department of Agriculture's Rural Development agency, the U.S. Environmental Protection Agency state clean water revolving loan capitalization grants, and the U.S. Army Corps of Engineers.

III. Achieving Vermont's Clean Water Initiative: Funding and Revenue Sources by Stage

Finding adequate resources to support Vermont's Clean Water Initiative poses a significant challenge. As described above, funding needs associated with the Clean Water Initiative will impact a broad range of stakeholders in Vermont, including municipalities, businesses, farmers and the general public, as well as state and federal agencies and non-governmental organizations.

¹⁴ Improvements include collection system refurbishment, replacement, separating stormwater from collection systems, pump station upgrades, and water pollution control facility upgrades.

Because sources of pollution are both diffuse (i.e., precipitation driven, nonpoint source pollution across the Vermont landscape) and interrelated (e. g. runoff from fields or parking lots can affect runoff treatment needs on roads and contribute to the instability of river systems), it is impossible to provide a detailed accounting of all of the needed investments or predict the exact cost of addressing the priorities described above. Further, a number of the Clean Water Priorities depend upon new or expanded regulatory requirements and permits, increased support and technical assistance to regulated entities, and coordination with external partners. These programs are not yet fully developed and cost estimates for implementation will need to be developed and reconsidered as the programs are established.

In order to meet these challenges in a stepwise fashion, the State of Vermont recommends implementation of the Clean Water Initiative over three discrete stages.

- In stage one (SFY 2016-2017), while continuing all ongoing efforts, the State will focus on establishing the new or expanded structures, partner and program capacity needed to fully implement that Clean Water Priorities as described in this report.
- In stage two (starting in SFY 2017 and continuing), the State will implement the new or expanded programs and requirements, including tactical basin planning necessary to achieve the Clean Water Priorities, including funding, regulatory, education and outreach, and other tools to address the most significant sources of pollution.
- In stage three (starting in SFY 2020 and continuing), the State will evaluate results, report on outcomes and redirect resources and priorities as needed.

Stage One – Building Capacity

Vermont Clean Water Fund

The first step in stage one will be to create a dedicated special fund (the Clean Water Fund or Fund) to coordinate investments by the State in addressing polluted runoff into the state's surface waters. The Fund will be used primarily to distribute state funds, but could also be used to manage certain federal and private money where appropriate. Possible sources of private funds might be philanthropic, payments made to account for impacts on Vermont's water resources, or public-private partnerships to achieve shared goals with civic-minded corporations.

The funds will be used to provide matching funds necessary for the state, local governments or others to obtain federal funds, which often come with a match requirement. The Fund will be administered by state agencies, primarily ANR, VAAF, VTrans and ACCD to support municipalities, farmers, small businesses and other private landowners undertaking the actions necessary to meet the obligations required under the State's strategy.

Annually, Fund dollars will be available through state grant and loan programs to support regulation, planning, design, construction and operation of water pollution control strategies and practices. Initially, the priority for the fund will be to build capacity within partner organizations and state agencies responsible for implementation of the Clean Water Priorities, including personnel and administration needs and information technology systems. As part of stage one but especially in stages two and three of the Clean Water Initiative, the Fund will extend the

State's capacity to provide direct support to municipalities, businesses, farmers, loggers, and homeowners in identifying and implementing high priority water quality improvement projects.

The Fund will build on existing grant and loan programs within each state agency and rely on those programs to provide administrative support and Fund management. Those programs will direct money to grant and loan recipients, contractors and to partner organizations and state agencies. Existing grant programs that would be responsible for Clean Water Fund investments and enhanced by the Clean Water Fund include clean water grant programs such as the VTrans Vermont Better Back Roads Program, VAAFMs Best Management Practices Program, and ANR's Ecosystem Restoration Program.

