



TOWN OF FRANKLIN

DEPARTMENT OF PUBLIC WORKS

257 Fisher Street
Franklin, MA 02038

February 25, 2015

Mr. Newton Tedder
US Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston MA 02109-3912

Re: 2014 Draft Massachusetts Small MS4 General Permit
Comments from the Town of Franklin

Dear Mr. Tedder,

The Town of Franklin would like to take this opportunity to respectfully submit comments on the 2014 Draft Massachusetts Small MS4 General Permit, which was published on September 30, 2014.

While the goal of the Clean Water Act is commendable and supported by the Town of Franklin, we consider the majority of the requirements in the new proposed MA Small MS4 general permit to be overly assertive, burdensome, expensive, unrealistic and most likely not feasible and unachievable for the Town of Franklin within the specified timeframe and without funding support from the US Environmental Protection Agency (US EPA) and/or the Massachusetts Department of Environmental Protection (MassDEP).

As you are aware, The Town of Franklin has made huge strides towards improving the overall water quality and water availability in Franklin. These improvements have been made in not only Stormwater Management, but also drinking water and sewer connivance over the past decade. Our successes have been made through MS4 compliance activities, proven and innovative drinking water conservation practices, smart sewer infiltration and inflow (I/I) monitoring and improvements, stormwater drainage improvements, impervious area reductions during redevelopment of public and private property, and with capital infrastructure improvements in all areas. The Town of Franklin has spent in excess of \$30,000,000.00 on all drinking water, sewer and stormwater improvements over the last 12 years. The majority of the funding for this work has come from an operational increase of 22% for stormwater, increases of water and sewer rates of 334%, additional local bylaws and requirements for development and redevelopment and an aggressive pursuit of grants that were matched with Town effort.

In the absence of a current updated permit, resulting in little or no direction from EPA over the last eight years, the town has developed its own approach for stormwater management and we have relied heavily on capital improvement projects to execute stormwater improvements. The Town has been able to include these improvements with every town construction project, allowing for a variety of stormwater improvements including the removal of impervious surfaces (road narrowing and sidewalk removal), the construction of rain gardens and tree wells and the installation of proprietary BMPs, such as stormceptors.

Full compliance with the 2014 Draft MS4 Permit is an additional significant effort that cannot be currently supported with the Town's existing resources and funding within the next permit cycle, as specified in the draft permit. The Town wishes to continue improving stormwater management and water quality, but this effort needs to take into consideration the progress made to date and be balanced with future infrastructure demands town-wide and economic conditions. Additionally, the town feels that the most cost-effective approach for stormwater improvements is integration with redevelopment and capital projects as infrastructure needs to be upgraded and/or replaced.

Similar to many other communities, Franklin has considered creating a stormwater utility to meet the current and proposed additional costs associated with the updated MS4 permit. Attached are working budget sheets that are based on current costs to meet the existing MS4 permit compared to estimated short-term EPA proposed MS4 stormwater activities. These worksheets clearly show that the additional tasks proposed by the new MS4 permit would go up over 100%!

Presently the Public Work's General Fund Operational Budget (GFOB) is \$3,996,424.00. It is estimated that 14% or \$559,499.00 of the GFOB is used for only stormwater tasks. If the new MS4 permit becomes effective as proposed, it is estimated that the stormwater program effort in Franklin would require an increase to 26% or \$1,039,070.00 of the GFOB. In order for the Town to maintain "level funded services" they would have to increase taxes to come up with an additional \$479,571.00 or other services and personnel would have to be cut from one or more town sectors (public works, police, fire, library, senior services, education or elsewhere). Please be aware this large increase is just for annual operation costs and does not consider the capital improvement costs and related operation and maintenance needs required under the draft MS4 permit.

