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VERMONT ENVIRONMENTAL TRUST FUND ESTABLISHMENT

An Analysis of Potential Strategies

Presented to the Vermont House Committee on Fish, Wildlife and
Water Resources

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EXECUTIVE SUMMARY

In 2013, Vermont developed the Lake Champlain TMDL Phase 1 Implementation Plan to reasonably assure the U.S. Environmental Protection Agency that Vermont will reduce phosphorus loading in Lake Champlain attributable to nonpoint sources. This plan proposes the establishment of the Vermont Clean Water Improvement Fund (VCWIF) to assist the Vermont Agency of Natural Resources in delivering financial and technical support to communities, businesses, farmers and other stakeholders to help improve the clean water of Vermont. This report proposes a variety of potential funding mechanisms for VCWIF. VCWIF will require a budgetary expenditure of \$156 million per year for ten years to fulfill the plan laid out by the State, which at the same time excludes broad-based taxes as a possible source of funding. Given the fact that Vermont's entire existing Municipal Pollution Control Budget is approximately \$51 million, the goal of \$156 million per year is an ambitious objective to attain. Regardless, Vermont's Department of Environmental Conservation currently offers a wide array of grants and loans for watershed planning and water pollution control projects into which VCWIF could tap. Furthermore, the specifics of fund administration need to be developed.

Beyond analyzing existing in-state and federal sources of financing, this report utilizes a comparative methodology to analyze environmental trust fund models adopted by the states of North Carolina, Nebraska, and Maryland. Operating on diverse funding schemes and intriguing administrative methods, the aforementioned states manage to accumulate annual revenues ranging from \$14 million to \$50 million. Synthesizing those findings into a set of recommendations applicable to Vermont, this report also examines various fees, taxes, and other sources of revenue that may be uniquely suited to Vermont. Additionally, it also provides further recommendations on viable fund administration strategies and ways of ensuring buy-in from Vermont's voters. Given the constraints placed on VCWIF's funding sources, the report concludes that additional research into more comparable environmental trust funds, such as at the county level, is necessary and that reaching the goal of \$156 million for even one year will be extremely difficult, if not impossible, without state appropriations or the use of broad-based taxes.

1. INTRODUCTION

1.1 Overview of the Vermont Lake Champlain Phosphorus TMDL Phase I Implementation Plan

Lake Champlain forms a natural border between the states of New York and Vermont, and is the sixth largest freshwater lake in North America. Given its ample water supply, status as a fishing destination and a venue for tourism and business enterprise, Lake Champlain continues to contribute significantly to the regional economy. Since the 1990s, however, the Lake has been threatened by excessive phosphorus loading that stimulates excessive growth of algae, spurs the production of algal toxins, disrupts the balance of freshwater nutrients, reduces the availability of fish varieties, and adversely affects the scope of Lake's recreational uses.¹ Vermont, along with New York, came



under fire from the U.S. Environmental Protection Agency (EPA) for violating the Clean Water Act in the 1990s. In 2002, Vermont and New York responded by developing a Lake Champlain Phosphorus Total Maximum Daily Load (TMDL). In 2011, EPA revoked its approval of the Vermont portion of the plan, and as a result, Vermont released the Vermont Lake Champlain TMDL Phase 1 Implementation Plan in 2013. This sets standards for individual waste load allocation in each of the wastewater treatment facilities along with defining phosphorus allocations to agricultural, developed, and forested lands in each of the sub-watersheds. One of the items on the agenda is to establish the Vermont Clean Water Improvement Fund (VCWIF) to prevent further pollution of Lake Champlain.

Phosphorus loading is attributable to two sources of pollution: point sources and nonpoint sources. While point sources include tangible physical facilities such as wastewater treatment plant or closely regulated storm water waterways, nonpoint source are linked to processes that span broader geographic regions such as soil erosion, runoff from agricultural fields, snowmelt or storm water drainage from roads, and lawns or parking lots. The Lake Champlain Basin Program (2014) suggests that nonpoint sources account for approximately 95 percent of the total phosphorous load, which highlights the need to contain soil erosion and to adequately manage the storm water runoff from roads, lawns, and parking lots.² However, developed lands also contribute to nonpoint source phosphorous loading, such as contaminated soil spreading from construction sites.

From 1990 to 2008, four segments of Lake Champlain experienced increases in phosphorus concentrations with all but two lake segments exceeding the Lake's TMDL.³ As evident from Figure 1, nonpoint phosphorus loading grew steadily from 2001 to 2008, and not one year between 1991 and 2008 did it reach the TMDL target level. The release of final levels of pollution is pending, however.

