



EAST OF HUDSON WATERSHED CORPORATION

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POLICY FOR THE OPERATION AND MAINTENANCE of EOHWC STORMWATER RETROFIT PRACTICES Adopted November 10, 2015

The nineteen municipalities, represented by the East of Hudson Watershed Corporation (EOHWC) have over 150 stormwater retrofit practices planned for, or constructed within their individual municipalities. Each of these projects, over time will require maintenance in order for the practice to maintain optimal efficiency in its operation. Within the EOHWC there has been much discussion concerning funding for, and completion of the maintenance required for these stormwater retrofits. This Policy will define how maintenance of the stormwater retrofit projects (SRP's) will occur.

In order for stormwater practices to remain effective at reducing phosphorus, proper maintenance is essential. Each stormwater retrofit that is installed by the EOHWC will have its own unique set of maintenance requirements and maintenance cycle, however some generalities can be made. Maintenance can be broken down into three parts; inspections, routine maintenance and non-routine repairs that may be required after large storms, or as a result of other unforeseen problems. Practices can be broken down into classes which have similar maintenance periods and requirement. These classes would include wet ponds, created wetlands, infiltration, and filter practices.

The NYSDEC General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-15-003) places the ultimate responsibility with each individual municipality for all stormwater practices within their jurisdiction including those considered stormwater retrofits. Part VI.Q states, "A covered entity must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the covered entity to achieve compliance with the conditions of this SPDES general permit."

At present, Towns and Villages are considered 'traditional land use control MS4's' as they hold the authority to make land use decisions under zoning and subdivisions controls. As such, they are obligated under the General Permit to maintain an inventory¹, provide for inspections and ensure the maintenance of all stormwater practices within their jurisdiction². The NYSDEC language in the General Permit covers both publically-owned, and privately owned stormwater management facilities that are located in, or under a municipality's jurisdiction.

Under the requirements of the General Permit, Towns and Villages should already be maintaining, or causing maintenance to be performed on, the stormwater management practices in their respective jurisdictions. This includes all drainage control structures such as stormwater ponds, and other practices installed as part of their highway drainage system. This also includes stormwater management practices

¹Part VII.A.5.a.vi. "maintain an inventory of post-construction stormwater management practices within the covered entities jurisdiction" [including] "type of practice, maintenance needs per the NYS Stormwater Management Design Manual, SWPPP and dates and type of maintenance performed."

²Part VII.A.5.a.vii 'ensures adequate long-term operation and maintenance of management practices identified in Part VII.5.a.vi. by trained staff, including inspection to ensure that the practices are performing properly.'



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constructed as part of a subdivision or site plan approved by the Town or Village. Pursuant to the requirements of the General Permit, municipalities must already have written procedures³, the equipment and the manpower to provide inspections and maintenance to the stormwater infrastructure in their respective municipalities. Since municipalities must already have a program in place, it should be relatively simple to manage the additional EOHWC retrofit practices constructed in their municipalities, although their individual resources will likely need to be supplemented.

With participation in the EOHWC, each municipality has agreed to “bubble compliance”, or a shared responsibility for the installation of stormwater retrofits. While each individual municipality will ultimately be responsible for the retrofits located within their jurisdiction, it is generally agreed that the EOHWC should remain involved in some fashion for meeting the maintenance requirements for as long as the EOHWC is in existence.

The EOHWC has chosen the following means for providing maintenance to EOHWC SRP’s;

Each stormwater retrofit will require maintenance specific to each individual retrofit. This maintenance obligation will be described in a written plan, prepared for each project by the design engineer preparing the construction documents in consultation with the host municipality. The maintenance plan shall include the design life of each SRP, recommended inspection schedule and checklist which also provides basic design criteria for the practice, required maintenance activities, an estimate of time needed and cost of such activities, schedule of such activities, and a present worth cost for inspecting and maintaining the SRP for its design life. Three copies of the maintenance plan shall be provided to the host municipality, along with an as-built drawing upon completion of construction of the retrofit. Moving forward, each maintenance plan shall be reviewed and approved by the chief elected officer of the host municipality prior to the SRP construction being placed for bidding.

Each municipality will be responsible for providing the inspections and maintenance of the stormwater retrofit practices (SRP) within, or under their jurisdiction. Maintenance shall be completed in accordance with the maintenance plan that has been prepared for the project.

The EoH municipalities have sought to achieve compliance with the stormwater regulations and the retrofit program through bubble compliance i.e., a sharing of the overall phosphorus reduction requirements for all of the EoH municipalities. Similarly the expense of paying for the cost of maintenance of the stormwater retrofits that have been installed would be shared between the municipalities in proportion to each of their obligations for phosphorus removal. The O&M **financial obligation** for each municipality will be based on their percentage of the overall 5-year phosphorus reduction (see Table 1) and the estimated annual total O&M cost for maintaining the stormwater retrofits.