The Clean Water Fund will operate under the following governance structure, with a reporting process intended to ensure that the Clean Water Initiative continues to receive the resources and support necessary to meet the goals in the Clean Water Priorities:

- The Clean Water Fund will be managed by a steering committee consisting of state government officials appointed by the Governor and staffed by state agency employees.
- The Steering Committee will act in consultation with an Advisory Board made up of appointments by the Governor and General Assembly, representing stakeholder interests.
- The Steering Committee will report annually on expenditures, progress, and future needs; identify funding and implementation priorities; and recommend revenue options for Fund needs.
- Funds will be administered by state agencies to invest directly in pollution control and to support state agencies and partner organizations doing that work.

Federal Funding to Support Clean Water Initiatives in Vermont

Federal agencies and programs continue to serve a crucial role in helping to leverage local and state funds to support Vermont's clean water goals. Vermont receives federal funding and assistance from a mix of federal agency programs to help the State target the five priority areas described above. Below is a list of important federal partners. Although some of these programs have experienced budget cuts in recent years, maintaining and enhancing federal funding is an essential to accomplishing the Vermont Clean Water Initiative.

- US Department of Agriculture, Natural Resources Conservation Service
 - Environmental Quality Incentive Program
 - Nutrient Management Planning,
 - Wetland Protection and Restoration
 - Conservation District Agricultural Resource Specialists
- US Department of Agriculture, Farm Services Agency of Natural Resources
 - Conservation Reserve Enhancement Program
- US Department of Agriculture, US Forest Service
 - Urban and Community Forestry
- US Department of Agriculture, Rural Development
 - Loans and grants to rural communities for wastewater treatment plant projects
- US Environmental Protection Agency

- Section 319 Nonpoint Source Program
- Section 604(b) Water Quality Planning Grant Program
- Capitalization grants to the Clean Water State Revolving Loan Fund
- Lake Champlain Basin Program
- Great Lakes Fishery Commission
- US Army Corps of Engineers
- Federal Highway Administration
- US Fish and Wildlife Service, Partners for Fish and Wildlife

ANR, VAAF, and VTrans continue to seek additional federal resources to support planning clean water actions, including the following opportunities:

- In August, 2014, USDA Secretary Vilsack announced that his agency would make \$45 million available over the next five years through the Natural Resource Conservation Service (NRCS) to continue to support implementation of agricultural nonpoint source controls specifically in the Lake Champlain Basin. Approximately \$7 million of the \$45 million represents new funding.
- In September, 2014, VAAF submitted a \$20 million, 5-year proposal to the NRCS Regional Conservation Partnership Program, in collaboration with the State of New York, to increase implementation of agricultural water quality projects in the Lake Champlain Basin. If successful, this grant will allow Vermont to leverage up to \$25 million additional dollars from a variety of public and private partners for a total \$45 million investment in water quality protections.
- In November, 2014, ACCD, with VTrans and ANR, submitted a threshold request to the U.S. Department of Housing and Urban Development pursuant to the National Disaster Resilience Competition Notice of Funding Availability (NOFA). If selected to continue in the next round of the competition, Vermont anticipates presenting a proposal to fund resilience efforts in eligible communities, with expected benefits for water quality.
- ANR, VAAF and VTrans will continue to work closely with the EPA-funded Lake Champlain Basin Program, which supports a number of important clean water initiatives, grant and loan programs.

Key Partners in Delivering Assistance to Municipalities, Farms, and Small Businesses

Two key partners in the State of Vermont's Clean Water Initiative are Vermont's eleven regional planning and development agencies (the RPCs) and the Vermont League of Cities and Towns (VLCT).

Under the Vermont Municipal and Regional Development Act, the Vermont RPCs have responsibility to support and oversee municipal planning efforts.¹⁵ By law, all municipalities within the RPC jurisdictions are members of a regional planning commission, and most participate in the regional planning process. Each RPC is governed by a board with members appointed by the municipalities, and the RPCs implement a variety of projects and programs

¹⁵ The RPCs operate under Vermont Municipal and Regional Planning and Development Act, 24 V. S. A. § 4301–4498.

tailored to municipal needs. As part of the Clean Water Initiative, the State proposes to leverage planning and oversight of municipal planning by helping to add a water resources coordinator at each RPC. These coordinators will help towns manage the growing number of overlapping local, state, and regional plans for transportation, floodplain and river management, flood hazard mitigation, stormwater management, and other plans that address land use and development. Each of these planning efforts has evolved separately yet, when viewed together, will provide the state and local communities a map for managing land use consistently, with the goal of protecting water quality and guiding investment priorities of the Clean Water Fund.