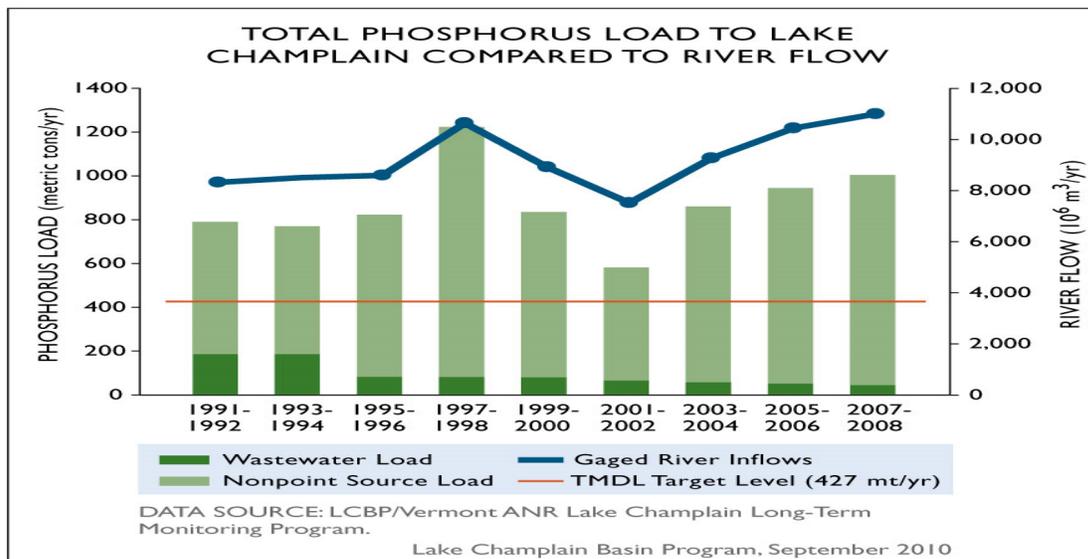


Figure 1 - Total Phosphorus Load to Lake Champlain Compared to River flow 1991-2008
 (Source: Lake Champlain Basin Program, Reducing Phosphorus Pollution)



1.2 Financial Strain on Vermont's State Budget and Implications on VCWIF

VCWIF requires funding in two categories: staff support within executive state agencies and water improvement grants targeted at communities, businesses, farms and project partners.⁴ Noting that Vermont “currently lacks the funding necessary to respond adequately and in a timely ways to the demands for remediation and water quality protection,” the General Assembly passed Act 138 in 2012, which lists a total of 16 possible financial tools for generating additional revenue for water quality and eight options for administering a statewide water quality program.⁵ To properly address the water quality problems, the General Assembly mandated that the Agency of Natural Resources draft a report providing “specific, detailed recommendations for strategic investments, the implementation of which is necessary in the next five to 10 years in order to preserve, protect, and remediate existing water quality problems.”⁶ Aside from the provision of financial resources to state and non-state parties tasked with overseeing and implementing the program, the State of Vermont envisions the formation of the Vermont Clean Water Improvement Fund as part of the Vermont's Agency of Natural Resources/Department of Environmental Conservation (DEC).

This report lays the groundwork for the development of an environmental trust fund that will effectively draw on innovative funding mechanisms and engage relevant state trustees and beneficiaries. It will address how the Vermont Clean Water Improvement Fund can meet its objective of providing “coordinated financial and technical support to communities, businesses, farmers, foresters, developers, state agencies and watershed protection partners.”⁷

1.3 Methodological Note: Case Study Analysis

In order to identify viable funding options that may serve VCWIF, this report compiles a sampling of environmental trust fund cases from selected states. Each case was selected and analyzed based on similarities through the following seven variables:

1. Size of state population and overall tax revenue
2. Degree of environmental violations
3. Specific mechanisms for trust funds financing
4. Percentage of state revenue committed to environmental funds
5. Fund administration methods
6. Length of implementation period
7. Public reaction to funding methods

Once the relevant trust fund cases were identified, interviews with key policy actors were conducted in accordance with semi-structured interview templates. Using the comparative method, findings were synthesized from the selected cases of North Carolina, Nebraska, and Maryland.



