

Municipal Roads General Permit (MRGP)– Paved Roads with Catch Basins (CBs) Road Erosion Inventory (REI) Supplement 2019 Field Season

Use the following methodology for completing the REI and associated REI form C. for Paved Road Segments with Catch Basins. If road segments are paved with catch basins and have drainage ditches, use DEC's *Road Erosion Inventory and Evaluation Form A: Paved and Gravel Roads with Open Ditches* form. For additional MRGP information see the VT DEC MRGP website below:

<http://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/municipal-roads-program>

Download latest versions of *Survey 1,2,3* and *Collector for Arc GIS* apps to your tablet or phone. Request your credentials for *Username* and *Password* from Ryan Knox ryan.knox@vermont.gov or Jim Ryan jim.ryan@vermont.gov

For additional information regarding the *Collector for Arc GIS* and *Survey 1,2,3* FAQ and App use, link below:

<http://vtanr.maps.arcgis.com/home/item.html?id=fe11c5ffd0d04eeca968115d84daf90>

Collector App Maps of hydrologically-connected catch basin outlets and road segments- Hydrologically connected outlets are those within 500' of a water resource. The *Collector* app will show connected outlets and those segments draining to them as orange in color. The outlet-segment connectivity was determined by GIS analysis (*screen shot of connected outlets and segments below*). As with the Gravel and Paved Roads with Drainage Ditches, hydrologic-connectivity, the outlet connectivity and outlet to segment connectivity, can be determined based on field conditions and may override the GIS-determined connectivity.

Use *Collector App* to locate which connected outlets to inventory. ***Launch Inventory for Connected Outlet*** to assess individual outlets.

Survey 1,2,3 App Catch Basin Outlet assessment form questions (* indicates required fields):

- **Your name***
- **Your organization***
- **Date** (*auto populated*)
- **Municipality**
- **Outlet ID** (*auto populated*)
- **Hydrologically-connected*** *Yes or No*

- **Assessment Reason***-

Initial assessment or Reassessment or Work completed or Storm damage

- **Culvert location** (*see App FAQ link above to add a new catch basin outlet*)

- **Photo**

- **Culvert diameter in inches***

- **Does Outlet discharge directly into water*** (water to water)?

- **Erosion type present*** Gully, rill or sheet flow/none

- **Erosion Measurement*** (If erosion present)-

length in feet and average width in feet and average depth in feet

- **Total Cubic Yards** (*auto calculated*)

- **Recommended treatment** (*optional*)-

Meets standard or Stone lining or Stone apron or Stone header

- Stone lining of eroded swale- Recommended 12-24" outfall diameter minimum 12" minus, 24-48" – minimum 24" minus³
- Stone apron at outfall (*diagram below*)- Recommended 12-24" outfall diameter minimum 12" minus, 24-48" – minimum 24" minus³. For 12-24" diameter apron should be 10' long, for 24-48" diameter apron should be 14' long
- Stone header to protect pipe in embankment- Recommended 12-24" outfall diameter minimum 12" minus, 24-48" – minimum 24" minus

- **Assessment Notes** (*optional*)

Culvert outlet stabilization (Detail from VTrans Better Roads Manual)

