M E M O R A N D U M

TO: Board of Selectmen, Town of Millis

FROM: Betsy Frederick

DATE : March 15, 2018

SUBJECT: FY2019-2021 Stormwater Management Program Cost Analysis for Stormwater Utility Implementation Phase 2

CC: Michael Guzinski, Town Administrator; James McKay, Deputy DPW Director; Andrew Goldberg, Kleinfelder; Jean Haggerty, Amec Foster Wheeler

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Kleinfelder worked with the Department of Public Works (DPW) Deputy Director, the Town Administrator, and additional stakeholders attending Stormwater Utility Workshops in February 2018 to prepare a recommendation for the Stormwater Utility Budget for Fiscal Years (FY) 2019-2021. The intent of this program cost estimate is to provide a basis for Stormwater Utility rate setting, given the Town's desire to maintain a flat billing rate over the first three years of the Stormwater Utility.

Prior Budget Estimates

Prior to FY19 and the implementation of a dedicated Stormwater Utility, stormwater management activities were funded through the Town's General Fund. More specifically, the Department of Public Works was primarily responsible for the Town's stormwater management with assistance from additional Town departments and agents. The Town funded multiple expenses including wages and salary for DPW staff; activities related to MS4 compliance including street sweeping, catch basin cleaning, and annual reporting; engineering and planning services; and administrative expenses.

To financially prepare for the effective date of the Final MS4 Permit, in November 2016, Kleinfelder prepared a planning-level cost estimate specific to the Town's MS4 compliance requirements. The Technical Memorandum provided an estimate for current and anticipated increases for MS4 program needs. The costs were presented in multiple categories (Administration, Regulation/Enforcement, Engineering & Master Planning, Operation & Maintenance, and Monitoring) based on the 2011 EPA study "Sustainable Stormwater Funding Evaluation for the Upper Charles River Communities of Bellingham, Franklin and Milford, MA." A copy of the Technical Memorandum is included as Appendix A, for reference.

Current Budget

Kleinfelder updated the MS4 Program Cost Estimate presented in Appendix A to reflect actions that the Town has taken to fund required compliance activities. Additionally, to provide a comprehensive estimate of future stormwater management program costs, this Technical Memorandum expands upon the cost categories provided in the MS4 Program Cost Estimate. The costs presented below include estimates for MS4 Permit compliance activities, Town Labor, additional Operations and Maintenance Activities recommended for best management of the

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stormwater infrastructure, Capital Improvement Projects, and Stormwater Master Planning. A description of costs by category is presented below and is summarized in Appendix B.

Town Labor

This section provides estimated costs for Town Labor related to stormwater management activities and administration of the Town's Stormwater Utility. Town labor includes wages, salary, and longevity payments to DPW staff; expenses such as health insurance, pension, and worker's compensation insurance; and indirect labor (from non-DPW budgets).

Through the allocation of Stormwater Utility funding, DPW staff with stormwater management program responsibilities will support MS4 Permit requirements and the routine maintenance of drainage infrastructure through the a variety of tasks included but not limited to the following activities:

- street sweeping,
- catch basin cleanout and documentation,
- outfall inspection and screening,
- construction site inspection,
- Emergency response to infrastructure failure/poor performance,
- stormwater GIS inventory data collection,
- stormwater utility credit application processing,
- Publicly-owned BMP maintenance,
- BMP inspection and enforcement, and
- stormwater billing appeals

Kleinfelder provided an initial planning-level estimate for DPW labor costs for discussion at Workshops in February 2018. This estimate was based on anticipated labor needs for stormwater management. Appendix A provides justification for the relative increase in costs for the Town's MS4 Program implementation in future permit terms, to account for significant increases to compliance activities and reporting requirements. Initial labor cost and expense estimates were refined by the Town based on discussions during the Stormwater Utility Implementation Workshop on February 22, 2018 and a discussion with the Town Administrator and DPW Deputy Director on March 5, 2018. The refined values for each category are presented below.

