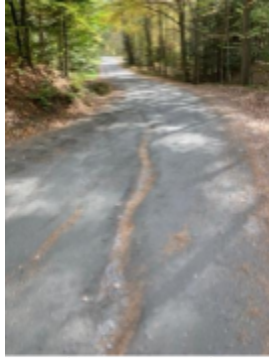


Hubbard Park Stormwater Design Project

Hubbard Park in Montpelier, Vermont is one that many in the area hold near and dear. Over the years the two-mile road system throughout the park has been eroding, pooling with water, and depositing sediments and storm water in an area referred to as ‘Frog Pond’.



Road ruts

Frog pond was not created for stormwater management, however since the area lacked best management practices (BMPs) for stormwater, sediment was continually building up in Frog Pond. Since the pond was filled with sediment, with every large rainfall that occurred the water directed to Frog Pond would subsequently overflow the pond and then overflow out. This led to more erosion around the pond, and on the roads downstream.



Sediment in Frog Pond

The Friends of the Winooski River (FWR) and Watershed United Vermont (WUV) partnered together to fund the implementation of BMP's to Hubbard Park roadways. Some of the high priority needs identified by Stone Environmental Inc. included cleaning out culverts, putting in plunge pools at the downslope portion of culverts, constructing sediment basins, refreshing ditches and turn-outs, and putting in riprap at overflow sites.

In 2018 FWR created an agreement with the City of Montpelier Parks Department that they would do three things:

1. Forebay at Frog pond
2. Sediment basins
3. Take on road surfaces and ditch stabilization measures

A forebay is a small pond before the main pond. The purpose of this is to allow sediment from stormwater to settle so that when the water flows into Frog pond it is cleaner. Creating sediment basins above Frog pond will catch all sediment and large debris before the water flows into Frog pond. This will improve the habitat quality of the pond. These basins will also make sure no run-off is occurring, it keeps culvert clean, and reduces erosion. Re-grating the roads stops channelization of water from occurring on the roads and creating ruts. This third step also includes replanting any poorly vegetated areas. These fixes will require maintenance from the city to maintain clear culverts, quality roads, and decrease sediment buildup.



Sediment basin

What happens upstream has a big impact downstream. Reducing sediment runoff and diverting water into storm drains or vegetated areas benefits the entire watershed. Stormwater runoff

contains various pollutants, such as sediments, trash, and chemicals. These pollutants reduce the health of all aquatic organisms in the stream, and all others that rely on the stream for food. Implementing best management practices in one area can benefit the whole community. Increasing vegetation, stopping channelization, putting in sediment basins and forebays, all help slow the velocity of water. Slowing the flow of water decreases erosion and property damage. You can learn more about this through the [Vermont Guide to Stormwater Management](#).

If you think your property may have some of these same issues, and you'd like to fix them, [contact us!](#)