Some examples of ways that RPCs will assist in meeting the State's clean water goals are:

- Sponsor Stormwater Master Planning. This kind of planning looks comprehensively at a municipality's impervious surfaces to identify, prioritize and remediate polluted runoff and erosion problems.
- Review municipal plans for compliance with State Statute. In their work with towns to ensure that municipal plans are compliant with state statute, RPCs can ensure that there is adequate consideration for clean water, including management of stormwater runoff.
- Provide technical assistance in the development of water quality and flood resilience language in municipal bylaws and town plans. RPCs will provide technical assistance in the development and promotion of model bylaws and language for town plans that focus on important clean water priorities, such as stormwater management and flood resilience.¹⁶
- Assist in Trainings and Workshops. RPCs will work with ANR staff, VTrans, ACCD, VLCT, conservation districts and watershed groups in providing trainings on regulatory and non-regulatory water quality topics.
- Support the Tactical Basin Planning Process. The RPCs can help promote greater participation in the development of tactical basin plans, provide monitoring and assessment assistance, aid in communications, develop maps, reports.
- Assist in Road Inventories, Prioritization, and Mapping. The RPCs will assist municipalities to develop road inventories and map priorities for implementation of best management practices.
- Assist in Mapping of Flood Hazards. The RPCs will develop flood risk maps and other information on flood hazards.
- Source of information about the permitting process. The RPCs can play an important role in helping direct the public and developers to the appropriate jurisdictions when they have projects which may impact water resources.

In addition, the State proposes to further support municipalities by expanding operational capacity at the Vermont League of Cities and Towns (VLCT). Currently, VLCT has a part-time water resources coordinator, who delivers education, outreach, and technical assistance to municipalities on a range of water quality and flood resiliency-related topics. Increasing that position to full time will enable VLCT to offer more trainings, workshops, and seminars, local ordinance and bylaw development, and direct communications to municipalities via monthly newsletter articles, weekly legislative reports, and technical papers.

¹⁶ Vermont League of Cities and Towns have a model stormwater bylaw: <http://www.vlct.org/municipal-assistance-center/water-resources-assistance/>

Reducing polluted runoff fundamentally means changing or making adjustments to our land uses. Changing land uses requires education. All polluted runoff sources – farmers, municipal road crew and highway departments, commercial business owners with large parking lots, developers at construction sites, and residential homeowners – need opportunities to learn about the problems with polluted runoff, understand their options to address the problems, and subsequently how to take action.

There are many other important partners in Vermont that conduct restoration projects at the local level as well as offer educational programs to targeted audiences. These partners include farmer alliances and cooperatives, watershed organizations, conservation districts, regional stormwater runoff education programs, and stormwater utilities. ANR's Ecosystem Restoration Program (ERP) will continue to support these organizations through expanding its competitive grant program.

In addition, ANR currently offers only limited grants to support delivery of technical assistance and educational program, targeting municipalities, road crews, businesses including farmers, homeowners, and the public. The Clean Water Fund will support an expansion of the Ecosystem Restoration Program to specifically support this need.

Stage One Needs at the Agencies of Natural Resources, Agriculture, Food and Markets and Transportation

The three principal state agencies engaged in water quality restoration and protection – VAAF, VTrans, and ANR – are preparing to conduct capital project planning, provide technical assistance, oversee implementation, and ensure compliance with obligations required as part of state and federal clean water directives.