In total, the Town allocated 4867 hours of DPW labor annually for stormwater management activities and Stormwater Utility administration. The majority of the estimated labor to administer the Stormwater Utility will be from existing Town staff by changing the allocation of stormwater hours and/or increasing the number of total hours worked (up to 40 hours/week maximum). One additional full-time staff, a DPW Laborer, was hired in FY2018 to meet increased stormwater management needs. The distribution of DPW labor for stormwater management, estimated by labor type, is presented in Table 1.

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Table 1: Distribution of DPW Labor by Type

Labor Type	Estimated Annual Hours	Full Time Equivalency (FTE)	Average Hours / Week
Administrative	270	0.13	5.2
Laborer	4,222	2.03	81.2
Supervisor	374	0.18	7.2
Subtotal	**4,867**	**2.34**	**93.6**

In total, wages and salary for DPW staff represent a cost of $128,485 annually. An additional $864 annually should be budgeted for longevity payments to DPW staff.

The Town provided information related to additional indirect expenses for health insurance, pension, and worker's compensation insurance. The distribution of expenses aligns with the memorandum from Michael Guzinski to the Board of Selectmen dated November 30, 2017 related to the Water & Sewer Enterprise Funds. Values for these expenses are provided in Table 2, below. The estimated costs assume the Stormwater Utility will cover indirect expenses for 2.5 FTE in each category.

Table 2: Stormwater Allocation for Indirect Expenses

Indirect Expense Category	Employee Ratio	% of Total Budget	Estimated FY19 Cost
Health insurance	2.5/295	0.85%	$24,498
Pension	2.5/73	3.42%	$59,180
Workers Compensation Insurance	2.5/295	0.85%	$1,017
Subtotal Indirect Expenses			**$84,695**

The activities related to Stormwater Utility administration and billing, listed below, will largely be completed by staff in the Treasurer/Collector's office with additional support from Accounting, Assessing, and other departments:

- stormwater fee bill creation,
- payment processing,
- stormwater fee collection, and
- data processing and database maintenance

It is anticipated that all labor for Stormwater Utility administration and billing will be from existing Town staff by changing the allocation of stormwater hours and/or increasing the number of total hours worked (up to 40 hours/week maximum).

Kleinfelder estimated indirect labor costs for Stormwater Utility Administration and Billing based on the level of effort to administer the Water and Sewer Utilities and additional information provided by the Town. The distribution of indirect costs by department is presented in Table 3.

Table 3: Stormwater Allocation for Indirect Labor

Department (Salary & Expenses)	FY19 Total Budget	Indirect Allocation Rate Stormwater	Stormwater FY19 Costs
Town Admin./BOS Office Budget	$408,793	3.3%	$13,490
Legal Expenses	$95,000	3.3%	$3,135
Accounting Budget	$236,686	3.3%	$7,811
Treasurer/Collector Budget	$237,530	6.7%	$15,915
Assessors Budget	$137,389	1.8%	$2,404
Data Processing/IT Budget	$147,036	1.8%	$2,573
Subtotal Stormwater Utility Indirect			**$45,328**

Based on the proportion of Indirect Town Labor and Expenses reallocated to the Stormwater Utility from other departments, the Utility will transfer $130,022 per year to the General Fund in the near-term. This value does not include the allocated proportion of DPW labor and expenses for stormwater management activities previously funded under the General Fund. A summary of stormwater labor costs and expenses are presented in the table below.

Table 4: Summary of Stormwater Utility Estimated Labor Costs by Category

Labor Cost Category	Estimated Annual Costs
DPW Labor	$128,485
Longevity	$864
Indirect Labor	$45,328
Indirect Expenses	$84,495
Total – Labor and Expenses	**$259,172**

Operations and Maintenance

Prior to FY2019, planning related to funding for repairs or replacement of existing stormwater infrastructure such as drainage pipes, catch basins, outfalls or detention basins was primarily retrospective (i.e. what was spent in the past will serve as basis for future costs). Often, capital projects were the result of existing failures with attending cost premiums. Budget assumptions did not capture deferred maintenance, replacement and renewal projections and/or best practices related to infrastructure management. One of the outcomes of an effective Stormwater Management Program is implementing stormwater infrastructure maintenance procedures which prevent catastrophic damage to assets, thus improving level of service and saving money in expensive reactive maintenance over the long-term.

