



South Burlington Stormwater Utility

Gregory Drive Swirl Separator



Map of South Burlington



City staff backfilling around new swirl separator on Gregory Drive



View of swirl separator interior plates.

Location:	Gregory Drive
Problem:	Stormwater runoff from roadways can carry pollutants like sediment, oil, and grease to streams. The City of South Burlington had a State of Vermont stormwater permit for Gregory Drive and needed to improve stormwater treatment before the permit could be renewed.
Benefit:	Sediment is removed from stormwater runoff on Gregory Drive prior to discharge into Muddy Brook and the City is in compliance with its State stormwater permit.
Description:	In order to come into compliance with the State Stormwater permit and treat stormwater runoff from Gregory Drive the City installed a hydrodynamic swirl separator. A hydrodynamic swirl separator is a device used to remove sediment from stormwater runoff. As water flows into the unit, internal plates cause the water to swirl in a whirlpool like fashion. A combination of gravitational and hydrodynamic drag forces encourage the solids to drop out of the flow and migrate to the center of the chamber where velocities are at their lowest. The velocity gradient that has been created by the swirling action prevents solids from re-suspending, even under high flow conditions. After installation, all that is visible from the street level is a manhole cover. City staff will periodically maintain the unit and remove the collected sediment.
Dates/Timeline:	Fall 2007
Total Project Value:	\$32,000
Funding Sources:	Stormwater Utility Fund
Best Management Practices:	Installed a Swirl Separator