

Stormwater Management for Roads:

Overview of Vermont Stormwater Regulations for Roads

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Christy Witters, Municipal Stormwater Program Coordinator, VTDEC

Roads and other developed lands are a significant source of nutrient and sediment pollution in Vermont. When rain and snowmelt run off impervious surfaces like parking lots, roadways, and rooftops, instead of being absorbed into the ground, it carries pollutants to nearby waterways, which can threaten the health of our rivers, lakes, and wetlands. The Stormwater Program addresses this stormwater-related pollution from municipalities, industries, and developments through its permitting programs and associated technical assistance.

In 2017, the Stormwater Program developed two new permitting programs designed to help clean up Lake Champlain and protect high quality waters statewide, as required by the Vermont Clean Water Act (Act 64)—the Municipal Roads General Permit and the TS4 General Permit. Both programs will not only significantly reduce road-related runoff, they will also improve the flood resilience of our road networks across Vermont.

Municipal Roads General Permit (MRGP)

The Municipal Roads General Permit (MRGP) was developed to improve the condition of municipal roads to reduce road-related stormwater erosion. The MRGP Standards, including maintaining proper road crowning, stone-lining steeper ditches, and properly sizing replaced culverts, will significantly reduce the amount of sediment and nutrients transported from roads to surface waters. Bringing roads up to MRGP Standards will reduce phosphorus by 40–80%. Implementation of the standards will also improve flood resilience—roads that meet standards can better withstand larger rainstorms.

All hydrologically-connected municipal roads shall meet the following 4 standards:



Crowning



Removal of Grader Berm



Stable Ditches



Stable Turnouts

In addition, if **erosion** is present, identify the source and implement:

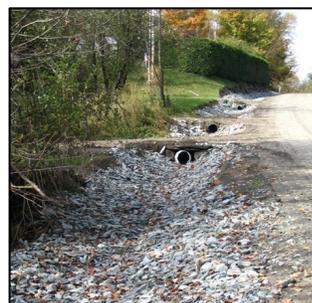
On hydrologically connected Class 4 Roads, with **Gully erosion**



Culvert End Treatment



Stable Outlet



18" culverts (driveway culverts may be 15")

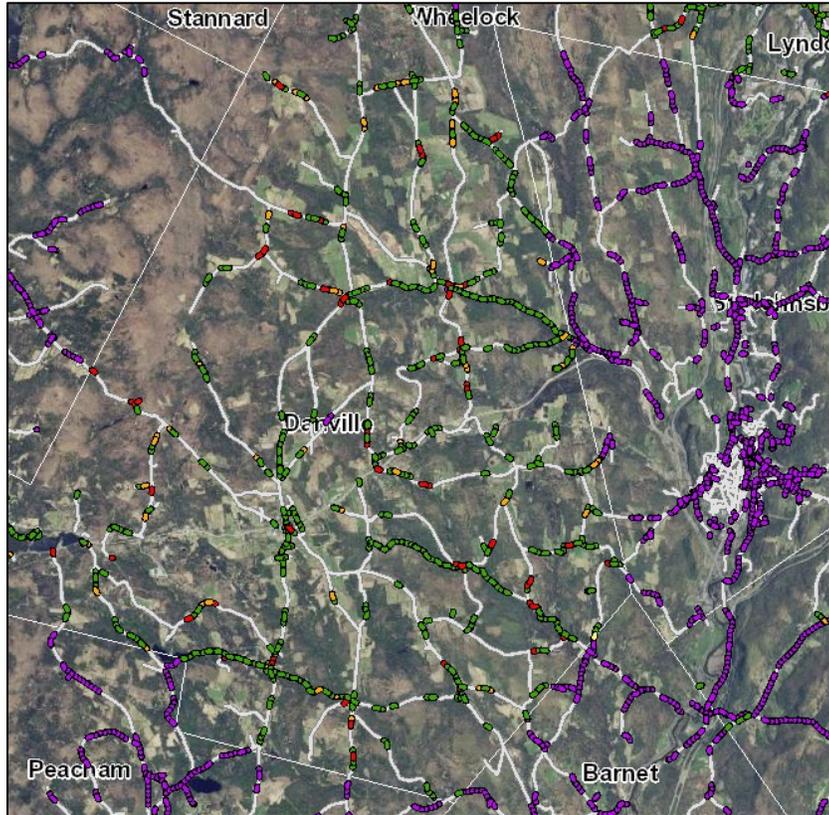


Implement relevant best management practice

All towns shall complete Road Erosion Inventories:

ANR has mapped all hydrologically-connected municipal roads (shown in purple, below) using a GIS analysis of proximity to waters and road slope. Towns will use this data to inventory the connected road segments and evaluate each segment’s compliance with the road standards. The resulting Road Erosion Inventory and initial plan to meet standards is due by December 31, 2020. All hydrologically connected roads shall meet standards by December 31, 2036.

ANR Natural Resource Atlas, Municipal Roads Theme - <http://anrmaps.vermont.gov/websites/anra5/>



Road Erosion Inventory Scoring for Danville (draft)

Road Erosion Scoring (MRGP)

- Fully Meets
- Partially Meets
- Does Not Meet
- Incomplete Data
- Not Connected

Road Segment Priority (MRGP)

Hydrologically Connected

Road Segments (MRGP)

- Yes

Grant-in-Aid – Funding for road stormwater projects

To assist municipalities in better understanding the requirements of the MRGP and to jump-start implementation, the Stormwater Program and the Clean Water Initiative Program, in partnership with VTrans and regional planning commissions, developed and implemented the municipal roads Grant-in-Aid (GIA) program. The GIA program makes funding available to municipalities to proactively implement best management practices. It also dramatically reduces grant application, review, and administration time, benefiting both the state and municipalities.

FY 2018 - \$2.1 million

- 179 towns participated
- 44 road miles brought into full compliance

FY 2019 - \$2.6 million

- 211 towns participated

FY 2020 – proposed \$3.1 million

Transportation Separate Storm Sewer System (TS4)

The TS4 General Permit covers all state-operated high-ways, and most other Agency of Transportation (VTrans) facilities like district garages and park-and-rides. The new general permit will result in the installation of best management practices at existing facilities, minimizing water quality impacts from new and expanded roads, and the implementation of “phosphorus control plans” for the portion of state highways in the Lake Champlain basin. Phosphorus control plans will require VTrans to develop and implement projects that reduce phosphorus pollution from their lands.