Through the Stormwater Utility fund, we recommend that the Town includes a dedicated annual budget for operations and maintenance of infrastructure. In the near-term, our recommendation is that this allocation be used to implement a stormwater drain pipe assessment and cleaning program to collect inventory, condition, and connectivity data for the drainage network. For planning purposes, this activity was budgeted at approximately $20,000 per year in each of FY19-21. Through this program, the condition of drainage pipes could be improved through line jetting and assessed through CCTV technology, or similar visual assessment tools. Areas for pipeline cleaning and assessing should be prioritized. No change to the General Fund is anticipated as no stormwater infrastructure maintenance costs were identified under prior DPW Budget allocations.

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As such, this is a new cost to be covered by the Utility, but does not replace any previous or ongoing program costs paid through the General Fund annual appropriations.

Capital Improvement Projects

We understand that the Town made a significant investment in culvert replacement projects in recent years, including construction on Village Street. Looking forward, a capital improvement project related to drainage infrastructure was identified at the intersection of Birch & Village streets. An engineering opinion of probable cost is currently being prepared under a separate effort.

We anticipate additional capital projects will be identified in the first three years of the Utility. Since capital project costs are highly variable and specific project needs and areas have not yet been identified, we recommend that $180,000 per year be budgeted for each of the first three years of the Utility for design and construction of these capital improvements. Currently, $157,938 is included in the FY19 budget request for capital outlay reserve. Future costs for stormwater Capital Improvement Projects will no longer be funded through stormwater warrant articles or the General Fund; however, an estimate of the impact on the FY19 General Fund Budget is not provided since it would not capture the uncertainty and variability of future funding needs.

Funding may be available to assist with drainage improvement projects under state grant programs. For example, the Division of Ecological Restoration provides funding for culvert replacement projects, which may help to partially offset Town investments. This culvert replacement grant program prioritizes ecologically sensitive areas. Applicants are not required to provide match for this particular Grant Program, however, the award amount may not entirely fund project costs. Millis has multiple candidate project locations categorized as in the top 10% of stream crossings for culvert replacement, according to the Massachusetts Wildlife Climate Action Tool, a resource used to give preference to candidate projects under this grant program. We recommend that the Town apply for these funding opportunities to partially offset the design and/or construction costs of eligible projects. There are multiple other funding options including the State Revolving Fund (SRF) Clean Water Program, or federal programs such as Section 319 non-point source program grants. Some of these are competitive opportunities where successful application will be enhanced by an improved understanding of project challenges addressed and benefits provided, which the master planning process will inform. In all of these examples, the utility is an eligible applicant/entity under program criteria.

Given the on-going appeal and arbitration of MS4 Permit requirements and uncertainty in the inventory and current condition of stormwater infrastructure, we recommend that the Town's revenue needs related to stormwater Capital Improvement Projects be reevaluated and refined within the first 3 years of the Stormwater Utility. Should the Town not spend the entirety of the budget allocated for Capital Improvement Projects within a given fiscal year, these funds can form a reserve for future projects. Conversely, should the Town need to fund a Capital Improvement Project and does not have adequate funding to cover the entire cost, the Town may decide to borrow money necessary to fund the project and use this budget allocation to repay debt service. The Town has expressed interest in developing a Stormwater Master Plan, described below, which could provide the Town with recommendations and planning cost estimates for stormwater Capital Improvement Projects.

