Testimony of Rose Paul
Director of Science and Freshwater Programs
The Nature Conservancy in Vermont
Before the Senate Natural Resources Committee

H.777- VT Clean Water State Revolving Fund
April 6, 2018

Thank you for inviting me to testify on H.777 and the proposed changes to the Vermont Clean Water State Revolving Fund (CWRF). I have reviewed the bill, and I attended a public information meeting organized by the Vermont Agency of Natural Resources on February 22, and I've had a chance to discuss these changes with Agency staff.

I'd like to state that The Nature Conservancy is in support of the proposed changes to how the Fund is administered, and that we are interested in becoming a sponsor of natural resources projects in partnership with municipalities. I'll explain why we think this is a good idea, but first a little about who we are.

The Nature Conservancy (TNC) is a science-based international nonprofit conservation organization. Our mission is to conserve the lands and waters on which all life depends. We have offices in every U.S. state. We originated in the United States over 60 years ago and we have been incorporated in the State of Vermont for over 50 years. We are membership-driven and we have over 6,500 Vermont members. We have helped to conserve more than 300,000 acres of land in Vermont and nearly 1,500 miles of shorelines on lakes and rivers. Our lands are open to the public for nonmotorized recreation, hunting and fishing. We have helped protect many of Vermont's iconic places such as Camel's Hump State Forest, Alburg Dunes State Park, and the Bald Mountain Natural Area in West Haven. We are a land trust and much more. We lead with our science to help inform and solve contemporary environmental challenges.

One of the areas we focus on in Vermont is water quality. We firmly believe in the approach of protecting and restoring natural resources, such as natural floodplains, wetlands and forests, to clean our waters. Nationally, this approach is called "nature-based solutions" and there are many case studies showing that nature can deliver significant clean water benefits that people rely on in an economical way. In other words, **natural infrastructure** (floodplains, wetlands and forests) delivers vital water quality benefits at much less cost than grey infrastructure, and with multiple co-benefits, namely reduced flooding, increased wildlife habitat, recreational opportunities and a forest products economy.

I can refer you to a website called Naturally Resilient Community Solutions (www.nrcsolutions.org) which has case studies and information resources. TNC helped develop this website along with professional associations of engineers, planners and county governments. A mayor

from Miami/Dade County, FLA, is quoted on this website as saying: "We should let nature do its very best job for us."

TNC believes that changing the rules for the CWRF to allow the pairing of natural resource projects with clean water infrastructure projects is a smart and strategic idea for Vermont and is consistent with what other states, such as Ohio, have done to address water quality. Investing in natural resource projects is a thrifty way to help prevent water pollution so that we don't have to pay for the clean-up later on. Many studies support this. A published 2017 study[1] has shown that small wetlands play a disproportionately large role in filtering out phosphorous and nitrogen in watersheds; in fact, wetlands less than ½ acre in size can remove 50% of the nitrogen in a watershed, and nitrogen removal is especially important for the Connecticut River watershed. Fairly close to home, a University of Maine study showed that investing in forest protection around Sebago Lake, the water supply for the City of Portland, would be less than two-thirds the cost of building a new water filtration plant, a savings of $110 million[2]. Wetlands along the Otter Creek (where TNC owns over 700 acres) prevent an estimated $126,000 in flooding damages in downtown Middlebury annually, and much more than that in a huge flood like Irene.[3] Additionally, nature requires no operating and maintenance costs, and nature's parts don't wear out and require replacement.

TNC has created a Water Quality Blueprint for the Lake Champlain Basin, an interactive web-based map to help communities prioritize where they can invest in natural resources for clean water outcomes. Our national water program has created a procurement guide for communities to help them include nature-based solutions in their community development. The guide gives language and templates for how to write a Request for Proposals that seeks the outcome, such as water filtration, but doesn't specify how to achieve the outcome. This gives proposers flexibility in figuring out the most effective solutions at least cost, which often includes natural resources in the mix. In Vermont, TNC has invested $656,000 of private funds donated to us by Keurig Green Mountain for natural resource projects aimed at clean water over the last two years in the Champlain Basin alone, and we've invested more in other parts of the state, including a recent acquisition that protects two miles of frontage on the White River in Sharon.

We would be pleased to team up with municipalities as a natural resources project sponsor to help communities understand how they can lead the charge to make their local waters better by investing in the power of nature.

Thank you for inviting me to speak, and I'll be happy to answer any questions.

Rose Paul
Director of Science and Freshwater Programs
The Nature Conservancy
rpaul@tnc.org; 229-4425 x108

---

[1] Cheng, F. Y., and N. B. Basu (2017),Biogeochemical hotspots: Role of small water bodies in landscape nutrient processing, Water Resour. Res., 53, 5038–5056, doi:10.1002/2016WR020102

[2] The Cost of Green Infrastructure. Martha Sheils. University of Maine. 2013. http://digitalcommons.usm.maine.edu/green/1/

[3] Watson, K. et al. Quantifying flood mitigation services: The economic value of Otter Creek wetlands and floodplains to Middlebury, VT. Ecological Economics 130 (2016) 16–24