New revenue will be necessary in SFY 2016 in order to establish the Clean Water Fund and begin meeting stage one needs. Revenue sources to support implementation of stage one include a mix of capital funds, fees, and the Clean Water Fund. The Governor's budget proposal, to be submitted to the General Assembly in January, 2015, will describe the state's proposals for additional fee revenue and capital fund requests dedicated to clean water.

The new Clean Water Fund will be structured to receive eligible federal financial assistance and contributions from private donations. The Fund will be instrumental in filling gaps in existing programs to ensure that municipalities, farms, and businesses are getting the technical and financial support they need to implement water quality improvement projects.

Below is a short description of the recommended financial tools for the new Clean Water Fund. These options were selected from those described in the Act 138 Report and other sources,¹⁷ based on the long term viability and stability of the options to support the Fund, as well as the degree to which the financial tool bears a relationship to water quality. We estimate that the Clean Water Fund will need approximately four to six million dollars in Fiscal Year 2016 depending on variables such as the amount of federal grants, and private contributions. The

¹⁷ Water Quality Remediation, Implementation and Funding Report, January 14, 2013: http://www.watershedmanagement.vt.gov/erp/docs/erp_act138report.pdf

revenue sources may be expanded or contracted in the future as we get a greater understanding of the needs and opportunities for the uses of the Clean Water Fund.

These funds could be raised through two primary sources of revenue:

A Simple Impervious Cover Fee, applied to Commercial, Industrial, Institutional, and Agricultural Parcels in the Lake Champlain Basin

This financial tool would apply a simple tiered fee system applicable to commercial, industrial, institutional and agricultural land use categories within the Lake Champlain Basin. The fee would vary, based on the relative size of the parcel and the land use category. For farms, the size of the parcel would be limited to the farmstead, where most of the farm's impervious cover is located, and would not include fields. The benefit of an impervious cover fee is the association of the fee with the factors that influence the generation of stormwater runoff, i.e. impervious areas and agricultural lands (parking lot, building footprint, driveways, and barnyards).

Agricultural nonpoint sources represent the largest source of nutrient and sediment pollution in the Lake Champlain basin and statewide. Likewise, although commercial, industrial and institutional land uses represent a relatively small fraction of the overall impervious acres in the Lake Champlain Basin, commercial, industrial and institutional parcels are typically more intensely developed. The median percent impervious for commercial properties is nearly 50 percent, meaning that nearly 50 percent of the land area on commercial properties is impervious.¹⁸

Nationwide, there are over 1,400 financial management systems in 39 states and the District of Columbia used to raise funds for investment in better managing stormwater runoff and providing flood protection.¹⁹ More than 80 percent of the of these financial systems use an impervious cover fee based on an Equivalent Residential Unit (ERU) as a proxy for the extent of impervious cover.²⁰ This approach applies a fee that is based on the amount of impervious area for each land use category, in relation to the typical amount of impervious area for a single family residential household. Each category can be further partitioned into tiers based on size to be more equitable. The ERU then becomes a multiplier to determine rates for properties that make up the other land use categories.

¹⁸ O'Neil-Dunne, J. Impervious Surface Land Use Analysis. University of Vermont, Spatial Analysis Laboratory, January 12, 2014.

¹⁹ Campbell, W. (2013) Western Kentucky University Stormwater Utility Survey. Western Kentucky University, Bowling Green, KY, *available at*: http://www.wku.edu/engineering/civil/fpm/swsurvey/western_kentucky_university_swu_survey_2013.pdf.

²⁰ Equivalent Residential Unit (ERU) is a square footage unit of imperviousness that represents the median horizontal impervious area of a typical residential property in Lake Champlain Basin. We are using ERUs as a unit of measure in this analysis, even though we are not proposing to assess the fee on residences, since it can be determined using an established methodology. As described in this report, impervious area is the most important factor affecting stormwater runoff and influencing the cost of managing the impacts from runoff.

Using this approach to raise \$1 million, annual impervious cover fees applied to commercial, industrial, institutional,²¹ and agricultural parcels would range from \$100 to \$400 per ERU depending on how the fee is structured. For each additional \$1 million increment sought to be raised, the fee would need to be increased accordingly. Most commercial properties have the equivalent of three ERUs.

