

Managing stormwater to protect water quality

By Rebecca Hanson and Elizabeth Wolf, Squam Lakes Association

As a result of the three to five inches of intense rain on the Fourth of July weekend, the Pemigewasset and Baker Rivers turned muddy and brown due to the sediment erosion from the surrounding landscapes and roadways. High intensity storms, like the one we experienced on July 1, cause an increased volume of water to pass over land areas. In the process, waters gather sediment, fertilizer, and pet waste which then directly enter the surface water bodies. This introduction of toxins is compounded by the presence of impervious surfaces near waterbodies. Impervious surfaces prevent water absorption into the soil, and concentrate high volumes of sediment rich stormflow over roofs, driveways, roads, and compacted soil which then directly flow into the nearest waterbody. An estimated 90% of water pollution problems in New Hampshire are caused by pollutants that enter surface water by overland flow.

Water clarity is an indication of lake health – a lake with high water clarity has lower levels of pollutants such as phosphorus and sediments. Healthy lakes and rivers are important to New Hampshire and play a vital role in maintaining a healthy ecosystem. Data suggest that a reduction in water clarity in New Hampshire lakes can lead to a reduction of property values, impact the tax base of a town, and negatively impact tourism.

New Hampshire can expect to see these high intensity storms increase in frequency due to climate change, and impacts on our water quality and clarity is imminent. Stormwater management is a vital tool in combatting this problem and can be implemented at the individual homeowner level. Whether or not you live in proximity to surface waterbodies, your home and driveway can concentrate storm runoff and fast track pollutants to rivers and streams. Homeowners can lessen their impact by reducing impervious surfaces and increasing the amount of infiltration (the absorption of a water into soil) systems on their property.

Soak Up the Rain New Hampshire (soaknh.org) is a program offered by New Hampshire Department of Environmental Services that provides information for homeowners on the importance of this effort and methods to increase stormwater infiltration on their properties and in their neighborhoods. Soak Up the Rain NH provides plans for projects such as Infiltration trenches, rain gardens, rain barrels, infiltration steps, and pervious pavement all to reduce pollution impacts from stormwater.

The impact of these increasingly frequent high intensity summer storms is apparent: erosion, road closures, and effects on water quality. Managing stormwater on our own properties is a realistic goal and has dramatic impact on preserving the integrity of this regions waterbodies.

Photo caption: Intense rain storms can flow across the landscape and cause erosion, bringing pollutants directly to lakes and rivers. There are simple steps homeowners can take to reduce their impact on storm flow.