2. VCWIF NEEDS ASSESSMENT

2.1 Financial Demands and Constraints on VCWIF

To fully meet the needs of Lake Champlain, Vermont estimates that VCWIF would need to generate \$156 million annually over a time span of ten fiscal years. The biggest challenge is that broad-based taxes, meaning the income tax, sales tax, purchase/use tax, and property tax, cannot be employed to reach this mark. Furthermore, the governor's fiscal year 2015 recommended budget projections list no budgetary allocation for water restoration from fiscal year 2013 onwards.⁸

Vermont is therefore seeking alternative funding sources to bridge VCWIF funding gap. Although existing state funds may not be a viable source of revenue, federal assistance is readily available. One of the most prominent examples of recent federal contributions is the U.S. Department of Agriculture's (USDA) commitment to invest \$45 million of federal funds towards improving soil and water quality in the Lake Champlain Basin over the course of the next five years.⁹ USDA's investment should be considered not only in terms of VCWIF's budget for the next five years but also in terms of planning funding sources that will fill the vacuum USDA will leave in five years.

2.2. Existing Financing Mechanisms for Environmental Remediation

Vermont's DEC offers a variety of grants and loans to watershed planning projects and other similar programs. For instance, municipalities may apply for water source protection loans for the "purchase of land or conservation easements to protect public water supply sources."¹⁰ Similarly, municipalities may take advantage of pollution control programs to fund initiatives such as the construction of pollution control facilities, carry out phosphorus removal, or enact sewer outflow abatement. Nonpoint source management grants, Vermont Watershed (Conservation License Plate) grants, and Watershed Protection Assistance Grants provide aid with a comprehensive array of activities related to water quality improvement, runoff control, and lake shoreline re-establishment.

To date, Vermont's Conservation Motor Vehicle Registration Plate Program has issued a total of 25,254 conservation license plates, raising a cumulative total of \$2,705,171 since their release in 1997.¹¹ Estimates indicate that half of the proceeds from these license plate sales fund the Vermont's Watershed Grants program, which dispenses grants to both local and regional water-related projects. Watershed Grants Fund procured an operating budget of \$1,079,948 from the sale of conservation plates, although revenue collected varies widely from year to year.¹²

Besides co-financing enterprises related to water quality management, DEC put in place a number of grants intended for minimizing the actual sources of contamination. For



instance, the Vermont Better Backroads Grant allocates a budget of up to \$7,000 for correcting an existing road erosion problem or for conducting a road erosion inventory.¹³ This entails the creation of a capital budget plan to sort out the environmental issues. Vermont may consider tapping into this source of financing for VCWIF in addition to federal grants.

2.2.1 ERP Capital Grants and Ecosystem Restoration Grants Expenditure

In an effort to reduce the surface water pollution from runoff that contains nutrients such as phosphorus, the Ecosystem Restoration Program provides financial assistance ranging from \$10,000 to \$75,000 for storm water-based and surface water restoration-focused projects, among others. Eligibility criteria for project funding stipulate that the proposal must exhibit the following: reducing nutrient and sediment pollution such as runoff containing nutrients such as phosphorus, addressing regulated nonpoint sources, targeting high priority needs, providing stewardship assurance, demonstrating consistency with the state's surface water management strategy, and eligibility for capital construction funds.¹⁴ VCWIF should capitalize on its comprehensive Lake Champlain Phosphorus TMDL Phase I Implementation Plan by using it as a framework for funding proposal development.

2.2.2 Municipal Pollution Control Projects Priority List for State Fiscal Year 2013-14

State FY 2014 Municipal Pollution Control Priority List projects operate on a budget of approximately \$51 million annually, and they are funded through federal capitalization grants and revenue allocated to the program by Vermont's legislature. Lake Champlain Phosphorus TMDL Report, for example, set in motion a stream of funding for Phosphorus Removal Projects at previously identified wastewater treatment plants. Vermont's annual spending continues to rely heavily on federal capitalization grants, as illustrated by the recurrence of the Clean Water Intended Use Plan that details item-by-item appropriation of the EPA Clean Water State Revolving Fund (CWSRF) for each fiscal year. Despite Vermont's efforts to ensure that the CWSRF operates in perpetuity to provide continuing financial assistance to municipalities in need of pollution control, certain projects are not completely covered by this revolving fund. Instead, total eligible project costs will require federal subsidies or local bonds for successful completion. Therefore, Vermont requires both state appropriations and federal grant money to allocate this \$51 million, a sum much less than \$156 million, which is what needs to be raised to fund VCWIF.

