

Report on Funding of State Response to a Lake in Crisis

10 V.S.A. 1314(b)

Submitted to the House Committee on Appropriations and the Senate Committee on Appropriations

Agency of Natural Resources  
Department of Environmental Conservation

January 15, 2020

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This report is submitted pursuant to 10 V.S.A. § 1314 (b):

*Long-term funding. Annually, the Secretary of Natural Resources shall present to the House and Senate Committees on Appropriations a multiyear plan for the funding of all lakes designated in crisis under this subchapter. Based on the multiyear plan, the Secretary of Administration annually shall recommend to the House and Senate Committees on Appropriations recommended appropriations to the Lake in Crisis Response Program Fund for the subsequent fiscal year.*

The Legislature of the State of Vermont created the Lake in Crisis Fund during the 2018 session and, using authorities granted under 10 V.S.A. § 1310, the Secretary of Natural Resources designated Lake Carmi as a “lake in crisis” in 2018. Lake Carmi is currently the only lake in Vermont with this designation, which was granted in response to intense and prolonged cyanobacteria blooms in 2017. Shortly after this designation and as per statutory requirements, the Department of Environmental Conservation (DEC), in collaboration with local stakeholders, developed the Lake Carmi Crisis Response Plan<sup>1</sup> to identify projects aimed at improving water quality in Lake Carmi and the adjacent watershed, provide indicators to track implementation of these projects, and identify potential funding sources and partners for these projects. Implementation of the Crisis Response Plan has been ongoing since 2018, and the plan aims to both remediate the processes contributing to the impairment of the lake, namely eutrophication and related cyanobacteria blooms from excessive nonpoint source phosphorus loading, and mitigate the sources of this nutrient loading to the lake.

To support targeted funding for clean water efforts in Lake Carmi and as per 10 V.S.A. § 1314, DEC has expended \$50,000 of lake in crisis funds appropriated to the Agency of Natural Resources from the Clean Water Fund in SFY2019 and is in the process of expending an additional \$50,000 of similarly-appropriated funds in SFY2020 to support the implementation of the Crisis Response Plan. DEC is proposing the appropriation of an additional \$50,000 in SFY2021 to continue implementing the Crisis Response Plan and support the ongoing effort to improve water quality in the lake and reduce phosphorus loading from the watershed. The lakes in crisis funds covered in this document are only a portion of a broader DEC-led effort, involving additional funds from the ANR Clean Water Initiative Program, the Agency of Agriculture, Food, and Markets Clean Water Fund Grants, and the Town of Franklin.

The table below describes how the lake in crisis funds have been spent in SFY2019 and are being spent in SFY2020.

<b>Lakes in Crisis Fund Allocations</b> <i>Funding Source: Clean-Water Fund</i>	<b>SFY19</b>	<b>SFY20</b>	<b>Explanation (page numbers refer to the Crisis Response Plan)</b>
Lake Water Quality Monitoring	\$20,000	\$22,000	Intensive monitoring pre-and post-aeration with sediment cores (page 14)
Manure Injection in Watershed	\$30,000	n/a	Reducing phosphorus loading to Lake Carmi from surface water runoff (page 47)
Study Phosphorus Loading from Groundwater	n/a	\$10,000	Evaluation of phosphorus loading via groundwater, including shoreland septic contribution (page 9)
Aeration System Operation and Maintenance	n/a	\$18,000	Whole-lake Aeration/Circulation to reduce internal phosphorus loading (page 14)
<b>TOTAL</b>	<b>\$50,000</b>	<b>\$50,000</b>	

In light of the fact that the water quality impairments found in Lake Carmi persisted throughout 2019 and that additional work is needed before all of these impairments can be resolved and applicable water quality standards can be met, **DEC is recommending that the House and Senate Committees on Appropriations appropriate an additional \$50,000** in funding to the Lake in Crisis Response Program Fund

<sup>1</sup> [https://dec.vermont.gov/sites/dec/files/wsm/lakes/docs/2018\\_08\\_22\\_Lake\\_Carmi\\_Crisis\\_Response\\_Plan\\_2.0.pdf](https://dec.vermont.gov/sites/dec/files/wsm/lakes/docs/2018_08_22_Lake_Carmi_Crisis_Response_Plan_2.0.pdf)

for SFY2021. Based on consultation with local stakeholders, DEC recommends using these funds in SFY21 as described in the table below:

<b>Lakes in Crisis Fund Allocations</b> <i>Funding Source: Clean-Water Fund</i>	<b>SFY21</b>	<b>Explanation (page numbers refer to the Crisis Response Plan)</b>
Lake Water Quality Monitoring	\$20,000	Intensive monitoring pre-and post-aeration with sediment cores (page 14)
Monitoring Best Management Practices in Watershed and on Lakeshore to reduce phosphorus loading	\$25,000	Monitoring the impact of agricultural and shoreland Best Management Practices to ensure that efforts to reduce nutrient and sediment runoff into Lake Carmi are contributing to water quality improvements (pages 21 & 22)
Aeration System Operation and Maintenance	\$5,000	Whole-lake Aeration/Circulation to reduce internal phosphorus loading (page 14)
<b>TOTAL</b>	<b>\$50,000</b>	

DEC will continue to support the implementation of projects aimed at improving water quality in Lake Carmi as well as monitor phosphorus levels in Lake Carmi and communicate the results of these efforts. With most elements of the Crisis Response Plan either underway or completed, including the in-lake aeration system as well as specific land management actions in the watershed, it is our expectation that we will see progress in the 2021 calendar year towards meeting phosphorus loading reduction targets and water quality standards in Lake Carmi.