Stormwater Master Planning

The Town has expressed interest in developing a comprehensive Stormwater Master Plan, similar to those prepared for the Water and Sewer systems. The proposed planning document would work in tandem with reports required for MS4 Permit compliance; however, the Master Plan would serve a different purpose. This Plan would identify, prioritize, and estimate the costs of stormwater management needs as they relate to levels of service with respect to flood protection, hydraulic performance, and water quality. The process for developing a Stormwater Master Plan would include an effort to capture a more complete inventory of stormwater assets, identify the condition of critical stormwater infrastructure, and include an assessment of needs at both a Town-wide system and asset level. The process would leverage activities that are required under the MS4 Permit, such as outfall inspections, to more efficiently collect information to make these assessments. For budgeting purposes, the development of a Master Plan is estimated at approximately $155,000. Since we anticipate that the Town will fund costs for Master Planning using remaining funds allocated under the FY18 warrant article for stormwater management the budget recommendation presented in Appendix B does not include funds for these activities.

Summary and Next Steps

In total, it is recommended that the Town allocates on average $583,500-$641,950 in each of the fiscal years 2019-2021 for Stormwater Management and Stormwater Utility Administration. This planning level estimate does not account for inflation. A summary of program cost categories and annual estimates in FY19-21 is presented in Figure 1, below. For summary purposes, DPW Labor costs are incorporated as either Administration costs (Department Assistant) or Operations & Maintenance costs (all other DPW staff).

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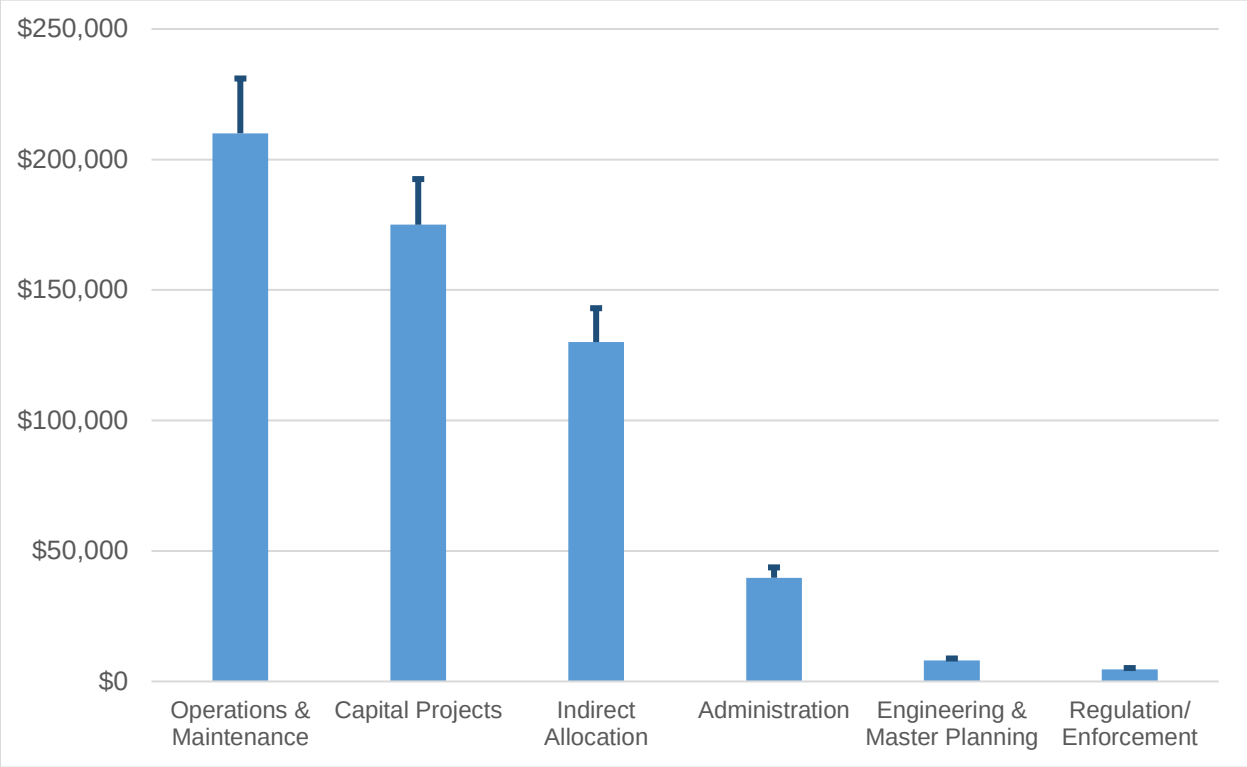