2.3 EPA Environment

To add context to the need and urgency of the above issues, EPA views the challenge to the original TMDL plan as a welcome forced reassessment.¹⁵ Great faith had been placed in voluntary non-point source measures that proved close to impossible to measure and enforce. Without reassurance, EPA disapproved the TMDL and it has thus become their



responsibility to replace it. Their goal has been to work as closely as possible with state agencies to clean up Vermont's Lake Champlain.¹⁶ Unfortunately the work Vermont is facing is uncommon in the nation and virtually unheard of in New England. Thus, it is one of EPA's top priorities, if not the top priority, moving forward.¹⁷ Vermont is expected to stick with the timing and requirements of the phase one implementation plan and continue through to basin-to-basin implementation within the next several years.¹⁸ Unfortunately EPA sees little room to cut costs and still attain the scale of the project that has been described by the Governor in his 2015 Inaugural Address.

While EPA Region 2 welcomed the challenge to Vermont's TMDL, a representative agrees that in an ideal world, New York would have undergone similar measures at the same time.¹⁹ The state of New York, however, has not experienced the same legal action that acted as a catalyst for reassessment in Vermont.

3. NORTH CAROLINA

With a population of almost ten million, North Carolina has an economy that has transitioned from being predominantly based on manufacturing and tobacco to one that also includes aerospace and aviation, biopharmaceuticals, and other service industries.²⁰ While North Carolina differs from Vermont economically and demographically, the North Carolina's Clean Water Management Trust Fund (CWMTF) provides a good case study for developing VCWIF because of its sole focus on the state's surface water and large scope of projects. In its eighteen years of existence, CWMTF has funded over 1,500 projects, totaling more than \$1.5 billion. For every dollar the state has invested in the fund, the state estimates it has received a return of \$1.50, as of 2012.²¹

3.1 Establishment

CWMTF was established in 1996 by the state legislature with the initial mission of protecting surface water through watersheds, stream restoration, infrastructure, and wastewater treatment. The creation of this fund was not due to a federal mandate; rather it was based on a political campaign to protect North Carolina's surface water and the state's drinking water, tourism, agriculture, and more in the process.²²

3.2 Funding

CWMTF's funding derives from two sources. The majority of its funding comes from direct appropriations from North Carolina's legislature. The second, less significant source, is the sale of specialty license plates. CWMTF receives revenue from the sale of personalized plates and out-of-state collegiate plates. License plates raise roughly \$350,000 per month, which adds up to approximately \$4.2 million per year. Specialty license plate sales, combined with annual appropriations from the legislature combine to form the \$12 million to \$14 million budget the CWMTF is able to distribute each year. Demand on the trust fund, however, is much higher; CWMTF often receives annual grant requests totaling approximately \$100 million.²³ While Vermont already has a



Conservation License Plate Grant, North Carolina's program speaks to possible additional uses of those revenues. Though Vermont's government has thus far decided against using state appropriations to fund VCWIF, the solutions found by North Carolina may sway its opinion.

Because the creation of the CWMTF was not necessitated by a federal mandate, the appropriations awarded to CWMTF are especially variable and dependent on political whims. The 2012-2013 budget passed by Governor Bev Purdue and the General Assembly made significant changes to the trust fund, including assimilating the National Heritage Trust Fund into CWMTF, giving CWMTF the authorization to acquire lands with ecological, cultural and historic significance. Another change was moving wastewater and storm water treatment out of CWMTF's purview.²⁴

3.3 Administration

Originally, CWMTF was an "independent non-regulatory agency housed for administrative purposes in the Department of Environment and Natural Resources (DENR)."²⁵ North Carolina's DENR provided administrative help but no direct oversight. With the changes made by the 2012-2013 budget, however, CWMTF is now directly accountable to DENR. Under this budget, administrative costs were also significantly reduced. The board decreased from twenty-one members to nine members. Marketing and public relations for the trust fund were also eliminated due to restructuring. Administrative costs are \$2.5 million, and they are received as an appropriation from the legislature for operations.²⁶ Additionally, CWMTF no longer commands the authority to fund wastewater improvement or conventional storm water projects, in spite of being granted the permission to acquire lands with ecological, cultural and historic significance to the State of North Carolina.²⁷

North Carolina's Governor, President Pro Tempore of the Senate, and Speaker of the House each appoint three of the Trustees. An advisory council - comprised of the Commissioner of Agriculture, Chair of the Wildlife Resources Commission, Secretary of DENR, and Secretary of Commerce or their designees - overlooks the board of trustees. This arrangement works well in terms of accountability and transparency since the board members are public appointees.²⁸ The diverse political range of board members is interesting as it prevents bipartisan political allegiances.

