

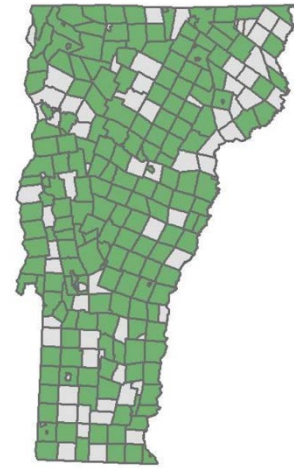
# GRANTS IN AID PILOT PROJECT

## State Fiscal Year 2018- FINAL REPORT

### INTRODUCTION

The Grants-in-Aid pilot project provided funding for municipalities to construct best management practices on municipal roads ahead of the Municipal Roads General Permit. The project was designed to be a streamlined approach to providing financial and technical support to municipalities. 187 municipalities committed to participate and 44.7 miles of roadway were improved. The Grants in Aid Project has been continued for FY 19.

The State of Vermont released a Municipal Roads General Permit (MRGP) in 2017, pursuant to Act 64 and part of the implementation milestones for the Lake Champlain Phosphorus Total Maximum Daily Loads (TMDLs). The “best management practices” (BMPs) used to address water quality concerns on unpaved roads are among the most cost-effective actions to reduce nutrient and sediment pollution. BMP implementation will also enhance municipalities’ resilience to flood damages and will help reduce long-term maintenance costs. There are approximately 13,000 miles of municipal roads in Vermont, of which approximately half directly drain into surface waters (streams, rivers, ponds, lakes and wetlands), referred to as “hydrologically connected road segments.”



*Participating Municipalities*

BMPs eligible for funding under the Grants in Aid pilot project were based on the draft MRGP, and included the following:

- Grass and stone-lined drainage ditches, turnouts, and other disconnection and infiltration practices;
- Removal of grader berms and lowering of high road shoulders;
- Improvement and replacement of drainage culverts and installation of culvert headwalls and outlet stabilization;
- Addressing gully erosion on Class 4 roads; and
- Stabilizing catch basin outlets.

The State of Vermont made \$2.65 million available for completion of this pilot project. Of this total, \$2,125,000 was available for construction, \$375,000 was for technical assistance provided by regional planning commissions, and \$150,000 was for engineering assistance provided by consulting engineers.

## PARTNERS

Project partners each served a unique role in the project. Vermont Department of Environmental Conservation staff provided administrative oversight and technical assistance regarding the best management practices. Regional Planning Commissions worked with each individual municipality to identify the best project sites, plan for best management practices, and verify construction. Northwest Regional Planning Commission served as the fiscal agent and overall program manager. VTrans staff in the Better Roads program and at the District offices provided additional expertise and technical assistance. Municipalities completed construction with municipal staff or through contractors.

Partner	Disburse Funds	Enroll	Assist	Implement	Track	Report
DEC Staff	✓					✓
RPCs		✓	✓		✓	✓
Municipalities		✓		✓		
VTrans			✓			

*Project Partners, graphic credit VT DEC*



Regional Planning Commissions held pre-construction site visits with all participating municipalities to identify and select priority project locations and BMPs that were necessary to bring road segments into full MRGP compliance (based on draft MRGP standards).

VTrans Better Roads and District staff participated in select site visits. Private consulting engineers provided additional assistance for complicated construction projects.

This combination of technical assistance provided municipalities with on the ground advice and ensured that projects were constructed to comply with best management practices.

## RESULTS

Overall, 85% of Vermont’s municipalities signed up to participate in the program. Nearly all were able to complete the construction projects. In total, 44.7 miles of roadway were improved to fully comply with the draft MRGP standards (720 100-meter road segments).

- 187 Municipalities submitted Letters of Intent**
- 173 Municipalities completed construction**
- 720 Road segments improved to meet MRGP draft standards**
- 1322 Best management practices constructed**
- 187 Pre-construction site meetings conducted**
- 173 Post construction project reviews completed**

The specific break-down of best management practices constructed is shown below.