In order to refine this option, over the coming months, the Administration proposes to work with the General Assembly to answer a number of key logistical questions, including:

- Identifying the precise number of commercial, industrial, institutional and agricultural parcels and farms in the Lake Champlain Basin, including refined information regarding the average amount of impervious areas on the parcels subject to the fee;
- Describing the process to set and modify fee rates;
- Identifying the most effective collection mechanism for the fee;
- Assessing the value of further partitioning the land use categories based on size of total impervious area;
- Describing a process to conduct public outreach and education to engage businesses, farms, municipalities and the public regarding the fee;
- Evaluating the potential for reduced fees for certain parcels:
 - for parcels in designated downtowns to promote smart growth, and
 - for parcels in communities that already collect stormwater fees; and
- Exploring how to implement a system of credits for properties implementing appropriate best management practices to capture and treat stormwater, in order to reduce the fee burden for those properties.

Phosphorus and Nitrogen Fertilizer Charge

Another financial tool closely linked to water quality would be a charge on fertilizers. Nearly every state imposes a fee on fertilizers, and many assess those fees on fertilizers at a higher rate than Vermont. A focus on fertilizers makes sense because of the heightened risk of water pollution associated with the application of nutrients to land (e.g., fertilizer application on farm fields or gardens), and monitoring data shows that phosphorus and nitrogen are the two major nutrients of concerns for Vermont's surface waters. Nutrients in fertilizers are of a particular concern, since they are in the chemical form that is more readily assimilated by algae, which can result in excessive algae growth and increased incidence of algae blooms.

Currently, agricultural fertilizers used on Vermont farms are exempt from a sales or excise tax. Since the majority of fertilizers sold in Vermont are imported, the added benefit of placing an excise tax on fertilizer products would be to use price to influence the amount of fertilizer being imported into the basin and improve nutrient management by encouraging field-specific application of fertilizers. A one percent excise tax on all fertilizers, including the non-agricultural fertilizer use (already subject to an excise tax) would raise approximately \$450,000 annually.²²

²¹ "Institutional" refers to Vermont's colleges, universities and hospitals.

²² This figure is based on 2013 data from the Vermont Agency of Agriculture, Food and Markets.

Vermont currently employs a fertilizer registration and tonnage fee to support inspection of all commercial fertilizer products sold in Vermont. The current fee supports inspections to ensure that fertilizer products are labeled correctly, meet the chemical guarantee specified on the label, and are stored safely. The current fee is \$0.25 per ton sold in Vermont, with a minimum fee of \$50.

VAAF and ANR anticipate convening the Agriculture Workgroup over the coming months to explore these and other funding options. The Agriculture Workgroup is an informal advisory committee made up of farmers and farm service providers. The Workgroup assisted the State in evaluating strategies to reduce agricultural runoff that are described in the TMDL Phase I Implementation Plan.

More detailed information on this revenue option will be presented to the General Assembly with the Governor's budget in January. The Administration will continue to work with stakeholders to discuss these and other revenue options over coming months in anticipation of needs for implementing Stages 2 and 3 of this strategy.

Stages Two and Three – Moving Projects Forward and Getting Results

Following investment in the structural and personnel needs required to launch the Clean Water Initiative, the State will begin work with partner organizations, municipalities, farmers, businesses and other private landowners to address the Clean Water Priorities through full implementation of the Phase I Plan, Phase II planning and implementation under the Lake Champlain TMDL, as well as continued implementation of the Surface Water Strategy statewide through the ANR tactical basin planning process.

