ELECTION 2016 WATER QUALITY

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VERMONT LEAGUE OF CITIES & TOWNS

Water Quality: Keeping it Clean

Waters of the State. The quality of Vermont's waters is generally rated high, particularly when compared to the problems of pollution, invasive species, and drought that besiege other waters of the U.S. Nevertheless, over several decades, the state has enacted a confusing and complicated array of laws that regulate the use, classification, withdrawal of, and discharge to waters of the state. Vermont has:

- 17 river basins, each of which will need a Tactical Basin Implementation Plan to address water quality needs;
- 812 lakes and ponds of five acres or more totaling approximately 230,000 acres,
- 300,000 acres of fresh water wetlands; and
- between 7,100 and 24,500 miles of rivers and streams, depending, it seems, on the scale at which the water bodies are mapped and how small a stream can qualify for the designation.

You are never far from water in Vermont! And that might be part of the problem.

According to 10 V.S.A. § 1253, which was revised last session, Class A waters comprise all lakes, ponds, and reservoirs, natural or artificial, used exclusively as a public water source prior to July 1, 1971, and all waters flowing into such lakes, ponds, and reservoirs, and all waters located above an elevation of 2,500 feet. All remaining waters are designated Class B(2). There are approximately 1,192 miles of Class A rivers and streams and 3,383 acres of Class A lands and ponds. As of this fall when rules implementing the amendments to 10 V.S.A. § 1253 were adopted, reaches (i.e., lengths) of water are classified as A1 (ecological waters), A2 (public water supplies), B1 (whose specific use may be upgraded for a reach of water through rulemaking), or B (swimmable, fishable, boatable). Wetlands are designated as Class 1 (exceptional), Class 2 (merit protection), or Class 3 (not yet determined to merit protection).

Quality of Waters of the State. Within the 17 basins, the Vermont Department of Environmental Conservation has also designated and the U.S. Environmental Protection Agency (EPA) approved categories for designated reaches of water and particular pollutants of concern. Some of the categories overlap so that, for instance, one pollutant may be removed in a section of a lake while another pollutant continues to be managed. Thus, that section of lake is included in a lower category.

According to the EPA, Part A (303d list) waters are assessed as impaired due to one or more pollutants for which a total maximum daily load (TMDL) is required to be developed. Part B waters are assessed as impaired by a pollutant but because other pollution control mechanisms are in place, no TMDL is required. Part D waters – there is no Part C (Don't ask.) – are assessed as impaired by a pollutant and have a completed EPA-approved TMDL. Part E waters are assessed as altered where aquatic habitat and/or other designated uses are not supported due to the extent of invasive aquatic species. And Part F waters are assessed as altered due to hydrologic factors. Parts A through D waters are deemed "impaired;" parts 3 and F are "altered."

The EPA's new draft Region 1 Impaired Waters and 303 (d) List[1] shows 101 Part A reaches, 11 Part B reaches, and 118 Part D reaches. (Who knew that Vermont had any completed TMDLs?!) There are also 52 Part E reaches and 81 Part F reaches, including some of Vermont's finest recreational resources such as Green River Reservoir, Shadow Lake and Peacham Pond.

According to the 2016 Water Quality Integrated Assessment Report, "The major causes of impairment and stress to Vermont rivers and streams include sediments, physical habitat alterations, nutrients, temperature, pathogens, flow alterations, turbidity and metals. The major sources of these pollutants or stream habitat changes are streambank erosion, loss of riparian vegetation, agricultural land use and activities, developed land runoff and hydrology changes, hydro-electric and snowmaking facilities, channel instability, and atmospheric deposition."

Water quality issues of major concern include:

- agricultural runoff;
- atmospheric deposition of pollutants;
- chlorides and water quality;
- climate change and Vermont's waters;
- dams and dam removal;
- invasive exotic plants and animals in surface waters;
- lakeshore development and loss of littoral habitat;
- lake and reservoir drawdowns and aquatic biota impacts;
- pharmaceuticals, personal care products, and other contaminants in waters, river corridors; and water quality;
- stormwater TMDL implementation; and
- water quality standards criteria.

Vermont's Clean Water Act and Beyond. In the last biennium, the legislature passed several major water quality bills, including Act 64 (the Vermont Clean Water Act), Act 86 (which requires notice of wastewater discharges), Act 105 (water quality on small farms), Act 103 (clean water and pollution control revolving loan funds), and Act 79 (the classification of state waters). The most significant legislation in terms of fiscal consequences is Act 64, because the administration's policy for addressing it "all in" – that is, all sectors of the economy must do their share to clean up the waters of the state. Act 64 applies statewide.