Best Management Practice	Number Constructed <sup>1</sup>
Grass and stone-lined drainage ditches, turnouts, and other disconnection and infiltration practices	574
Removal of grader berms and lowering of high road shoulders	401
Improvement and replacement of drainage culverts and installation of culvert headwalls and outlet stabilization	245
Addressing gully erosion on Class 4 roads	10
Stabilizing catch basin outlets	9
<sup>1</sup> incomplete, some final post construction details still pending	

### Sample Project: Long Hill Road, Concord, VT, Before and After

Several BMPs were constructed, including: stone-lined drainage ditches, turnouts, and other disconnection and infiltration practices; removal of grader berms and lowering of high road shoulders; and improvement and replacement of drainage culverts and installation of culvert headwalls and outlet stabilization.



Concord, VT, Before and After, Photo: NVDA

## BENEFITS AND CHALLENGES

In addition to the miles of roadway that were improved and the number of best management practices that were constructed, there are programmatic benefits from this project.

- Water Quality Benefits- Targets hydrologically connected roads, constructed projects count towards permit compliance and TMDL targets.
- Municipal Education- Pre-construction meetings, water quality education and technical assistance familiarized municipalities with Municipal Roads General Permit standards in advance of the permit being finalized.
- Accountability- Post-project field verification and reporting assistance to track and account for results.

Regional Planning Commissions polled the municipalities that did not participate in the pilot program, and identified three main challenges:

- Permit Concerns- Not comfortable certifying number of connected road segments because of concern it would lock them in for permit compliance.
- Capacity Issues- Not enough staff resources to allocate to the project in the grant time period. Staff turnover impacted ability to get the construction work done.
- Timing- Not enough time to understand and consider the project and schedule a meeting to approve participation.

Two of the concerns were addressed in the design of year 2 of the project. With the release of the MRGP, there was no need to certify connected road segments. In year 2, municipalities were given extra time to respond to the letter of intent, and they were already familiar with the program. Capacity issues remain a challenge. In addition to being a barrier for initial sign up, lack of staff and resources were the main reasons 14 municipalities did not complete the projects they initially planned to construct.