In 2011, The Town of Franklin, in conjunction with EPA, studied the cost for the Town to meet the requirements of the Charles River TMDL. EPA estimated Franklin's capital improvement cost to be \$74,600,000.00! The tables below are from the 2011 Upper Charles Study. The target reduction in phosphorous for Franklin was 52%, 15% of which would be met by enhanced operational and non-structural BMPs, which are rolled up into the future operational costs. The remaining 37% was to be achieved through implementation of structural BMPs. It also needs to be noted that the \$74,600,000.00 is only for operational and construction of new BMPs and there is consideration for land acquisition that would be needed. It is estimated that many more millions of dollars would be needed to acquire the land through purchase or easement to install future BMPs.

Table E.5: Recommended Capital Cost for Implementation of Structural Stormwater Controls to Achieve Compliance with Phosphorus Load Reductions (2011 Dollars)

Town	% Phosphorus Removal from Structural Controls ¹	Total Cost of Structural BMPs (Charles River Watershed) ²
Bellingham	37%	\$29,700,000
Franklin	37%	\$74,600,000
Milford	42%	\$75,800,000

¹ Assumes 15% TP reductions in each community via non-structural controls.
² Estimated costs are based on a calibration against Spruce Pond Brook subwatershed and rounded to the nearest \$100,000.

Table E.9: Estimated Operational and Capital Costs – Charles River Watershed (2011 dollars)

Town	DD CIP	Town CIP	Total CIP	Operating Costs ¹
Bellingham	\$2,600,000	\$27,100,000	\$29,700,000	\$891,000
Franklin	\$10,900,000	\$63,700,000	\$74,600,000	\$1,815,000
Milford	\$11,100,000	\$64,700,000	\$75,800,000	\$1,037,000
TOTALS	\$24,600,000	\$155,500,000	\$180,100,000	\$3,744,000

¹ Annual Average for first five years.
² Bellingham DD implementation costs per impervious acre are estimated to be significantly lower due to the presence of higher infiltration capacity soils underlying subject properties and the lower ratio of impervious to pervious surfaces compared to DD properties in the other two municipalities. Costs are rounded to the nearest \$1,000 (totals may not add up due to round off error).

Table E.10: Estimated Total Implementation Costs over 25 Years Beginning in 2012 (2011 Dollars)

Town	10-Year Implementation	15-Year Implementation	20-Year Implementation	25-Year Implementation
Bellingham	\$70,800,000	\$65,900,000	\$60,700,000	\$55,000,000
Franklin	\$165,900,000	\$153,400,000	\$140,400,000	\$127,000,000
Milford	\$146,000,000	\$133,400,000	\$120,200,000	\$107,000,000
TOTALS	\$382,700,000	\$352,700,000	\$321,300,000	\$289,000,000

Costs are rounded to the nearest \$100,000.

Besides the unrealistic cost associated with the proposed Phosphorus Control Plan that was identified during the 2011 Upper Charles River Study, the current draft MS4 permit outlines an implementation time frame of no later than 20 years to complete the Phosphorous Control Plan. The table above clearly shows the overall cost savings that are realized with a longer implementation time table. EPA needs to consider extending the time table to implement the Phosphorus Control Plan to save money for all communities!

The draft MS4 permit outlines a 37% reduction requirement for Franklin, which is less than the 52% previously outlined in the Upper Charles Study. Even if we only have to meet a 37% reduction, I calculated the costs for the relative structural BMP cost and weight by lbs. of phosphorous from 52% to 37%. The table below still shows an implementation cost of over \$42,000,000.00 to meet proposed Phosphorus Reductions in Franklin!