Finally, the State will continuously monitor and report the results of stage one and stage two investments, evaluate the effectiveness of planning and implementation processes, and provide recommendations for new, increased or refocused efforts. The primary metrics for measuring the effectiveness of the Clean Water Initiative will be (i) the accountability framework established by EPA for the Lake Champlain TMDL, and (ii) monitoring and mapping efforts established in the basin planning process and carried out by ANR, VAAF and VTrans staff in collaboration with the RPCs, municipalities, farmers and other clean water stakeholders. The Administration will also work with the General Assembly to establish other Results Based Accountability measures to gauge the population level impacts and effectiveness of investments made by the State of Vermont under the Clean Water Initiative. "Lean" government principles will be used to ensure that new and enhanced programs deliver timely and predictable results. The ANR Surface Water Strategy also describes a full suite of monitoring and assessment tools to support watershed specific planning and implementation processes.

Stages two and three will feature increased incentives, grants and loans through the Clean Water Fund to municipalities, farmers and private landowners to implement Phase II plans and comply with new regulatory requirements implemented as part of the Phase I Plan and Surface Water Strategy. As noted above, ongoing funding needs will be determined on an annual basis and reported by the implementing agencies to the General Assembly through the Clean Water Fund governance and reporting process. Although total needs to address all of the Clean Water Priorities cannot be calculated with precision today, it is predicted that Clean Water Fund

expenditures will increase in State Fiscal Years 2017 and 2018, in order to support the increased cost of compliance with new regulatory requirements established during stage one. Annual Clean Water Fund reports will include recommendations for new sources of revenue, as needed to support those increased investments.

Conclusion

This report describes a Clean Water Initiative for all of Vermont, and involving many state agencies and partners, not just the Vermont Agency of Natural Resources. Over the next twenty years, ANR will continue to work with our partner agencies, particularly VAAF, VTrans and ACCD, but also with the Tax Department, the Vermont Treasurer's Office, Buildings and General Services, the Office of the Attorney General and the other affected state offices to ensure that Vermont has a coordinated approach to achieving the clean water strategies identified in this report.

Our federal partners and the members of the Vermont federal congressional delegation will also play a critical role in ensuring that Vermont has the resources to achieve our shared goals.

Finally, we will work with Vermont's communities, regional planning and development organizations, local and statewide conservation groups and businesses across all affected sectors to ensure that we implement these strategies in a manner that reflects Vermonters' strong commitment to clean water.

As noted, this effort will require substantial new investments. New revenue is needed to support capacity needs at the responsible state agencies and partner organizations, as well as to fund grant and loan programs capable of providing a state share of costs required to fulfill the obligations of municipalities, farmers, businesses and private landowners. Given, however, the wide scope of needs and diffuse sources of water pollution in the Lake Champlain Basin and around Vermont, the cost to fully implement the Clean Water Initiative is unknown. Likewise, the extent of support from Federal partners and private donations is also unknown. Finally, the timeline for full recovery of Lake Champlain and other surface waters cannot be estimated with complete precision so the State will have to continually refocus its efforts as new monitoring data is received, new results are mapped and new milestones reached, to ensure that investments continue to target the most strategic, cost-effective needs around the State. Mindful of those and other unknown factors, the State has set forth a stepwise plan to build capacity, plan and invest in a clean water future. Annual progress will be reported through the Clean Water Fund, and annual recommendations to the General Assembly will detail new and ongoing funding needs and potential sources of new revenue needed to meet those needs.

Appendix

Signs of Success: Agricultural Applications



Corn crop showing bare soil & no buffer, increasing erosion and phosphorus loading



