



## LAKE CHAMPLAIN AND PHOSPHORUS – WHERE SHOULD WE SPEND OUR DOLLARS?

Lake Champlain – the jewel shared by Vermont, New York and Quebec – attracts thousands of visitors each year to the place we call home. The Lake Champlain basin includes 145 municipalities in Vermont, 57 in New York and 37 in Quebec. In each of those municipalities, human and other animal activity produces phosphorus that eventually reaches the lake. Flushing the toilet, spreading fertilizers, walking the dog, grazing the livestock – they all produce phosphorus, a naturally occurring nutrient essential for all plant growth, including unwanted algae in the lake. It's one of the most complex problems that faces Lake Champlain.

What should we do to reduce phosphorus loads in the lake? Non-point (overland runoff) sources of phosphorus are responsible for around 90 percent of phosphorus loading in the lake; point sources (wastewater treatment facilities) are responsible for approximately the other 10 percent. It would cost about \$1,900,000 to reduce the phosphorus discharge at wastewater facilities by one more metric ton, and about \$5,000 to reduce one more metric ton of phosphorus discharge from non-point sources. Relative source and cost to remedy the problem dictate where Vermont should focus its scarce dollars.

New York, Vermont and Quebec took years to develop a total maximum daily load allocation agreement (TMDL). That TMDL was approved by the US Environmental Protection Agency (EPA) in 2002. (It was no simple task to negotiate that agreement across two states and an international boundary.) The TMDL allocates an “allowable load” (amount of phosphorus ending up in the lake) amongst Vermont, New York and Quebec for point and non-point sources as well as an implementation plan to achieve that allowable load. According to the Vermont Department of Environmental Conservation (DEC), phosphorus discharges to the lake from Vermont, New York and Quebec totaled approximately 900 metric tons per year (mt/yr) in 2003-2004. The TMDL establishes a phosphorus-loading goal of 427.1 mt/yr, which is designed to achieve water quality goals in the lake.

After the TMDL was signed, Vermont programs were implemented to reduce phosphorus loading from point and non-point sources. Discharges from wastewater treatment facilities currently total 24.7 mt/yr, an amount that has steadily declined for decades as facility controls were implemented to reduce phosphorus. Municipal efforts to reduce phosphorus discharges from their facilities have been concerted and successful.

Why the flap this session in Montpelier? In 2007, the Vermont legislature, without conferring with either New York or Quebec, passed legislation (Act 43) effective July 1, 2008. It states:

*“The secretary of natural resources shall reopen the total maximum daily load (TMDL) plan for Lake Champlain as it pertains to the waters of Vermont in order to:*

*... (C) Ensure that the total annual phosphorus discharged by all wastewater treatment facilities in the aggregate does not exceed the total phosphorus load discharged to Lake Champlain by all wastewater treatment facilities in the aggregate in 2006 and to adjust aggregate total phosphorus load allocations to Lake Champlain accordingly; ...”*

The legislation presents two major problems. First, reopening the TMDL is not a Vermont-only proposition – New York, Quebec and the EPA are also implicated. And in reopening, staff resources in each of those jurisdictions are again dedicated to renegotiating the words of a paper document instead of working to reduce phosphorus getting to the lake. Municipal governments and private and non-profit entities undertaking projects are forced to wait, unsure of their obligations or where their limited dollars should be spent. Second, further restricting phosphorus discharges from municipal

wastewater treatment facilities will cost huge amounts of money that: (a) are not available; and (b) if available, could be spent far more effectively on reducing non-point source discharges that comprise 90 percent of the problem.

We must also remember that new and severe restrictions on wastewater treatment facilities would result in turning development away from the smart growth locations they serve, such as downtowns, villages and growth centers. The significant capital investments already made in capacity at those plants and planned to accommodate growth could be unusable with more restrictive phosphorus limits. If allowed, the cost of connecting to a facility would soar, creating a disincentive to compact development just when our energy and land use policies demand those growth patterns.

Money is an enormous issue this year. Governor Douglas' proposal for all capital funding in FY09 is \$79,650,000(think school construction, roads, bridges, corrections, state buildings, historic projects and more), including \$25 million from leasing the lottery. DEC estimates that it would require a \$59 million investment to assure that 30 wastewater treatment facility phosphorus discharges do not exceed 2006 levels and meet an average phosphorus limit of 0.2 milligrams per liter, a cost item not even contemplated in the governor's proposal.

There are 95 municipal wastewater treatment facilities in Vermont, 60 of which discharge to the lake. They have design capacity to process 81.15 million gallons of wastewater per day (mgd). Under *current* statute, DEC estimates that, in the next three years, 20 wastewater treatment facility projects will go to construction and need \$110,160,000 in state loans for upgrades to existing facilities as well as one new facility. A phosphorus removal project in Proctor this fiscal year requires approximately \$500,000. Under current law, the state is obligated to pay for 100 percent of phosphorus removal infrastructure at municipal wastewater treatment plants. The Senate Institutions Committee recently discussed abandoning that formula when presented with the \$59 million estimate. Operations and maintenance costs, ranging from \$100,000 to \$500,000 annually, are a municipal obligation paid through user fees.

If \$59 million were available to reduce phosphorus discharges, it would be far more effective to spend it addressing the 90 percent of non-point source phosphorus load runoff than further reducing the 10 percent phosphorus load from point sources. Productive efforts include establishing erosion control along waterways, mitigating effects of land conversion from agriculture to developed uses, increasing total investments already made in alternative manure management on farms, banning phosphate based cleansers and fencing cows out of lakes and rivers.

Highly effective and relatively low cost ways exist to substantially reduce non-point phosphorus discharges to the lake without reopening the TMDL. Vermont needs to focus its very scarce revenues on where it gets the most bang for the buck.

Fortunately, there is a solution to this problem. H.732 would repeal the offending sections of last year's law. Local officials should call on their legislators to approve H.732.

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## **SENATE TRANSPORTATION COMMITTEE INTRODUCES ITS OWN CAPITAL GAINS PROPOSAL**

*Would return \$21 million to the Transportation Fund*

Following on the heels of a similar proposal made by the Speaker of the House, members of the Senate Transportation Committee have released a proposal to use the estimated \$21 million from the elimination of a capital gains tax exemption on roads and bridges.





