

Why Stormwater Planning?

“In the last 50 years, severe storms have gotten more common in Vermont and across the Northeast. While the future is not fully predictable, current models of climate change suggest this trend will continue. We need to take careful steps to ensure that our village centers and downtowns can thrive as more water rains down more often.

“Most communities in Vermont have numerous issues to address on the path to flood resilience. Addressing local flood risks now and creating a prioritized list of actionable tasks is the smartest way to prevent a crisis.” *Floodready.vermont.gov*

Stormwater planning is an important part of town planning throughout Vermont. In the Poultney Mettowee watershed, substantial projects to mitigate stormwater runoff are either completed or underway. Poultney Mettowee Natural Resources Conservation District is a leading partner in these projects. We help our communities be “flood ready”.

PMNRCD provides educational outreach, technical assistance, and financial support to communities and landowners to protect healthy soil and clean water and preserve the ecological integrity and economic vitality of communities. The District brings together the efforts of citizens and organizations that share the common goals of conserving, protecting, and enhancing the natural and cultural resources of the watershed.

This project was funded by an agreement awarded by the Environmental Protection Agency to the New England Interstate Water Pollution Control Commission in partnership with the Lake Champlain Basin Program. NEIWPCC manages LCBP’s personnel, contract, grant, and budget tasks and provides input on the program’s activities through a partnership with the LCBP Steering Committee. Although the information in this document has been funded wholly or in part by the United States Environmental Protection Agency under agreement LC96187501 to NEIWPCC, it has not undergone the Agency’s publications review process and therefore, may not necessarily reflect the views of the Agency and no official endorsement should be inferred. The viewpoints expressed here do not necessarily represent those of NEIWPCC, the LCBP Steering Committee, or U.S. EPA, nor does mention of trade names, commercial products, or causes constitute endorsement or recommendation for use.” The provisions of this Clause shall survive the expiration or earlier termination of this Agreement.



For more information or to set up a visit contact PMNRCD at pmnrcd@pmnrcd.org or 802-287-8339. www.pmnrcd.org

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Stormwater Planning



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STORMWATER RUNOFF

Stormwater runoff is any form of precipitation (rain or melting snow and ice) that runs off the land. Under natural conditions, this runoff infiltrates into the soil and groundwater or evaporates back into the air. This process is generally known as the hydrologic cycle. Due to human development and the use of impervious surfaces, the natural runoff process is often significantly hindered, causing an increase in frequency, volume, and flow rate of precipitating waters. This affected runoff accumulates unnatural levels of sediment and pollutants which are then deposited into waterways. The increased flow and aberrant patterns of water flow can lead to destabilization of downstream channels, effecting both built and natural communities.

GREEN STORMWATER INFRASTRUCTURE

Green Stormwater Infrastructure (GSI) describes a set of practices and design principles that uses natural processes to manage the effects of stormwater. When rain falls in natural, undeveloped areas, the water is absorbed and filtered by soil and plants and runoff is cleaner and less of a problem. GSI models this natural system by using vegetation, soils, and other elements and practices to manage runoff while providing habitat, flood protection, cleaner air, and cleaner water. GIS is a cost-effective and resilient approach to stormwater management. A raingarden is a well known and widely used example of GSI.

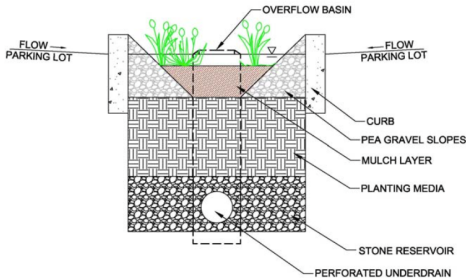


STORMWATER MASTER PLANNING

The goal of stormwater planning is to protect or maintain the health of streams, lakes and aquatic life as well as to provide opportunities for human uses of water by mitigating the effects of human development.

The Vermont Agency of Natural Resources, Department of Environmental Conservation Stormwater Management Program works closely with PMNRCD to provide regulatory oversight and technical assistance to ensure proper design and construction of stormwater treatment and control practices, as well as construction-related erosion prevention and sediment control practices.

The Stormwater Management Program is currently working on an update to the Vermont Stormwater Management Manual that will incorporate more green infrastructure practices into the management standards for projects that require a state issued stormwater permit.



RECENT PMNRCD STORMWATER PROJECTS

Castleton Headwaters:

PMNRCD was awarded a grant as part of Vermont’s Ecosystem Restoration Program to identify sources of stormwater runoff and propose high priority stormwater mitigation projects. PMNRCD is working with the Rutland Regional Planning Commission (RRPC), the Town of Castleton, and the Town of Hubbardton to conduct Stormwater Master Planning within the Castleton River headwaters.

The Castleton Headwaters watershed has many known project opportunities currently being prioritized. These projects include abandoned dams, potential agricultural projects, culvert replacement projects, riparian buffer projects, steep roads / sediment reduction projects, and several others.

Weathering the Storm: Community-based Planning for Flood Resiliency:

PMNRCD and Rutland Regional Planning Commission (RRPC) partnered to create a flood resiliency database to assist in the implementation of flood resiliency projects in the Flower Brook Watershed shared by Danby, Tinmouth, and Pawlet. This data checklist consolidates vital flood-related information, identifies any gaps in existing data, and then uses the information collected to identify stressors and flood risks within each town/watershed, and opportunities for community-led implementation projects to decrease flood risks.

High Meadows Fund supported this project as part of a series of watershed resilience projects identified through the Leahy Center Environmental Summit in 2015.

Stormwater Study Addressing Sediment Flows to Lake Bomoseen:

Poultney Mettowee Conservation District (PMNRCD), collaborated with the Lake Bomoseen Association (LBA), Vermont Department of Environmental Conservation, and Rutland Regional Planning Commission to identify projects that will improve water quality in Lake. The project identified sediment and nutrient inputs to Lake Bomoseen and its tributaries and prioritized them for additional design work and implementation.

The project partners reviewed a preliminary list of 48 of which a subset of 20 high-priority projects were ranked based on with ability to reduce pollution to the lake and their potential ease of construction. Six projects were selected to receive conceptual designs.