Figure 1: Distribution of Average Stormwater Utility Program Costs by Category (FY19-21)

Line-item estimates of program costs by category are presented in Appendix B. Non-labor costs are listed as either annual (i.e.: recurring activities that should be budgeted for each year) or one-time, which are generally regulatory requirements and should be completed prior to the associated deadline. Rather than spending the average recommended allocation, the Town may choose to increase spending on stormwater management over the first three years of the Utility once additional information on the Town's stormwater needs (capital projects) are identified through the Master Planning process.

The upper end of this recommended range was calculated using a contingency value of 10% of annual program costs. The contingency accounts for some uncertainty in program implementation and is currently being used as a placeholder for additional Stormwater Utility revenue needs including credits, payment delinquencies, interest earnings, and debt service. The revised program costs presented in this memorandum will be used to develop a Rate Study and Cash Flow Rate Model. These documents will be developed through the Stormwater Utility Implementation Project Phase 2 after the impervious area refinement process is complete. The rate model will take into account the entire program's revenue needs (including those listed above) and will be used to recommend a standard billing unit rate.

As requested, in addition to the program cost estimate provided herein, we are providing a narrowed range for the Utility's potential rates per Stormwater Billing Unit (SBU). As you know, this range will ultimately be dependent on final impervious area calculations which are currently underway. The rate range is based on impervious area data from the feasibility study, our current

understanding of the Town's SW Utility polices (credits, rounding, etc.), and the recommended budget over the first three years (FY19-21). During the preliminary stages of the project, and for planning purposes, we were estimating a possible rate range of $3.00-$5.00/month. These are the figures that were cited most frequently at public meetings and in written public outreach materials. We now estimate that the recommended rate will be between $2.00-$3.50/month. Based on impervious area data from the Stormwater Utility Feasibility Study completed in 2017, with a SBU rate of $2.75/month, 60% of parcel owners would pay $100 or less in stormwater fees annually. We look forward to providing a revised SBU rate recommendation in April, after the impervious area refinement, Rate Study, and Cash Flow Rate Model are complete.

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Appendix A

Stormwater Management Program Cost Analysis Technical Memorandum
November, 1 2016

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MEMORANDUM

TO: James McKay

FROM: Betsy Frederick

DATE : November 1, 2016

SUBJECT: Stormwater Management Program Cost Analysis

CC: Suzanne Kennedy; Andrew Goldberg

The Town of Millis has continuously implemented its Municipal Separate Storm Sewer System (MS4) program under the framework of the National Pollutant Discharge Elimination System (NPDES) Small MS4 General Permit since 2003. Over that time, the Town has maintained a compliant program and has been able to report progress towards identified plan objectives. Other than for capital costs/equipment (such as a new sweeper) or consultant expenses for specific tasks, the Town has not maintained a separate accounting of costs associated with stormwater management (i.e. salary or FTE figures for staff assigned to stormwater management, or expenses associated with stormwater management) as is typical for water and sewer enterprise funds/accounts. Program costs have typically been paid out of operating budgets and general fund appropriations.

Current Program Regulatory Status

The Town's Department of Public Works (DPW)/Highway Department, under the day-to-day supervision of the Deputy Director/Chief of Operations, has been the primary responsible authority for administration of the stormwater program; the Town's Town Administrator has typically been the certifying authority signing the obligatory Annual Reports. Other agents, however, such as the Board of Health, Building Inspector, Planning Board, Conservation Commission and non-governmental entities (e.g. volunteers or consultants) were also cited in the NOI as bearing some responsibility for enacting certain best management practices (BMP). Over time, additional BMP "owners" were introduced to the program, including Selectmen and the School Department. In Millis, the Town Administrator has also played a significant role in both policy and implementation of the stormwater management program. This experience of diffuse responsibility is similar to the majority of small MS4 communities in Massachusetts due to the highly decentralized nature of stormwater management.