Municipalities will be reimbursed by the EOHWC for costs incurred for providing maintenance at the actual cost plus 2% for administration. Municipalities can individually chose how to accomplish maintenance responsibilities to find the most cost-effective and efficient means; either by using municipal staff/highway departments, or through the use of private contractors.

³Part IX.A.6



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When completing SRP maintenance by contracting with a private contractor, all contracts seeking reimbursement from the EOHWC must follow EOHWC procurement policies. However, as the minimum requirement to qualify for reimbursement of maintenance costs, municipalities must request at least three written quotes from three different contractors in order to ensure that the work is being completed at a fair price. Where there is a conflict between a municipality's procurement policy and the EOHWC procurement policy, the EOHWC procurement policy will govern.

Costs associated with the use of municipal employees and equipment to provide SRP maintenance shall be.

Work completed by municipal employees and consultants will be reimbursed at cost, based on a schedule of values, and subject to a cap. The EOHWC Board of Directors shall establish a schedule of reimbursement rates for completing SRP maintenance. The schedule shall provide a maximum hourly rate for municipal employees, consultants and equipment. Reimbursement costs shall also be capped by the estimate of time needed and cost of such activities found in the maintenance plan. Any exceedance of the cap must be approved by the EOHWC Board of Directors.

Financing O&M Requirements

The EOHWC shall oversee the O&M operations for the retrofits installed by the Corporation. The EOHWC shall create a separate fund (a bank) to fund the estimated cost of providing the annual operation and maintenance cost of all the stormwater retrofits in the Program. Each municipality is responsible to provide their proportionate share of this amount to the EOHWC as either a direct payment or as a documented labor and capital expenditure to be applied as credit toward O&M costs.

Twice annually, in June and November municipalities will submit an invoice for reimbursement of the actual cost for providing maintenance of the stormwater practices under their jurisdiction. Invoices will be reviewed by the EOHWC staff and Executive Board. Actual costs incurred will be credited against any amount due and owing to the Corporation. Where there is a surplus, the municipality would receive a refund. EOHWC staff shall be responsible for spot checking inspections completed by each municipality and ensuring that the maintenance of each practice is being completed in a timely and efficient manner.

Each municipality's financial obligation will fall into one of two categories:

- 1) The estimated O&M financial obligation of your municipality is **less** than your yearly O&M costs. Those municipalities that are required to contribute towards retrofit maintenance fund must provide payments to the EOHWC on the following schedule:
 - § January 1, 2016. 35% of total O&M estimates costs minus any incurred costs for completing retrofit maintenance.
 - § May 1, 2016. 35% of total O&M estimates costs minus any incurred costs for completing retrofit maintenance.
 - § September 1, 2016. 30% of total O&M estimates costs minus any incurred costs for completing



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retrofit maintenance.

In case 1, the actual expenses incurred by the municipality will serve as a credit towards meeting its responsibility to the EOHWC O&M program. The difference between the actual expenses and the municipality's financial obligation will be due as payment to the EOHWC.

- 2) The estimated O&M financial obligation for your municipality is **more** than your yearly O&M Costs.

Those municipalities that will receive O&M funds must provide documentation of inspection and maintenance completed for each project to the EOHWC on the following schedule:

- § June 30, 2016. O&M Documentation for December 1, 2015 thru May 31, 2016.
§ November 30, 2016. O&M Documentation for June 1, 2016 thru November 30, 2016

In case 2, the municipality will document all expenditures for the O&M program. Once the municipality has reached the estimate annual O&M costs, the EOHWC will reimburse the municipality for the additional required O&M which exceeds its financial obligation.

These reimbursements will be capped by the calculated percentage contribution for the overall bubble compliance. Any additional expenditure will be documented by the municipality. All overages to the estimated municipal costs must be verified and approved by the EOHWC prior to the work being completed. These costs will be then included in an updated budget for the next O&M calendar year.



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TABLE 1

Municipality	5-Year Phosphorus Reduction (kg)	Percent Contribution
Bedford	32.2	7.01%
Brewster	9.2	2.00%
Carmel	72.0	15.67%
Cortlandt	11.6	2.52%
Kent	33.6	7.31%
Lewisboro	35.5	7.73%
Mount Kisco	18.7	4.07%
New Castle	25.1	5.46%
North Castle	1.0	0.22%
North Salem	19.1	4.16%
Patterson	17.2	3.74%
Pawling, Town	3.5	0.76%
Pawling, Village	4.3	0.94%
Pound Ridge	9.5	2.07%
Putnam County	30.9	6.72%
Putnam Valley	1.0	0.22%
Somers	50.0	10.88%
Southeast	31.1	6.77%
Yorktown	54.0	11.75%
Total	459.5	100.00%