Phosphorous Reduction Requirements

	Existing Load (lbs/yr)	TMDL Allowable Load (lbs/yr)	Required Load Reduction (lbs/yr)	% Reduction	Non-Structural BMPs %	Ibs Removed by Non-structural BMPs	Structural BMPs %	Ibs Removed by Structural BMPs	Structural BMPs Cost	\$/lb Structural BMPs
Upper Charles Study	5,428	2,600	2,828	52.1%	15%	814	37%	2,008	\$74,600,000	\$ 37,145
2014 MS4 Permit	5,218	3,302	1,916	36.7%	15%	783	22%	1,133	\$42,096,429	\$ 37,145

As mentioned previously regarding operational costs, I am unsure how the Town of Franklin can come up with \$42,096,429.00 over the next 20 years for the implantation of the Phosphorus Control Plan and realistically implement this magnitude of projects. The Town of Franklin presently has a FY15 operation budget (schools, DPW, police, fire, library, etc.) of \$111,318,801.00, with a capital improvement appropriation of \$2,092,000.00. It would be difficult, if not impossible for the Town of Franklin to come up with an additional \$2,104,821.45 for this program without reductions in other areas for capital improvements in Town like needed repairs to our schools and Town buildings, roadway improvements and equipment purchases, just to name a few. Taxes would need to be increased significantly or other services and personal would have to be cut from all other town sectors (public works, police, fire, library, senior services, education or elsewhere).

In conjunction with the comments mentioned above, EPA needs to be aware of the release date of the proposed permit and the Massachusetts municipal budget cycles. Many of the deadlines provided in the draft permit do not allow sufficient time to allocate appropriate time to complete the tasks required. No item in the permit should be required to be completed during the first permit year, except for the preparation of the Notice of Intent (NOI) and the Stormwater Management Plan (SWMP).

Additionally, there should be language within the permit that references EPA's Integrated Planning framework and allow communities the flexibility to utilize this approach to address a community's stormwater/MS4 requirements. EPA's Integrated Planning framework has been shown to save time and money so it should be embraced and recognized.

Additionally, the Town of Franklin and all communities should be recognized and credit should be given for all the improvements that have been constructed and completed since the implantation of the first MS4 permit in 2003, not just the last five years. Through local regulations, zoning requirement, the Town's overall infrastructure improvement program, and grants many BMP have been constructed over the last 10+ years and the Town should receive credit. Additionally, there are many older BMPs in town that may not have been designed for water quality, but still provide some benefit. The Town should have the option to incorporate these BMPs into its approach and calculations to meet the MS4 permit requirements for phosphorous control.

Finally, I would request that before the new MS4 permit is issued in Massachusetts that EPA evaluate how the permit program has worked since the initial phase "Small" MS4 program was implemented in 2003. It appears that the new permit is based on information that was collected and compiled before 2003. Charles River Basin communities have spent millions of dollars on stormwater improvements. How much better is the condition of the Charles River in 2015 compared to the understanding of water quality in 2003? EPA should be able to show some sort of measurable results! Why has there been no incremental evaluation of these permits to see if they are working before new and more stringent and expensive permits are implemented?

Below are our comments along with feedback specific to the proposed Small MS4 General Permit.