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Based on the most recent Annual Report, submitted to EPA and MADEP in May 2016, the Town remains in compliance with the current (2003) general permit, although proposed changes in primarily public education and engagement strategies has had some impact on proposed roll-out schedules under those respective program Best Management Practices (BMP).

Current Program Operational Status

In 2003, regulated communities approached this new NPDES non-point source stormwater management program requirement in a wide variety of ways. Some communities instituted organizational or personnel changes to meet the demands of the programs, but many necessarily operated their programs with little or no budgetary increases. Since the General Permit was relatively vague regarding documentation requirements and specific deliverables, the level of program documentation also varies widely. The Town of Millis absorbed these new programmatic responsibilities within the existing staff at the Department of Public Works.

The Town's DPW is responsible for highway, drainage system, sewer system, water system, parks and recreation and cemetery maintenance among other responsibilities. With a total non-administrative staff of approximately ten (10) full-time equivalents, it is already stretching resources to successfully achieve all of these functions.

The DPW's Deputy Director and Chief of Operations has indicated that while the Town continues to accumulate relevant documentation, the significant administrative and data management aspects of the program make it very difficult to compile and use the data in the manner intended under the permit. For instance, certain information regarding system mapping and outfall locations may be held by the Department, but lack of resources means that the information may not be integrated into the Town's GIS for meaningful value. As has been common for many communities, resource restrictions have led to a generally minimalist approach to meeting permit requirements.

Background on Final April 2016 Massachusetts NPDES MS4 General Permit (effective July 1, 2017)

After several drafts of the permit, EPA eventually published the new Final MS4 General Permit (hereafter "the MS4 Permit") in April 2016. In response to public comment relative to adequate time to plan for and appropriate funding through Town Meeting, the permit was published with an effective date of July 1, 2017.

The MS4 Permit includes more prescriptive requirements, particularly associated with illicit discharge detection, municipal operations, and management of MS4 discharges to impaired waters (with approved TMDL limits and those without a TMDL but recognized as impaired or "water quality limited.") Fact sheets provided with draft and final permits

also explicitly state that EPA intends the stormwater management program to become an iterative process of planning, implementation, monitoring, assessment and adaptation with increasingly stringent requirements as permits are reissued (typically every five years). The cost implications of this objective are one basis for EPA's recommendation that communities seek a sustainable funding mechanism that can support requisite program expansion.

The MS4 Permit is divided into "water quality-based effluent limitations" (WQBEL) and requirements to reduce pollutants to the "maximum extent practicable" or MEP. The latter requirements are typically referred to as the six Minimum Control Measures (MCM) and include (1) public education and outreach; (2) public participation; (3) illicit discharge detection and elimination (IDDE); (4) construction site stormwater runoff controls; (5) post-construction (new and redevelopment) runoff controls; and (6) good housekeeping or municipal operations. The IDDE and municipal operations MCMs are very prescriptive and include several specific tasks, reports, programs and investigations that are extensive and potentially costly in their own right. The Stormwater Management in New and Re-Development (previously the "Post-Construction") MCM also has some significant challenges including a requirement to capture and infiltrate the first inch of run-off from impervious area on a site, or inclusion of BMPs with the design capacity to capture, treat and discharge a water volume such that the comparable pollutant load would be mitigated. There are a variety of analyses or evaluations required regarding local development standards and their appropriateness within the context of stormwater management objectives.

The MS4 Permit also includes WQBELs related to TMDL and Water Quality Limited Waters. There are particularly complex activities and costly capital projects implications for communities within the Charles River watershed and others with phosphorus-impaired receiving waters.