4. NEBRASKA

The Nebraska Environmental Trust was created in 1992 to broadly protect Nebraska's environment. Since its creation, it has funded over 1,600 projects in all of the state's 93 counties.²⁹ Administrated by a board of directors that draws from the heads of state agencies and citizen appointees, the trust is financed entirely by the state lottery. A state constitutional amendment was passed to authorize the state lottery in 1992, tying its creation to funding of the Environmental Trust. Specific lottery appropriations were at



the direction of the state legislature, however. Twelve years later after establishment, Nebraska's Constitution was further amended to permanently tie lottery proceed levels to the Trust. Today, 44.5 percent of Nebraska state lottery proceeds go to the trust, and only three percent of the of the trust's revenue is spent on administrative costs. This provides a successful and sustainable environmental fund for study.

4.1 Establishment

In 1991, following the failure of a proposed cigarette tax, Nebraska Governor Ben Nelson proposed an amendment to create a state lottery with revenue benefiting an environmental trust fund. This satisfied the demands of citizens who wanted a legal form of gambling in Nebraska as well as the aspirations of environmental lobbyists. Furthermore, it fulfilled an EPA mandate to establish regional landfills. Voters from this interesting political coalition approved the amendment with approximately 60 percent of the vote in 1992.

In 2004, following over years of reductions in lottery proceeds allocated by the state legislature to the Nebraska Environmental Trust, the lottery funding level was enshrined into the state Constitution to prevent further erosion. This took place during a unique period of large political support for the Trust. Mark Brohman, Director of the Nebraska Environmental Trust, recommends a constitutional approach to establishing the fund and ensuring adequate funding levels can be maintained indefinitely and beyond the reach of political whims. Director Brohman states that "about 40 percent of Nebraskans don't know about the fund" and 30 percent of the people who are aware of it criticize the Trust for its use of public money.³⁰ State residents tend to incorrectly classify the revenue source as taxes, though lottery proceeds are distinct as an optional buy-in.

4.2 Funding

Concurrent with the establishment of the Trust was a state lottery. Today 44.5 percent of lottery proceeds are used to fund the Trust. These lottery proceeds generate approximately \$18.5 million a year in revenue for the fund, an amount largely sufficient to fund all of the state's desired grant applications. The remaining half of the lottery proceeds benefit education, the state fair, and gambling addiction therapy.³¹ Vermont, by contrast, allocates a majority of its state lottery proceeds to education.³² Although Vermont channels its state lottery proceeds exclusively towards the state's Education Fund while Nebraska's lottery funds are siphoned into its Environmental Trust, the Vermont Legislature may consider allocating a certain proportion of its lottery ticket sales to VCWIF or creating a new lottery game.³³

While a decrease in gambling could severely threaten the Nebraska Environmental Trust, a recent increase in gambling has instead caused annual revenues to nearly triple since the Trust's inception. In total, \$221 million has been spent over the last 20 years. Additional local and state entities have matched every dollar spent, generating over \$400 million in matching dollars since 1992 for the Nebraska Environmental Trust.³⁴



In 2000, an endowment for the Trust was created with \$900,000 to ensure protection against politics and gambling downturns. At a level of \$200 million, this fund would have been self-sustaining. According to Director Brohman, however, a sizeable endowment could incentivize state legislatures to cut lottery proceeds to the Trust. Given that the lottery proceeds are more protected and keep the Trust seemingly on the edge of insolvency, trust administrators counter-intuitively preferred to continue relying on the lottery and stop donations to the endowment, maintaining the endowment at around \$1 million.³⁵

Every year, Nebraska's legislature makes millions of dollars in transfers out of the Trust's operating revenue for other environmental projects. However, Director Brohman emphasizes that many of these projects would have been selected anyway to receive money from the Trust. With this siphoning, these projects are administered through other state agencies. For example, \$3.3 million is transferred by the state out of the trust to the state's Department of Natural Resources for a clean water fund annually.