Comments on Proposed MS4 General Permit

1. **Section 1.7.2.d** Notice of Intent – “The NOI shall be submitted within 90 days of the effective date of the permit.”
Comment: The NOI and Stormwater Management Plan (SWMP) requires a significant effort by the Town as it represents the Town’s commitment to meeting the MS4 Permit requirement and a significant upfront effort to develop a realistic and effective approach to meet the MS4 Permit with clearly defined roles and responsibilities. It is unrealistic to expect such a detailed plan in such a short period of time.
Suggestion: Extend the deadline for submitting the NOI to one year from the effective date of the permit to allow for more coordination and integration with the SWMP development. If an extension is not possible, please consider a less detailed document that requires only an outline of the proposed SWMP.
2. **Section 1.10.c** Stormwater Management Plan – “The permittee is encourages to maintain an adequate funding source for the implementation of this program. Adequate funding means that a consistent source of revenue exists for the program.”
Comment: The increased level of effort to address water quality needs as required under the 2014 Draft Small MS4 General Permit should include Federal funding sources. This is crucial to not only continue monitoring water quality and foster development of solutions but also to allow for construction that will ensure compliance. The current source of grants available in Massachusetts will not be sufficient, particularly if other MS4s require assistance.
Suggestion: The EPA and/or MassDEP need to provide financial assistance to MS4 communities to help them meet the MS4 Permit.
3. **Section 2.3.4.6** System Mapping – “The mapping shall include a depiction of the permittee’s separate storm sewer system in the permit area. The mapping is intended to facilitate the identification of key infrastructure and factors influencing proper system operation, and the potential for illicit sanitary sewer discharges.”
Comment: The MS4 Permit requires that all system mapping of the MS4 be completed within two years of the effective date of the permit. This mapping will be crucial in determining the catchment areas, as stated in section 2.3.4.7.c. There is a discontinuity between these two activities; the catchment priority ranking is required to be completed within one year of the effective date of the permit.
Suggestion: Please revise the order of these planning efforts to ensure that mapping data that will be gathered can be utilized and built upon.
4. **Section 2.3.4.7.e.ii.b** Wet Weather Investigation – “The permittee shall conduct at least one wet weather screening and sampling at the outfall for any catchment where one or more System Vulnerability Factors are present.”
Comment: Wet weather sampling for outfalls should be based on an evaluation of catchments under Part 2.3.4.7.c and the requirements for discharges to impaired waters under Part 2.2.

General Feedback on Proposed MS4 General Permit

9. Phosphorous Control Plan – The draft MS4 permit does not address pollutant loads from private properties.

Suggestion: The Town believes that MS4s should be allowed to identify and investigate phosphorous reduction from private properties, but over a longer time period for planning and implementation. This may be more cost-effective and not constrain MS4s to working only within the MS4 regulated area and within the Town's current jurisdiction. The potential saving for the Town of Franklin was evaluated in the 2011 Upper Charles River Study.

10. Phosphorous Control Plan Implementation Timeframe – The current timeframe for implementation of the PCP capital projects is 15 years from the development of the PCP. The 2011 Upper Charles Study outlined an option for a 25-year implementation timeframe, which proved to be costly and the study suggested that an even longer timeframe may be needed.

Suggestion: As stated previously, based on the findings of the study, it was determined that a longer implementation period would provide greater flexibility and cost saving in meeting the permit requirements. The time frame should be extended beyond 25 years if communities are making reasonable and measurable progress towards water quality goals.

11. The 2011 Upper Charles Study suggested using a “back-end-loaded” approach for implementing structural controls. It was found that using such an approach would lessen initial funding to “allow for better quantification of benefits from non-structural measures and early implementation of the most cost effective structural practices. This approach would also reduce initial expenditures as practitioners gain expertise and will likely lead to long-term savings over time.”

Suggestion: The Town suggests that this capital expenditure approach be considered by the EPA to ensure successful and long term compliance with cost savings for the Town.

12. Regional coalition groups – The permit doesn't discuss any benefits for municipalities to work together and pool their resources to meet requirements of the Permit. It would be beneficial if the EPA offered an incentive program to encourage cooperation between municipalities to meet some of the goals stated in the Permit. For example, it would be more efficient and cost effective for a coalition of towns to hire a contractor to do catch basin cleaning instead of each municipality contracting the work or burdening their current staff.

Suggestion: An incentive from the EPA would encourage municipal cooperation and assist in obtaining support from the public and local officials, which would be difficult to otherwise achieve.

13. Education programs for government/elected officials – The Permit does not address providing education/information programs geared towards government/elected officials. It would be helpful if the EPA provided training materials or personally conducted regional information sessions geared specifically towards these officials. Obtaining funding for this permit is going to be difficult, if not impossible, particularly without the support of the town government.

Suggestion: A presentation specifically for government officials by the EPA would be crucial in selling the permit and ensuring acceptance, cooperation and the motivation needed to establish stable funding.