Act 64 requires agricultural and forestry enterprises, private property owners, municipalities, and the state itself to reduce phosphorus discharges to Lake Champlain. Sources of phosphorus include agriculture runoff, streambank erosion, developed land (from roads, parking lots, lawns, athletic fields, and buildings), wastewater treatment facilities, forest harvesting, and historically deposited phosphorus that has collected in bottom sediments in portions of the lake. An analysis of total loads estimated that 922 million tons (MT) of phosphorus were discharged to the lake each year from 2001 to 2010, including 213 MT from New York, 77 MT from Quebec, and 631 MT from Vermont. In Vermont, wastewater treatment facility contributions are estimated to be 25 MT per year (3.5 percent of the total); non-wastewater treatment facility (non-point source) contributions are 606 MT per year (60 percent of the total).

An analysis in the EPA's Phosphorus Total Maximum Daily Load for Vermont Segments of Lake Champlain states that annual, non-wastewater facility contributions include developed lands (114 MT); forest lands, operations, and roads (100.7 MT); streambank erosion (130 MT); and agriculture (262 MT). The distribution varies within segments of the lake according to the adjacent land uses and the contours of the lake itself. These estimates are six to 16 years old and, in the interim – even without a Lake Champlain TMDL – a lot of

[1] Under Section 303(d), states are required to develop – and update every two years – lists of waters that are impaired by one or more pollutants. Impaired waters are waters that do not meet Water Quality Standards even after point sources of pollution (e.g., municipal and industrial discharges) have installed required levels of pollution controls.

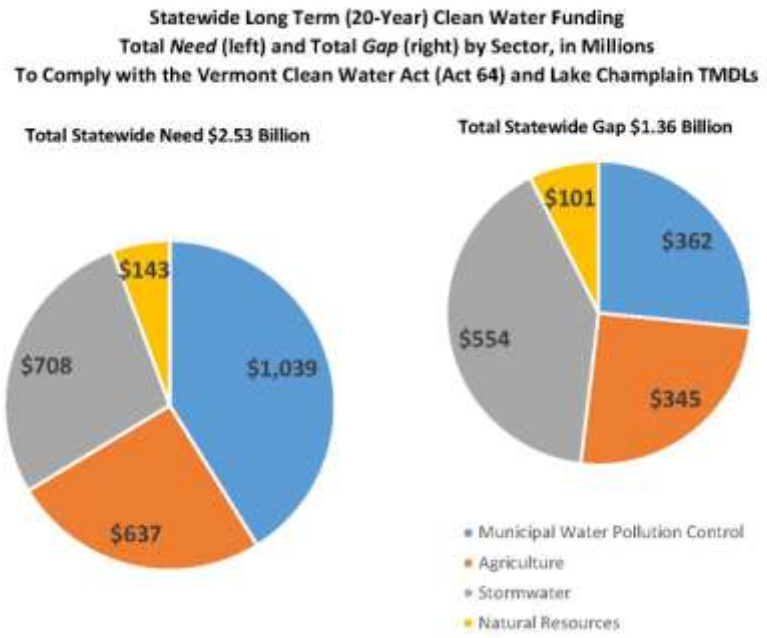
work has been done to reduce phosphorus discharges to the lake from virtually every contributing sector. The EPA issued its Lake Champlain TMDL this summer.

Vermont's Agency of Natural Resources (ANR) worked with the EPA to develop an implementation plan focusing on reducing non-point sources of phosphorus, the framework of which is embodied in the mandates established in Act 64. EPA's fallback position is that point sources – and, more particularly, wastewater treatment facilities – will need to further reduce their phosphorus discharges if non-wastewater facility contributions are not reduced sufficiently. Wastewater treatment facility discharges are measurable and have been both measured and reduced for decades – thus, the ease with which results can be demonstrated to make them disproportionately attractive as a focus for further reductions. In fact, according to the 2016 Water Quality Integrated Assessment Report, to date more than $750 million in federal, state and local dollars have been spent on improving wastewater treatment facilities. Further reducing phosphorus discharges from wastewater treatment facilities, will be enormously expensive while reaping very little relative return in most portions of the lake, given that these facilities annually contribute only 25 MT of phosphorus out of the 922 MT total. A far greater return will be realized by concentrating clean-up efforts on non-point discharges.