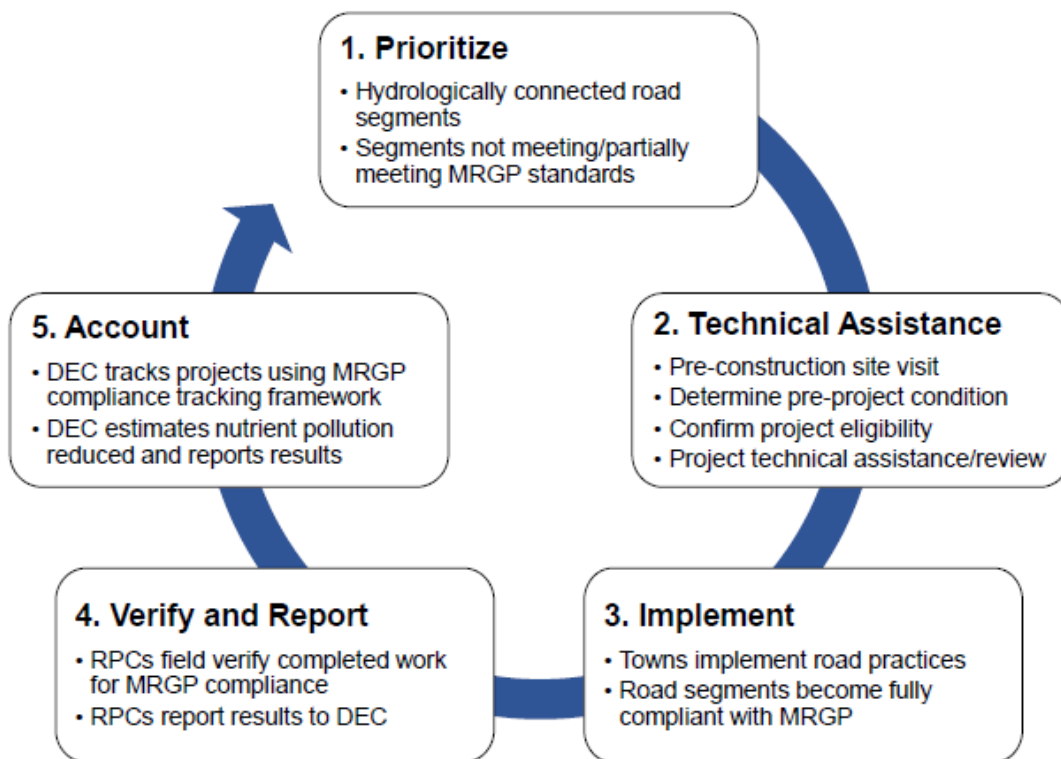
## PROJECT MANAGEMENT

Regional Planning Commissions, led by Northwest Regional Planning Commission, coordinated the program and provided technical assistance and program administration at the local and regional level. Regional Planning Commissions served as the point-of-contact for municipalities regarding this pilot project.

To accomplish these tasks in a comprehensive consistent manner statewide, NRPC hosted weekly conference calls with RPC staff and developed several templates to communicate project requirements. NRPC also developed protocols for site visits and provided an online reporting structure for the best management practices and before/after photos.

These materials are included as attachments to this report.

## Municipal Roads Grants-in-Aid Project Process



*Graphics credit VTDEC*

## PROJECT TIMELINE

TIME PERIOD	TASKS
June 2017	Announce the pilot program and invite municipalities to participate.
June 2017	Provide maps to participating municipalities that show the number and location of municipally-owned hydrologically connected roads.
July 2017	Obtain letter of intent from participating municipalities. Obtain verification from the participating municipalities of the number of hydrologically connected roads in their municipalities using best available
July 2017	Identify participating municipalities, where towns agree to: Install road BMPs to bring connected road segments up to draft state MRGP standards.
August 2017	Create two lists identifying which participating municipalities can complete the work by October 31, 2017, and which participating towns can complete the work by June 30, 2018.
July-October 2017	Hold pre-construction site visits with participating municipalities to identify and select priority project locations (i.e., connected road segments) and BMPs that are necessary to bring road segments into full MRGP compliance (based on draft MRGP standards).
August 2017	Collect information from non-participating municipalities on why they decided not to participate in the pilot project.
September 2017 – July 2018	Reimbursing municipalities for BMP construction costs up to a maximum limiting amount, based on a formula developed by the State and based on connected road-miles by town. Document construction project costs to ensure a substantial contribution of a minimum of 20% local match, including in-kind, transportation, municipal staff time, cash or other demonstration of substantial contribution
September 2017 – July 2018	Complete BMP reporting to the State, on behalf of the municipalities, on construction of BMPs including submission of “before and after” photographs.

## APPENDICES

Sample Invitation Letter  
Sample Municipal Letter of Intent  
Sample Confirmation Letter  
Site Visit Protocol  
Pre- and Post-Construction Report sample

## SAMPLE INVITATION TO PARTICIPATE IN MUNICIPAL ROADS GRANTS-IN-AID PILOT PROJECT

**TO:** Select Board/Village Trustee Chairs, Administrators/Managers, Municipal Clerks, Road Foremen and Public Works Directors  
**CC:** NRPC Regional Commissioners and TAC Representatives  
**FROM:** Catherine Dimitruk, Executive Director, Northwest Regional Planning Commission  
**DATE:** June 5, 2017  
**RE:** Letter of Intent to Participate in a **Municipal Roads Grants-In-Aid Pilot Program:**  
A New Project to Provide Funding Assistance in Municipal Road General Permit Compliance

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Vermont's Regional Planning Commissions (RPCs) and the Department of Environmental Conservation (DEC) invite your municipality to participate in a new **Municipal Roads Grants-In-Aid Pilot Project**. The intent of this new pilot project is to provide funding for municipalities to implement best management practices (BMPs) on municipal roads ahead of the forthcoming DEC **Municipal Roads General Permit (MRGP)**.<sup>1</sup>

DEC has set aside \$2.5 million to support this pilot project and will work with the Regional Planning Commissions to make available grant funds to all participating Vermont municipalities that agree to terms contained in the attached commitment letter. Your municipality must return the signed letter by July 5, 2017 to be eligible (page 3 of this invitation letter).