Hay crop & buffer reduce erosion and phosphorus delivery to streams



Gully erosion from concentrated water



Grassed waterway to prevent gully formation

Signs of Success: Agricultural Applications



Uncontrolled livestock access to stream



Installation of livestock fencing & buffer



Runoff draining into ditch



Vegetated buffer along ditch

Signs of Success: Agricultural Applications



Gully formation & runoff on bare soils

Cover crop protecting soils from weathering

Signs of Success: Agricultural Applications



Phosphorus-laden silage leachate discharging to stream



Silage leachate treatment



Improved manure storage

Signs of Success: Stormwater Management



Streambank erosion from stormwater runoff



Stormwater treatment ponds

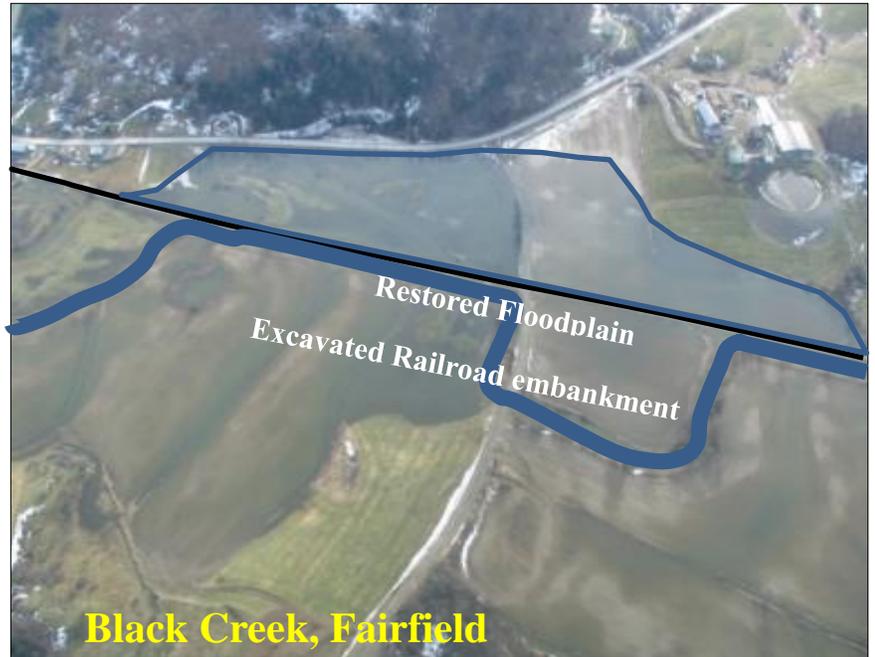


Eroding roadside ditch



Ditch stabilization saves road and reduces erosion

Signs of Success: Rivers Channel Stabilized



Restored floodplain

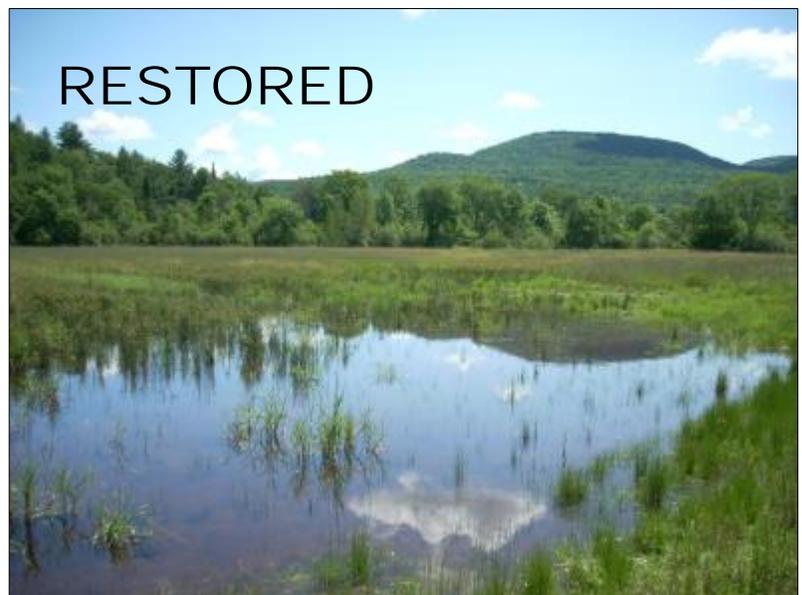


Removal of elevated railroad embankment

Signs of Success: Wetlands Management



Flooded cornfield, former wetland



Restored wetland, former farmland

Signs of Success: Forest Management



Unmanaged stream crossing at logging site



Temporary skidder bridge