Some of those non-point phosphorus sources of concern are municipal roads. A new Department of Environmental Conservation (DEC) Municipal Roads General Permit will cover all municipalities (but not the unorganized towns). Of Vermont's 15,840 total road miles, 13,131 miles are municipal, and 65 percent of those are Class 3 roads. Towns will have to inventory their road network, prioritize work on those segments that are hydrologically connected to surface waters, develop projects, and implement stormwater remediation projects to eliminate stormwater discharges, and then submit annual reports to ANR. **In 2018**, towns and cities will start paying annual permit fees of $2,000 and application fees of $400 to ANR for the municipal roads permit. Those fees are to pay for 13 positions at the agency and to fund stormwater programs. As well, permit fees were increased or newly instituted for stream alternation and flood hazard area permits and river corridor map amendments.

The state is also addressing non-point sources of stormwater runoff from farms. Act 64 made several statutory changes that should be incorporated in the new Required Agricultural Practices (RAPs), which will regulate runoff from large, medium, and small farms. However, at a Legislative Committee on Rules meeting last week, the draft RAPs were challenged by the farming community, in part over concerns that they require that any ditch that is determined to potentially transport significant waste or nutrients to surface water must be buffered with a minimum of 10 feet of perennial vegetation. Vermont is in the midst of a diversified agriculture resurgence, and leads the way in the localvore/slow foods/farm to plate revolution. We all are the beneficiaries of that burgeoning economy. At the same time, however, the 41 percent of the phosphorus loading to Lake Champlain that agriculture generates must be addressed if Vermont is to successfully comply with the TMDL.

How will we pay? Affected entities including local governments are rightfully worried about the lack of adequate, long-term funding from state government to cover the costs of implementing the Lake Champlain, Lake Memphramagog, and the Connecticut River TMDLs; the Vermont Clean Water Act; and the Lake Champlain Phase 1 Implementation Plan. Every dollar not appropriated by the legislature to address the Act 64 mandates on municipalities is a dollar that must be raised by the property tax under current law. Estimated obligations to implement Act 64 are enormous: $2.53 billion over 20 years, and the State Treasurer estimates the gap in funding over those 20 years to be $1.36 billion. On an annualized basis, the gap is estimated at $68.1 million, with 41 percent of that gap attributable to the somewhat amorphous category of "stormwater" and an additional seven percent attributable to the entirely clear category of "municipal water pollution control" (wastewater treatment facilities). Based upon estimates from municipalities involved in stormwater management today, even these figures may be low.



source: DEC Watershed Management Division

ANR has been clear that the obligations remain, whether or not there is any funding to pay for them. The State Treasurer is obligated to provide a report to the legislature on funding Act 64, which will set the stage for discussions in 2017 on how to pay for the cleanup.

In 2015, the legislature increased Ecosystem Restoration Grant funds to $3.75 million. As it becomes clearer what is required of cities and towns, those grants will be much in demand. Likewise, the creation of the Clean Water Fund – and approximately $5 million derived from an increase in the property transfer tax in each of three years to invest in Act 64 priorities – will help in the short term but will fall far short in the longer term, even if that funding source remains in place.

Vermont legislators and the administration have yet to provide a detailed response to the long-term fiscal challenge. The Lake Champlain Phase 1 Implementation Plan is ambitious but it will not happen without adequate funding to support its initiatives and programs. Nor will its objectives be met solely by edict in a state that already has one of the highest overall tax burdens in the country. "All in" must not be allowed to mean "all in *and* you pay it all." Responding to this challenge will be informed by the aforementioned State Treasurer's report.

VLCT supports:

- financial and technical support to municipalities to fully implement mandates included in the Vermont Clean Water Act and its associated TMDLs and Act 64;
- ANR and EPA implementing the Integrated Planning Approach Framework so municipalities can prioritize and schedule municipal Clean Water Act responsibilities and investments in compliance activities according to greatest need, notwithstanding statutory limits;
- the fair, effective, and efficient spending of state and federal dollars to achieve TMDL goals and to mitigate phosphorus and other TMDL-regulated discharges; and
- accounting for the capacity of potential funding sources to pay for priorities related to the Vermont Clean Water Act in conjunction with programs to which that funding source is already dedicated.

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