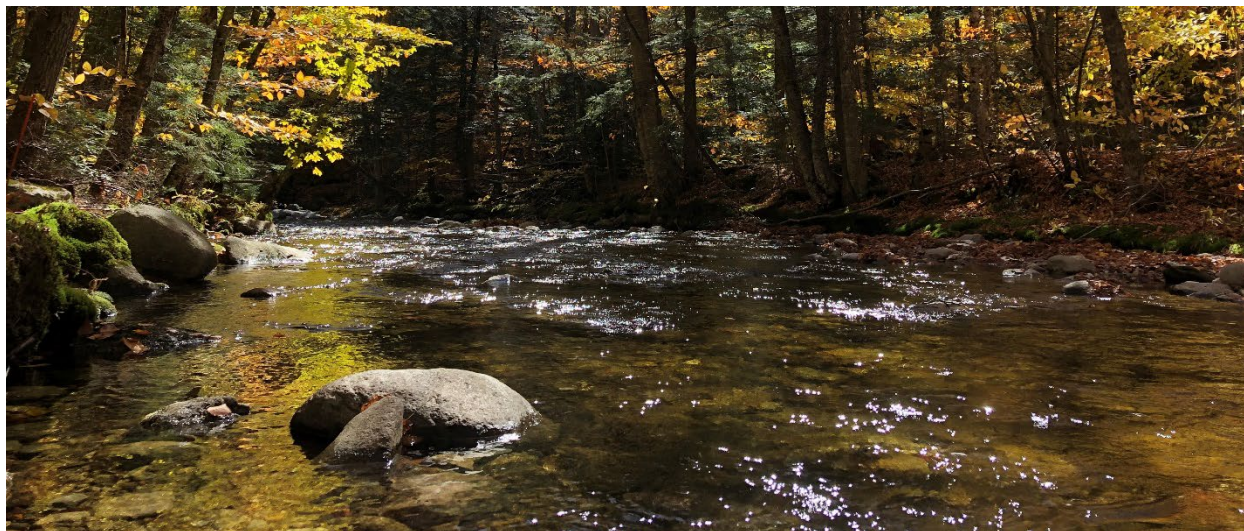


# Clean Water Initiative Program



A landscape view of a flowing brook in Stowe, Vermont, surrounded by fall-colored trees. Dappled sunlight reflects off the water.

## Source vs. Delivered Phosphorus Load

Water carries nutrients, like phosphorus, from the land to waterbodies. As this occurs, some of the total phosphorus may be stored if it:

- ▶ Gets taken up as a nutrient by plants;
- ▶ Infiltrates into soils; and
- ▶ Settles out as it flows through floodplains, inland lakes, ponds, and wetlands before reaching a waterbody.

In large quantities, phosphorus can lead to water quality issues. We describe the amount of phosphorus moving from land to water in two ways:

- ▶ As a **source load**, which is the estimated amount of phosphorus leaving the land surface; and
- ▶ As a **delivered load**, which is the estimated amount of phosphorus reaching a waterbody after accounting for potential storage or loss on its way to the waterbody.

The delivered phosphorus load is less than the source phosphorus load.

To estimate the delivered load of phosphorus to a waterbody, we apply a percent delivery rate to the source load. The delivery rate is based on the distance water travels

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from the landscape to the receiving water and natural obstacles in its path, like inland lakes. For example, the Winooski River flows through Mirror Lake, an inland lake in Calais, to its receiving water, Lake Champlain.

In Vermont, Lakes Champlain and Memphremagog have Total Maximum Daily Loads (TMDLs) for phosphorus. TMDLs are plans required by federal regulation that set targets for reducing pollutant loading to a specific waterbody to meet water quality standards.

In the [Vermont Clean Water Initiative Annual Performance Report](#), we express progress towards reaching the goals in the Lake Champlain and Lake Memphremagog TMDLs as estimated phosphorus reductions in delivered load. Estimated phosphorus reductions are modeled and reflect implemented clean water projects.


## **To receive this information in an alternative format or for other accessibility requests, please contact:**

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