4.3 Administration

Operating as a largely independent agency within the purview of the Nebraska executive branch, the Nebraska Environmental Trust is administered by a board of fourteen people. This comprises five directors of state agencies and nine members of the public drawn from each of the state's three congressional districts. This system thus includes both government stakeholders and interested citizens. Appointed by the governor for six-year terms, citizens are frequently political appointees. These citizen-board members usually have knowledge on environmental issues, however. Since the directors of state agencies are also typically appointed by the governor, it is not uncommon for most or all of the members of the Trust's administrative board to have been appointed by the same governor. Director Brohman emphasizes the diverse range of views on Nebraska's board, however.

A specialized committee awards grants with applications judged using point scores based on various factors. The state legislature occasionally directs the committee to award bonus points, thus increasing a particular grant's chance of success. Having passed a technical review by experts and approval from the grants committee, the grants are then sent for approval or rejection by the full administrative board. A simple majority is necessary to veto a grant application, and these vetoes are rarely contentious. Most grants that receive high scores are fully funded, though such grants represent approximately one-third to one-fourth of all grant applications.

In an effort to create as little bureaucracy as possible, the Trust was established under the state's Game and Parks Commission. Following a 2002 legislative audit, however, the Nebraska Environmental Trust was altered to move it out of the Game and Parks Commission's exclusive purview as this created a conflict of interest. The Game and Parks Commission still manages fiscal affairs and contract management for the Trust, but



the Trust's decision-making process operates entirely independently. This arrangement allows the Trust to have a total of only five full-time employees. It also ensures that only three percent of fund revenues are spent on administration annually, a low amount for such a large operation.

5. MARYLAND

Maryland's Chesapeake and Atlantic Coastal Bays Trust Fund was established in 2007 by the Maryland General Assembly as a means to protect Maryland's water sources. The fund specifically targets non-point source pollution. Since its inception, the fund has invested over \$109 million in 890 projects between 2009 and 2014.³⁶ The fund is jointly administered by three entities: the BayStat agencies, including the Maryland Departments of Agriculture, Environment, Natural Resources and Planning; a scientific advisory panel; and the legislature; and is largely funded through legislative appropriations. Funding is generated through Maryland motor fuel and car rental taxes. Maryland's Atlantic Coastal Bays Trust Fund serves as an example of innovation and efficiency that Vermont can study.

5.1 Establishment

In 2007, the EPA released a report that concluded that restoration efforts in Maryland's Chesapeake Bay were being neutralized by increased nutrient and sediment loads as a result of new developments.³⁷ After over 20 years of efforts to clean up the Bay, this report proved a catalyst for the development of a new more efficient system of protecting Maryland's water. The state created the Chesapeake and Atlantic Coastal Bays Trust Fund to focus their limited funds on the most effective non-point source restoration projects.³⁸

5.2 Funding

Maryland's Trust Fund receives its funding through appropriations from the state legislature of funds coming from the state's motor fuel and rental car tax. It is estimated that the Trust Fund receives 2.3 percent of the funds raised through these taxes.³⁹ While the Trust Fund has been able to leverage \$109 million and invest over \$190 million in non-point source pollution reduction, it has yet to realize its \$50 million annual operating budget.⁴⁰

The Trust Fund does not have a fixed annual appropriation and thus must have its funds approved each year by the state legislature. The process of procuring funds is multi-stepped. The budget process begins with the BayStat agencies presenting a package of projects to the Science Advisory Panel. The Science Advisory Panel then reviews the package and submits its recommendations to the BayStat subcommittee, which is essentially the heads of all the BayStat agencies. These individuals subsequently present their final recommendation of project and proposals to the Governor of Maryland. He then incorporates the Trust Fund projects into his budget that is later presented to and



approved by the Maryland General Assembly. Through this complicated back and forth process, it is important to recognize that once the budget proposal reaches the General Assembly, the legislators are only able to cut from the budget, not add. Therefore, special precautions are taken to ensure that the General Assembly is presented with a diverse array of projects from which they will be able to reach a funding conclusion.⁴¹

While some might view the process as unnecessarily arduous, administrators of the Trust Fund approve of the involvement of the legislature. They state that in allowing the General Assembly final approval of the budget, they are “blessing” the allocation. Because the funds do come from tax revenue it is important for both the legislature and Trust Fund to be held accountable for the funds.⁴²

With the process’ benefits also come its pitfalls. Without an external, guaranteed revenue source, Maryland’s Trust Fund has experienced multiple budget cuts in recent years as the state has looked to cut deficits.⁴³ As a result, the Trust Fund has been delayed in reaching its \$50 million annual operating budget goal. In light of these cuts, however, the previous governor contributed \$100 million in general operating funds to the Trust Fund to help realize non-point source pollution reduction projects that had been slated for implementation.⁴⁴