STORMWATER ENTERPRISE BUDGET

		Task	Current Effort	Actual 2012	Budget 2013	Proposed 2014	Potential
Highway Department Services		Catch Basin Cleaning	Clean catch basins once per year				
		Street Sweeping	Currently all streets are swept annually; limited high priority areas are swept more frequently				
		BMP Retrofit and Maintenance	Maintenance performed on an emergency basis	\$228,538	\$338,751	\$364,107	\$452,228
DPW Admin Services		NPDES MS4 Compliance	Efforts are presently performed to address different aspects of NPDES mandate				
		General Management	Management of O&M and capital projects	\$28,215	\$40,729	\$44,438	\$102,505
		GIS Services	Limited information regarding existing drainage system and detention basins has been added to GIS system				
Central Motors		Maintenance & Fuel	Maintenance and fuel for stormwater equipment including street sweeper, vacuum truck, heavy equipment for BMP maintenance, vehicles	\$33,445	\$39,333	\$39,460	\$39,981
		Operating Cost Sub-Total		\$292,211	\$420,826	\$450,019	\$594,714
Stormwater Capital Costs		Projects	Stormwater/drainage components of existing project budgets for road and utility work Emergency projects such as culvert repairs/replacements or repair of major erosion Potential includes BMP rehab projects	\$178,000	\$195,800	\$215,380	\$361,918
		Equipment	New equipment to support stormwater tasks (street sweeper, vacuum truck, catch basin truck) average annual cost over life-cycle	\$0	\$0	\$0	\$49,833
		Engineering & Consulting Support	Additional requirements for permit & TMDL compliance including: water quality monitoring, GIS/mapping	\$0	\$0	\$0	\$75,000
		Capital Cost Sub-Total		\$178,000	\$195,800	\$215,380	\$411,751
		Total		\$470,211	\$616,626	\$665,399	\$1,006,465
		Average Annual Cost per ERU		\$22.01	\$28.86	\$31.14	\$47.11

STORMWATER ENTERPRISE - Highway Dept BUDGET

	POSITION	TASKING	Actual 2012	Budget 2013	Proposed 2014	BENEFITS	%	Program Costs*			Potential
								2012	2013	2014	
Personnel	WORKING FOREMAN	DRAINAGE SYSTEM MAINT	\$ 52,160			\$ 28,688	20%	\$ 16,170			
	MECHANIC	VEHICLE MAINTENANCE	\$ 52,535			\$ 28,894	20%	\$ 16,286			
	HEAVY EQUIPMENT OPERATOR	CATCH BASIN CLEANING	\$ 45,159			\$ 24,837	100%	\$ 69,996			
	HEAVY EQUIPMENT OPERATOR	STREET SWEEPING	\$ 45,159			\$ 24,837	100%	\$ 69,996			
	SEASONAL	DRAINAGE SYSTEM MAINT	\$ 12,000			\$ 6,600	200%	\$ 37,200			
	HEAVY EQUIPMENT OPERATOR	BMP Maintenance	\$ 45,159			\$ 24,837	100%				\$ 69,996
	TOTAL Highway Div Salary Budget			\$ 446,563	\$ 451,153	55%	32%		\$ 221,495	\$ 223,772	\$ 223,772
HIGHWAY DIVISION PERSONNEL SUBTOTAL							\$ 209,648	\$ 221,495	\$ 223,772	\$ 293,768	
Expenses	Architects & Engineers	Drainage & Stormwater Design and T	\$ 5,059	\$ 10,000	\$ 10,000		100%	\$ 5,059	\$ 10,000	\$ 10,000	\$ 10,000
	Other Professional Services	Materials Disposal, Roadside Vegeta	\$ 295	\$ 74,756	\$ 88,000		100%	\$ 295	\$ 74,756	\$ 88,000	\$ 88,000
	Culvert & Drainage Supplies	Pipe and Other Materials for Drainage	\$ 1,136	\$ 10,000	\$ -		100%	\$ 1,136	\$ 10,000	\$ -	\$ 20,000
	Construction Materials	Construction Materials for Road and I	\$ -	\$ 10,000	\$ 30,000		75%	\$ -	\$ 10,000	\$ 30,000	\$ 28,125
	Dues & Memberships	NEWEA Membership	\$ 400	\$ 500	\$ 335		100%	\$ 400	\$ 500	\$ 335	\$ 335
	Waterfowl & Pest Management	Goose & beaver control	\$ 12,000	\$ 12,000	\$ 12,000		100%	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
	HIGHWAY DIVISION EXPENSES SUBTOTAL							\$ 18,890	\$ 117,256	\$ 140,335	\$ 158,460
TOTAL OPERATING COSTS							\$ 228,538	\$ 338,751	\$ 364,107	\$ 452,228	