DEC will offer participating municipalities funding to implement BMPs on hydrologically connected road segments that currently do not meet standards.<sup>2</sup> A municipality's funding award depends upon:

- The number of hydrologically connected roads sorted into five-mile increments. (DEC used its mapped Geographic Information Systems (GIS) data layer to estimate the number of hydrologically-connected municipal roads by Vermont municipality<sup>3</sup>); and
- The number of participating municipalities. Additional funds may become available, should some municipalities decide not to participate. Refer to page 5 of this letter to see the DEC Base Offer for your municipality.<sup>4</sup>

Grants-In-Aid awards will be made available through Regional Planning Commissions, which will submit reimbursement requests to DEC on behalf of municipalities. DEC will reimburse up to 80% of the municipality's documented construction expenses, including in-kind support, for BMPs on hydrologically connected roads.

### **Participating municipalities agree to:**

- Construct the additional road BMPs on hydrologically connected roads to bring road segments up to MRGP standards;

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<sup>1</sup> Act 64 requires VDEC to develop the MRGP. Municipalities will begin applying for coverage under the MRGP in July of 2018. Municipalities will ultimately be required to conduct road erosion inventories, develop road Stormwater Management Plans and begin implementing road BMP priorities contained within those plans.

<sup>2</sup> Hydrologically connected roads are those that drain directly into surface waters (streams, rivers, ponds, lakes and wetlands).

<sup>3</sup> DEC map layer for hydrologically-connected municipal roads in Vermont is available at: <http://anr.vermont.gov/maps/nr-atlas>.

<sup>4</sup> A municipality may prefer to use a recent road-erosion inventory to determine the number connected road-miles, provided that the inventory is less than two years old and is consistent with the Municipal Road General Permit Erosion Inventory.



- Complete the project by October 31, 2017, or if more time is necessary, by the final completion date of June 30, 2018;
- Sign the commitment letter to confirm the mileage of hydrologically connected roads in your municipality;
- Document project costs and provide a minimum of 20% local match (cash or in-kind). Match can include in-kind contributions such as transportation, municipally-owned road equipment, crew labor, municipal staff time and other costs directly related to the BMP construction project. Funds from other federal or state grant programs or local match for those other federal and state grant programs cannot be included as match.
- Work with your Regional Planning Commission to select projects, conduct site visits, obtain technical assistance, complete the report template for each additional BMP (page 4 of this invitation letter) and seek reimbursement from DEC.

**DEC agrees to:**

- Use a formula, based on the number of hydrologically connected municipal road miles, in determining the monies appropriated to each participating municipality; and
- Make payments on a reimbursement basis, upon receipt of invoices submitted from Regional Planning Commission on behalf of participating municipalities. DEC will reimburse 80% of documented costs of the project up to the final award amount for each municipality.

**Regional Planning Commissions agree to:**

- Assist municipalities by: (a) serving as the municipalities' point-of-contact and fiscal agent for reimbursement of expenses under the pilot project; (b) providing maps of connected road segments to participating municipalities; (c) providing technical assistance to towns in project selection, mapping and construction techniques; and (d) aiding towns in tracking and reporting deliverables
- Securing letters of intent to participate in the pilot project coordinated statewide through the Northwest Regional Planning Commission in St. Albans).

**Eligible BMPs according to the draft MRGP Standards:**

- Grass and stone-lined drainage ditches, turnouts, and other disconnection and infiltration practices;
- Removal of grader berms and lowering of high road shoulders;
- Improvement and replacement of drainage culverts and installation of culvert headwalls and outlet stabilization;
- Addressing gully erosion on Class 4 roads; and
- Stabilizing catch basin outlets.

If you have any questions, please contact Catherine Dimitruk at 802-524-5958, [cdimitruk@nrpcvt.com](mailto:cdimitruk@nrpcvt.com) or refer to the VDEC website:

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

Thank you for your attention, and we look forward to hearing from you soon.