Program Costs

The 2011 *Sustainable Stormwater Funding Evaluation for the Upper Charles River Communities of Bellingham, Franklin and Milford, MA* funded by US EPA cited the major cost centers associated with stormwater program costs, including:

- Administration
- Regulation/Enforcement
- Engineering and Master Planning
- Operations and Implementation
- Monitoring

This listing is specific to operating costs of the program and does not include capital construction costs for structural BMPs required to achieve water quality improvement

goals. Few towns track these categorized costs specifically for stormwater management. For instance, administration costs may be embedded in salaries for office staff responsible for multiple DPW areas of operation. In addition, these categories include generally descriptive terms (and open to some interpretation) and they do not necessarily align neatly with the MS4 General Permit "minimum control measures" (MCM). The "operations and Implementation" category, for example should not be assumed to be equivalent to MCM 6 – Municipal Operations and Good Housekeeping. Street sweeping and catch basin cleaning clearly fall within the municipal operations area, however, the BMP effectiveness evaluations and optimization planning required under that MCM is really an engineering and master planning task as defined by the EPA report.

Since the Town of Millis does not track costs separately, we assumed an "order of magnitude" cost comparable to similar communities in Massachusetts for whom a more detailed analysis of cost has been performed.

Table 1
Estimated Current Program Costs – Multiple Communities

Major Cost Centers	Bellingham	Franklin	Milford	Medway	Canton	Swampscott
	Population: 16,332 Road Miles: 91.28	Population: 31,635 Road Miles: 133.62	Population: 27,999 Road Miles: 109.55	Population: 12,752 Road Miles: 69.93	Population: 21,561 Road Miles: 91.57	Population: 13,787 Road Miles: 42.55
Administration	$18,421	$58,670	$18,335	$125,300	$19,134	$6,250
Regulation/Enforcement	$1,800	$51,396	$26,250	$2,900	$9,750	$1,250
Engineering & Master Planning	$17,000	$152,671	$13,100	$98,700	$135,100	$17,500
Operations and Maintenance	$194,918,	$759,978	$487,966	$144,200	$362,810	$100,000
Monitoring	--	--	--	--	--	--
Average Annual Cost (2015 $USD)	**$232,139**	**$1,022,715**	**$545,651**	**$371,100**	**$526,794**	**$125,000***
Cost per Road Mile (2015 $USD)	**$2,543**	**$7,654**	**$4,981**	**$5,306**	**$5,753**	**$2,938**
*A gross cost estimate for Swampscott developed on an average program cost per road mile of $5,247.00 derived through comparison with communities shown would be approximately $223,000. Medway represents mean value at $5,306/mile. If mean value used, Swampscott estimated costs would be $225,770.						

Costs for Swampscott were provided by the Town, however they were estimates that the Town acknowledged were based on a "best guess" as a percentage of overall DPW budget. Costs for Bellingham, Franklin and Milford were developed in detail during the EPA sponsored *2011 Sustainable Funding Study.* Costs for Medway and Canton were developed based on analyses conducted by Kleinfelder. Since Operations and Maintenance typically represents the largest cost component (for the non-capital costs) of the program, and those activities are usually relating to roadway/street sweeping, catch

basin and culvert cleaning, etc., we looked at cost per road mile as one means of estimating order of magnitude costs for the entire program. At the lower end of the range, given Millis' approximately 50 road miles maintained, existing costs could be approximately $150,000 - $200,000 per year. This is inclusive of all operating costs, administrative costs and labor.

The attached spreadsheets provide our cost of service analysis to meet regulatory obligations under the MS4 permit. These represent incremental costs above that which you currently spend on stormwater management operations and administration. A summary of costs is provided in Table 2.

Table 2
Estimated Current Program Costs – Millis

Major Cost Centers	Millis
	Population: 7,891 Road Miles: 55
Administration	$75,070
Regulation/Enforcement	$22,232
Engineering & Master Planning	$26,976
Operations and Maintenance	$120,591
Monitoring	$21,443
Average Annual Cost (2016 $USD)	**$266,312**
Cost per Road Mile (2016 $USD)	**$4,842.04**