Notes:

2012 costs are actual. 2013 are budget. 2014 are proposed.

% = % of time spent on stormwater tasks

Benefits estimated at 55% of based salary based on FY2013 indirect cost calculation for enterprises (30% for direct salaries fringe benefits + 22% for indirect salaries/fringe benefits)

Program costs = the DPW budgeted costs x % allocated for specifically for stormwater

2012 personnel rates based on actual salaries per person; 2013/2014 personnel budget based on % of TOTAL personnel budget. % calculated based on actual 2012 rates (2011 stormwater utility study)

Yellow highlighted cells are estimates based on past performance and can be modified if better current estimates are available.

Gray highlighted cells are placeholders for potential costs (not currently budgeted but will be required to implement program)

Waterfowl & Pest Management services were captured under the Highway Expenses, considered part of "other contractual services"

Red font needs to be confirmed by DPW - AMEC assumed this line item was for disposal of cleanings from catch basins/BMPs, but could not explain the jump between 2012 & 2013

STORMWATER ENTERPRISE - DPW Admin BUDGET

	POSITION	TASKING	Actual 2012	Budget 2013	Proposed 2014	BENEFITS	%	Program Costs*			Potential
								2012	2013	2014	
Personnel	DPW DIRECTOR		\$ 104,174	\$ 104,417	\$ 105,983	55%	5%	\$ 8,073	\$ 8,092	\$ 8,214	\$ 5,299
	DPW OFFICE MANAGER		\$ 58,174	\$ 52,336	\$ 52,879	55%	5%	\$ 2,909	\$ 2,617	\$ 2,644	\$ 2,644
	GIS TECHNICIAN		\$ 55,620	\$ 56,732	\$ 57,867	55%	15%	\$ 8,343	\$ 8,510	\$ 8,680	\$ 8,680
	Administrative Personnel	Utility Billing				55%	50%	\$ -	\$ -	\$ -	\$ 40,981
	DPW Admin PERSONNEL SUBTOTAL							\$ 19,325	\$ 19,219	\$ 19,538	\$ 57,605
Expenses	Overall Admin expenses	% of costs associated with NPDES comp	\$ 28,902	\$ 115,100	\$ 99,000		10%	\$ 2,890	\$ 11,510	\$ 9,900	\$ 9,900
	Other Professional Services	Consultant support for NPDES permit co	\$ 6,000	\$ 10,000	\$ 15,000		100%	\$ 6,000	\$ 10,000	\$ 15,000	\$ 15,000
	Additional Admin expenses	Billing costs (postage, paper, envelope, etc.)					100%	\$ -	\$ -	\$ -	\$ 20,000
								\$ 8,890	\$ 21,510	\$ 24,900	\$ 44,900
	TOTAL OPERATING COSTS							\$ 28,215	\$ 40,729	\$ 44,438	\$ 102,505

Notes:

2012 costs are actual. 2013 are budget. 2014 are proposed.

GIS technician salary was based on 2011 stormwater utility study as it was not listed as a line item under the DPW budget and is assumed to support multiple departments

% = % of time spent on stormwater tasks

Benefits estimated at 55% of based salary based on FY2013 indirect cost calculation for enterprises (30% for direct salaries fringe benefits + 22% for indirect salaries/fringe benefits)

Program costs = the DPW budgeted costs x % allocated for specifically for stormwater

Yellow highlighted cells are estimates based on past performance and can be modified if better current estimates are available.