**SAMPLE LETTER OF INTENT TO PARTICIPATE IN THE  
RPC/DEC MUNICIPAL ROADS GRANTS-IN-AID PILOT PROJECT**

We, the Legislative Body of the Municipality of \_\_\_\_\_ certify that there are \_\_\_\_\_ miles of hydrologically connected municipal roads in our municipality, based on (check one):

- Vermont Department of Environmental Conservation’s map layer for hydrologically-connected municipal roads in Vermont, (most common approach, contact your Regional Planning Commission or see: <http://anr.vermont.gov/maps/nr-atlas>), or
- A municipal road erosion risk inventory completed within the past two years (provide excerpt).

As a municipality participating in the Municipal Roads Grants-in-Aid Pilot Project, we also certify that the municipality will:

- Construct one or more road Best Management Practices (BMPs) to bring additional connected road segments up to Municipal Roads General Permit (MRGP) standards, to be completed, if possible, by October 31, 2017, or by the final completion date of June 30, 2018.
- Construct the additional road BMPs on hydrologically connected roads – roads that drain directly into surface waters (streams, rivers, ponds, lakes and wetlands). Contact your Regional Planning Commission or refer to the VDEC map layer for *hydrologically-connected* municipal roads in Vermont. This map layer is available at: <http://anr.vermont.gov/maps/nr-atlas>.
- Consult with the Regional Planning Commission prior to construction of the BMPs to conduct a required site visit and verify the appropriate location of the connected road segment and BMP to meet draft MRGP Standards.
- BMPs will bring road segment up to MRGP Draft Standards.
- Provide a minimum of 20% local match (in-kind and cash). Match can include quantified in-kind contributions such as transportation, municipally-owned road equipment, crew labor, municipal staff time and other costs directly related to the BMP construction project as part of this pilot project. Funds from other federal or state grant programs or local match for those other federal and state grant programs cannot be included as match.
- Work with the Regional Planning Commissions to complete the report template for each additional BMP, which includes: (a) location of the BMP (road segment number), (b) itemized practice installed and (c) before/after photographs (refer to page 4 of the invitation letter).

\_\_\_\_\_ Date:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Duly Authorized Representatives)

**Return signed commitment letter to: Municipal Roads Grants-in-Aid Pilot Program, c/o Northwest Regional Planning Commission, 75 Fairfield Street, St. Albans, Vermont 05478**

**MUNICIPAL ROADS GRANTS-IN-AID PILOT PROJECT  
FINAL PERFORMANCE REPORT**

**Project Information**

Municipality:

Report date:

Direct aid funding amount:

Total documented cost including match (20% of total project(s) cost):

For your reference. Do not return with Letter of Intent.

**Complete this table indicating road segments worked on and *linear practices* implemented along paved and gravel roads with ditches (e.g., stone-lined ditch, berm removal).**

Road Segment ID #	Hydrologically Connected? Yes/No	Road condition* before project implementation	Itemized practices implemented to improve road condition	Road condition* after project implementation

\* Road conditions are based on Municipal Roads General Permit (MRGP) draft standards. Please indicate one of the following three standards: (1) not meeting standards, (2) partially meeting standards, or (3) fully meeting standards. If road erosion inventory has not yet been completed or new MRGP inventory template not used, assume the before project implementation condition does not meet standards.

**If your project involved outlet stabilization on paved roads with catch basins, Class 4 gully erosion remediation and/or municipal winter sand pile erosion remediation, complete this table.**

Road Segment ID #	Hydrologically Connected? Yes/No	Average estimated length of erosion	Average estimated width of erosion	Average estimated depth of erosion

**Attach before and after photos for each road segment worked on and work completed. Photos should be taken from the same perspective before and after project implementation and submitted as individual JPG files (minimum resolution 300ppi).**

## SITE VISIT PROTOCOL

When scheduled, enter the date, time and starting location on the google form under the folder for site visits.

