

Managing Stormwater in Allenstown

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Stormwater, or runoff, is the water that flows as a result of rain or snowmelt. Stormwater travels across pavement and other surfaces collecting sediment, chemicals, and pollutants, including but not limited to motor oil, gasoline, lawn chemicals, pet waste, and deicing chemicals. It can carry these harmful pollutants directly into waterways, contaminating water used for drinking, recreation, and for local wildlife.

Residents of Allenstown enjoy the benefits of the town's location along the Merrimack and Suncook Rivers and it is of the utmost importance to maintain the quality of these waters to the highest standards. There are many steps that the town and residents can take to protect waterways and drinking water. This flyer is just one in a series about how residents and business owners can do their part. Read on to learn more.

Proper Sediment and Erosion Control Management

Sediment is the primary pollutant of concern associated with construction site stormwater runoff. Sediment-polluted stormwater can cause physical, chemical, and biological damage to waterways. Construction and site preparation can stir soil erosion, resulting in water pollution from runoff and an overabundance of nutrients and sediment in nearby water systems. The influx of nitrogen in water results in eutrophication, which leads to overgrowth. Too much sediment in water causes turbidity, which makes the water cloudy.

Understand Procedures Necessary for Compliance

Work with the municipality to understand what is required before, during, and after development to mitigate sediment runoff and erosion around the site.

Use Tools to Manage Sediment and Erosion

Use blankets, mulch, silt socks, tackifiers, or other tools to reduce and eliminate erosion on sloped sites.

Schedule Projects Strategically

Choose a time of year that the erosion potential is relatively low. In New Hampshire, there is no dry season, but fall has lower average precipitation than other seasons.

Stage Construction

Avoid areawide clearance of construction sites. Plan and stage land disturbance activities so that only the area currently under construction is exposed. As soon as the grading and construction in an area are complete, the area should be stabilized.

By clearing only those areas immediately essential for completing site construction, buffer zones are preserved and soil remains undisturbed until construction begins. Physical markers, such as tape, signs, or barriers, indicating the limits of land disturbance, can ensure that equipment operators know the proposed limits of clearing.

Clear Essential Areas Only

Leave any areas not essential to construction undisturbed. Physically mark off these areas.

Locate Potential Nonpoint Pollutant Sources Strategically

Material stockpiles, borrow areas, access roads and other land-disturbing activities can often be located away from critical areas such as steep slopes, highly erodible soils, and areas that drain directly into sensitive waterbodies.

Route Construction Traffic to Avoid Existing or Newly Planted Vegetation

Where possible, construction traffic should travel over areas that must be disturbed for other construction activity. This practice will reduce the area that is cleared and susceptible to erosion.

Intercept Runoff and Convey it to a Permanent Channel or Storm Drain

Earth dikes, perimeter dikes or swales, or diversions can be used to intercept and convey runoff above disturbed areas. An earth dike is a temporary berm or ridge of compacted soil that channels water to a desired location. A perimeter dike/swale or diversion is a swale with a supporting ridge on the lower side that is constructed from the soil excavated from the adjoining swale (Delaware DNREC, 1989). These practices should be used to intercept flow from denuded areas or newly seeded areas to keep the disturbed areas from being eroded from the uphill runoff. The structures should be stabilized within 14 days of installation. A pipe slope drain, also known as a pipe drop structure, is a temporary pipe placed from the top of a slope to the bottom of the slope to convey concentrated runoff down the slope without causing erosion (Delaware DNREC, 1989).

Seed and Fertilize

Seeding establishes a vegetative cover on disturbed areas. Seeding is very effective in controlling soil erosion once a dense vegetative cover has been established. However, often seeding and fertilizing do not produce as thick a vegetative cover as do seed and mulch or netting. Newly established vegetation does not have as extensive a root system as existing vegetation and therefore is more prone to erosion, especially on steep slopes. Care should be taken when fertilizing to avoid untimely or excessive application. Since the practice of seeding and fertilizing does not provide any protection during the time of vegetative establishment, it should be used only on favorable soils in very flat areas and not in sensitive areas.

Stockpile Topsoil and Reapply to Revegetate Site

Because of the high organic content of topsoil, it cannot be used as fill material or under pavement. After a site is cleared, the topsoil is typically removed. Since topsoil is essential to establish new vegetation, it should be stockpiled and then reapplied to the site for revegetation, if appropriate. Although topsoil salvaged from the existing site can often be used, it must meet certain standards and topsoil may need to be imported onto the site if the existing topsoil is not adequate for establishing new vegetation.



Photo of silt sock—State of Pennsylvania



Photo of Undamaged silt fence—State of Pennsylvania

Additional Resources:

UNH Facilities SWMP—https://www.unh.edu/sites/default/files/departments/facilities/swmp-unh-2020_update.pdf

Think Blue Suncook—<http://thinkbluesuncook.org>

Town of Allenstown, New Hampshire—<https://www.allenstownnh.gov>