Gray highlighted cells are placeholders for potential costs (not currently budgeted but will be required to implement program)

STORMWATER ENTERPRISE - Central Motors BUDGET

Expenses Personnel

POSITION	TASKING	Actual 2012	Budget 2013	Proposed 2014	BENEFITS	%	Program Costs*			Potential
							2012	2013	2014	
TOTAL Central Motors Salary Budget		\$ 160,983	\$ 170,824	\$ 173,099	55%	5%	\$ 12,476	\$ 13,239	\$ 13,415	\$ 13,415
Central Motors PERSONNEL SUBTOTAL							\$ 12,476	\$ 13,239	\$ 13,415	\$ 13,415
TOTAL Central Motors Expenses Budget		\$ 524,225	\$ 652,350	\$ 651,130		4%	\$ 20,969	\$ 26,094	\$ 26,045	\$ 26,566
Central Motors EXPENSES SUBTOTAL							\$ 20,969	\$ 26,094	\$ 26,045	\$ 26,566
TOTAL OPERATING COSTS							\$ 33,445	\$ 39,333	\$ 39,460	\$ 39,981

Notes:

2012 costs are actual. 2013 are budget. 2014 are proposed.

% = % of time spent on stormwater tasks

Benefits estimated at 55% of based salary based on FY2013 indirect cost calculation for enterprises (30% for direct salaries fringe benefits + 22% for indirect salaries/fringe benefits)

Program costs = the DPW budgeted costs x % allocated for specifically for stormwater

Since central maintenance personnel & expenses were not specified per equipment the budgets are based on % of TOTAL budgets. % were calculated based on the 2011 stormwater utility study

Yellow highlighted cells are estimates based on past performance and can be modified if better current estimates are available.

STORMWATER ENTERPRISE CAPITAL BUDGET

Description		Actual 2012	Budget 2013	Proposed 2014	Potential
Highway	BMP Rehab/Retrofits	\$ -	\$ -	\$ -	\$ 125,000
	Stormwater/drainage improvements with current projects	\$ 178,000	\$ 195,800	\$ 215,380	\$ 236,918
	HIGHWAY DIVISION PROJECT SUBTOTAL	\$ 178,000	\$ 195,800	\$ 215,380	\$ 361,918
	CATCH BASIN TRUCK \$170,000 with 15 year life-cycle	\$ -	\$ -	\$ -	\$ 11,333
	STREET SWEEPER \$185,000 with 10 year life-cycle	\$ -	\$ -	\$ -	\$ 18,500
DPW Admin	VACUUM TRUCK \$300,000 with 15 year life-cycle	\$ -	\$ -	\$ -	\$ 20,000
	HIGHWAY DIVISION EQUIPMENT SUBTOTAL	\$ -	\$ -	\$ -	\$ 49,833
	Water Quality Monitoring For NPDES & TMDL compliance	\$ -	\$ -	\$ -	\$ 25,000
	Drainage Mapping & Permitting For NPDES compliance	\$ -	\$ -	\$ -	\$ 50,000
	DPW ADMINISTRATION SUBTOTAL	\$ -	\$ -	\$ -	\$ 75,000
	TOTAL CAPITAL COSTS	\$178,000	\$195,800	\$215,380	\$486,751

Yellow highlighted cells are estimated based on the 2011 stormwater utility study and should be updated based on actual completed and planned projects. BMP Rehab/Retrofit should be estimated on the average cost per BMP and the realistic # of BMP projects that could be conducted per year, assuming additional equipment costs = cost of equipment/estimate life-cycle for annual cost. Water quality monitoring & drainage mapping costs are based on sub-contracting these services. If done in-house, budgets for personnel should be adjusted.