<https://docs.google.com/spreadsheets/d/1gbhl2WNIbock4FnMe37Gxa7L7EeUjbdORhAAAzCTpzw/edit?usp=sharing>

(DTA and Better Roads staff will have access to this list and will initial if they plan to attend.)

### Prior to the site visit:

- Verify whether the potential segments have been inventoried
- Verify the final grant amount

### At the site visit:

- Review the goal of the program- bring full segment(s) up to meeting draft standards
- Take inventory of the site if needed, or verify conditions from previous inventory
- Identify deficiencies and what eligible BMPs will address the deficiencies
- Determine the potential time frame of construction and reinforce deadlines
- Discuss estimated cost, +/- the grant amount?
- Determine if any additional technical assistance is needed
- Reinforce the importance of tracking costs
- Take 'before' photos of the site

### After the site visit:

- Fill out the site visit reporting form
- Send follow up/confirmation information to the municipality

Site visits should be prioritized based on which municipalities are ready to go. All site visits will be completed and summarized by September 30, 2017. [This may not be possible in storm damaged areas, in that case site visits must be completed by 10/30/2017.]

## SAMPLE SITE VISIT FOLLOW UP LETTER

**TO:** [Municipal Official]  
**FROM:** [insert RPC name and contact person]  
**RE:** Confirmation of Site Visit and Notice to Proceed

Thank you for participating in the recent site visit for the Municipal Roads Grants in Aid Pilot Project. Enclosed is a copy of the information from that site visit. Your municipality can move forward on construction of the Best Management Practices as described on the site visit summary (enclosed). Completion of these BMPs will bring the identified road segment(s) up to the draft standards for the Municipal Roads General Permit.

The maximum funding award for your municipality is [\$] as determined by the VT Department of Environmental Conservation and a 20% local match is required. Your municipality will need to document all eligible project costs and will be reimbursed for 80% of documented costs up to the award amount. Therefore in order to be reimbursed for the full award amount your municipality will need to document eligible expenses of [\$]. Funds from other federal or state grant programs or local match for those other federal and state grant programs cannot be included as match. If you have questions about eligible expenses, local match or documenting costs please contact me.

[MUNICIPALITY] has indicated that construction will be completed by [October 30, 2017/June 30, 2018]. Please note that the final deadline for this grant is June 30, 2018 and projects must be completed by that date or a municipality will not be eligible for reimbursement. Upon project completion, RPC staff will work with municipal staff to conduct a post-construction site visit, take post-construction photos, and assist with project reports and reimbursement requests.

We will be in touch again as the construction season moves forward. If you have any questions in the meantime, please contact [insert name and contact information for the applicable regional planning commission].

The municipal responsibilities from your Letter of Intent are listed below as a reminder. We look forward working with you on this pilot project!

### Municipal Responsibilities from the Letter of Intent

- Construct one or more road Best Management Practices (BMPs) to bring additional connected road segments up to Municipal Roads General Permit (MRGP) standards, to be completed, if possible, by October 31, 2017, or by the final completion date of June 30, 2018.
- Construct the additional road BMPs on hydrologically connected roads – roads that drain directly into surface waters (streams, rivers, ponds, lakes and wetlands). Contact your Regional Planning Commission or refer to the VDEC map layer for hydrologically-connected municipal roads in Vermont. This map layer is available at: <http://anr.vermont.gov/maps/nr-atlas>.
- Consult with the Regional Planning Commission prior to construction of the BMPs to conduct a required site visit and verify the appropriate location of the connected road segment and BMP to meet draft MRGP Standards.
- BMPs will bring road segment up to MRGP Draft Standards.
- Provide a minimum of 20% local match (in-kind and cash). Match can include quantified in-kind contributions such as transportation, municipally-owned road equipment, crew labor, municipal staff time and other costs directly related to the BMP construction project as part of this pilot project. Funds from other federal or state grant programs or local match for those other federal and state grant programs cannot be included as match.
- Work with the Regional Planning Commissions to complete the report template for each additional BMP, which includes: (a) location of the BMP (road segment number), (b) itemized practice installed and (c) before/after photographs (refer to page 4 of the invitation letter).