Maryland has had success in its funding mechanisms since its creation. In light of recent budget cuts, however, legislators are exploring options to establish a permanent funding mechanism for the Chesapeake and Atlantic Coastal Bays Trust Fund during the current session.⁴⁵

5.3 Administration

As discussed in the preceding section on funding, Maryland’s Trust Fund is overseen by three entities: the BayStat agencies, the scientific advisory panel, and the legislature. The three work together to select projects, present budget proposals, and administer the funds to local governments and state agencies for project implementation.

The BayStat agencies, the most prominent state agencies related to the environmental trust fund, are arguably the most involved in the oversight of the Trust Fund. The agencies, such as the Maryland Department of Natural Resources, receive grant proposals, work with the scientific panel to create a package of viable projects and the resulting budget, then distribute what funds their proposal receives from the legislature. The leaders within the BayStat agencies are dubbed the BayStat subcabinet and include: the Secretary of Natural Resources; the Secretary of the Environment; the Secretary of Planning; the Secretary of Agriculture; the President of the University of Maryland Center for Environmental Science; the Dean of the College of Agriculture and Natural Resources at the University of Maryland, College Park; and the Chair of the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays.⁴⁶ These individuals are responsible for presenting the final package and budget to the Governor of Maryland.



While the agencies could have fulfilled their duties alone, creators of the Trust Fund felt that science needed to be connected to decision-making.⁴⁷ Thus, a scientific advisory panel was created to give feedback on viability of projects. The panel is comprised of leading scientists in their fields. While these individuals have proved vital to the ongoing success of the Trust Fund, administrators state they would like to see adequate representation of social scientists and financial experts on the panel.⁴⁸ The agencies currently outsource to a financial center for guidance; including individuals with extensive finance experience in-house would prove a more cost-effective way of gaining their insight.⁴⁹

As discussed in the previous section, the legislature, Maryland's General Assembly, serves as the funding arm of the Trust Fund. It is responsible for approving all or part of the funding proposal put forth by the agencies through the Governor's state budget each fiscal year. Because funding comes from tax revenue, it is important that the legislators, citizens' voices in government, approve of the allocation of funds to the various Trust Fund projects.

In a similar vein, these three actors within the Maryland Chesapeake and Atlantic Coastal Bays Trust Fund work towards transparency and increased knowledge for the people of Maryland.⁵⁰ An online Fund Tracker allows individuals to track the progress of current projects and see their tax dollars at work. The Trust Fund hopes that public knowledge of the Trust Fund will garner continued public support that will transfer to the Maryland General Assembly and be reflected in annual appropriations.

6. NEW YORK

Phosphorus pollution in Lake Champlain is the result of activity from Vermont, New York, and Quebec, with Vermont responsible for approximately 65 percent of the pollution.⁵¹ Despite continued efforts from the EPA and private conservation groups, phosphorus pollution continues in the lake at higher than acceptable levels. Though both Vermont and New York contribute substantially to Lake Champlain's phosphorous pollution, only Vermont's cleanup plan has been challenged by the Environmental Protection Agency, requiring a larger and more expensive cleanup effort.⁵² This is a result of Vermont residing in a different EPA district from New York, resulting in charges being brought by the district EPA office.⁵³ The district office rejected its initial approval of Vermont's TMDL plan due to litigation from the Conservation Law Foundation, a challenge not present in New York.⁵⁴ The statute of limitations on challenging New York's portion of the 2002 TMDL has expired, leaving Vermont on its own to increase cleanup efforts.

7. PROPOSED FUNDING SOLUTIONS

Listed here is a working compilation of funding options. Some of these options were highlighted through three-state case study such as the lottery proceed diversions and sales of specialty license plates, and some are new. The prohibition on broad-based taxes as



funding source limits Vermont's ability to pool public funds toward environmental remediation. Governor Shumlin has also outlined a number of solutions in his Inaugural Address. Even so, a number of viable funding mechanisms exist in addition to the federal assistance programs and in-state sources of revenue previously outlined.

7.1. Funding

A potential funding source that is uniquely available to Vermont is increasing a permitting fee for operators of ferries across Lake Champlain. We will need to determine ferry revenue, and then we will need to extrapolate a reasonable permitting fee increase as a percentage of this revenue. A potential challenge to this option is the ferry service is political opposition across states, as commuters and tourists alike use this service in Vermont and New York.

Charging a toll on the Lake Champlain Bridge represents another potential source of funding. The Lake Champlain Bridge does not currently charge a toll. However, similar to the feeing the ferry service, the bridge is trans-state, so negotiating a toll and appropriating most of the funds to one state may prove politically challenging.

Lastly, discharges from farmsteads and agricultural production areas, poorly managed cropland, unmanaged or poorly managed pastures could be subject to fees depending on the degree of non-point pollution. However, this fee could be offset by the \$45 million USDA has invested for the benefit of Vermont agricultural community.

7.2 Taxes

First, existing pollution fines or taxes for major polluters could be increased to raise potential revenue. Increasing taxes for property holdings along Lake Champlain may be possible, possibly in the form of an environmental fee. A challenge would be making sure this fee is not perceived as a hike in property taxes and ensuring that it is targeted at more polluting properties.

Since towns with unpaved roads continue to be major contributors of nonpoint sources of phosphorus loading, they could potentially be taxed in proportion to the mileage of unpaved roads they contain. State gas taxes may also be increased to offset the costs of environmental harm.

Finally, the paper and electronic industries constitute the top two sources of waste disposal among all of the major Toxics Release Inventory Industries, as determined by EPA, in the Lake Champlain Basin.⁵⁵ An additional business tax could be levied to reverse this trend.



7.3 Other

State bond issues, lottery proceeds with consistent and sustainable revenue sources, an expansion of Vermont's current license plate program could all contribute to revenue-raising for VCWIF. A tax solution that only comes into effect when the fund levels run low and then automatically ceases may be a politically sensible approach. Also a possibility is a cap and trade mechanism for phosphorus pollution on relevant industries.

7.4 Governor's Proposal

In January 2015, the Governor of Vermont, Peter Shumlin, addressed his support for the establishment of the Vermont Clean Water Fund and proposed additional funding of \$5 million this year.⁵⁶ His proposal included two funding mechanisms. The first is a proposed fee on agricultural fertilizers, whose products contribute to water pollution, aimed to raise \$1 million in its first year. The second is establishing an annual "impact payment" from owners of commercial and industrial parcels located within the Lake Champlain watershed. The governor also addressed creating an administrative structure that can accept both federal and private funding sources, citing that dedicated state revenues will simply not be sufficient.

8. FURTHER RECOMMENDATIONS

8.1 Fund Administration

Structuring VCWIF's board may entail appointing citizens with state agency heads to establish a mixed expert and citizen board that would advocate for various stakeholders' interests, though more research on an appropriate board structure is needed. It is crucial to avoid placing the mixed board under a non-environmental agency to avoid conflicts of interest. The advisory board could use a point system to select grant recipients in a fair manner.

8.2 Public Buy-in and VCWIF

Educating the public on the purpose of cleaning Lake Champlain is important to reduce phosphorous loading as it will likely ensure that VCWIF is preserved regardless of political whims. Partnering with ECHO at the Leahy Center for Lake Champlain in addition to existing organizations like Friends of Northern Champlain will cut the projected costs to this aspect of VCWIF. Another alternative is awarding educational programs bonus points in the metric used to select projects to fund from VCWIF.

9. CONCLUSION

With a goal of raising \$1.56 billion in ten years, Vermont has a great challenge ahead of it in funding VCWIF. The structure of the fund need not be a mystery, however. It will likely not be possible to generate the entirety of the funds over a ten-year period given the



constraints placed upon VCWIF's potential funding sources, although there exist several innovative and intriguing funding solutions open to the State of Vermont. Comparing the case studies of North Carolina, Nebraska, and Maryland in terms of their establishment, funding, and administration serves as a basis for devising an innovative trust fund in the Green Mountain State. Of the states examined in the report, North Carolina relies on state appropriations and the sale of specialty license plates, Nebraska utilizes state lottery funds, and Maryland imposes a motor fuel tax and rental car tax.

In total, these fiscal options can raise a portion of the necessary revenue in Vermont, but the rest will need to either be appropriated by the state or simply not be raised. Through our case studies, we have discovered that each state has funding mechanisms that generate, at most, \$50 million annually. Thus, Vermont faces a task that no other state has yet been able to accomplish with ease: funding \$156 million annually. While this report provides comprehensive assessments of administrative strategies, funding an environmental trust at the billion dollar level will prove challenging.



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