Potential Funding Mechanisms

The MS4 Permit does not include a condition requiring the development and institution of a stormwater utility or other specific funding mechanism. However, documentation provided with the Draft Permit (particularly the Permit Fact Sheet) states unequivocally that the program as designed will cost significantly more than has traditionally been spent on stormwater infrastructure management, and will become more stringent, and therefore more expensive, in successive permit terms. Consequently, EPA is encouraging communities to investigate possible funding mechanisms, such as a utility or enterprise-funded program, that can be sustained over time and anticipated to meet the funding obligations of the regulatory program. In Massachusetts, there are two companion pieces of legislation that allow municipalities to set up stormwater utilities: MGL Chapter 83, Section 16 and MGL Ch 40 Section 1A. MGL Ch 83 Section 16 allows municipalities to set up a stormwater management utility and to charge utility fees for managing stormwater. MGL Ch 40 Section 1A provides a definition of a district for the purpose of water pollution abatement, water, sewer, and/or other purposes. Since Massachusetts

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passed this enabling legislation, approximately a dozen communities have adopted utility or fee-based systems to support program administration and capital programs. Millis does not currently have a utility, nor does it have plans to institute one in the near future. Nevertheless, the Town has applied for a planning grant that would allow them to address stormwater utility feasibility. That evaluation will be dependent upon award of the grant. Grant awardees are anticipated to be announced in December 2016. The information in this section is intended to provide background information on utilities for Town reference.

Stormwater utilities have been promoted by EPA as a funding option because they provide dedicated revenue solely for the stormwater program; consolidate/coordinate responsibilities; and allow for development of a more comprehensive and predictable program. A stormwater user fee distributes the cost for public stormwater services based on a property's estimated contribution to the stormwater system, not on property value, which is considered a more equitable way to distribute costs than most other funding methods.

Additional funding will absolutely be necessary to maintain compliance with the MS4 permit in the future, and relying on traditional appropriation methods may not provide the revenue stability that will allow better capital and O&M planning. Utilities are not the only funding mechanism available; there are multiple funding options which have been typically employed by communities in the past. Some of these are outlined in Table 3, including Millis' current tax-based funding approach.

Table 3
Summary of Common Stormwater Funding Mechanisms

Taxes	Most general purpose local governmental functions are primarily funded through taxes. The purpose is to defray the expenses of general government, as distinguished from the expense of a specific function or services. It is not necessary that a tax have a demonstrable association with any particular purpose or function.
Bonds and Grants	Bonds involve borrowing money and accruing debt. While they may be useful for major capital projects, they are not a stable source, and subject to annual vote. Grants are competitive and criteria specific, which may limit their availability or applicability to need.
Special Assessment	A special assessment must confer some direct benefit to the property assessed, as the assumption for the assessment is the premise that it improves the value of the property. They may be based on property value or other factors such as street frontage. Assessments

Table 3 Summary of Common Stormwater Funding Mechanisms	
	typically have a specific purpose and therefore may have some limitation in terms of how the dollars are applied within a program.
Service Fee/Utility	These fees provide the funds to provide services and facilities, or basically to recover the costs associated with provision of services. The utility must adopt a service charge rate methodology that equitably assigns appropriate fees or charges.

Typically communities undertake a phased approach to determining the feasibility of a stormwater utility to meet their funding needs. Since the utility itself must be adopted through Town Meeting, it is imperative that the feasibility study and subsequent steps include a high percentage of public involvement and public education around the value and need for such a utility.

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Millis NPDES MS4 COMPLIANCE COST PROJECTION

ROLLUP SUMMARY

	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5
NPDES MS4 PERMIT COMPONENT	**YEAR 1** Hours	**YEAR 1** Labor Cost	**YEAR 1** Non-Labor Expenses	**YEAR 2** Hours	**YEAR 2** Labor Cost	**YEAR 2** Non-Labor Expenses	**YEAR 3** Hours	**YEAR 3** Labor Cost	**YEAR 3** Non-Labor Expenses	**YEAR 4** Hours	**YEAR 4** Labor Cost	**YEAR 4** Non-Labor Expenses	**YEAR 5** Hours	**YEAR 5** Labor Cost	**YEAR 5** Non-Labor Expenses
NOTICE OF INTENT; ENDANGERED SPECIES & HISTORIC DOCUMENTATION	40	$ 4,442	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -
STORMWATER MANAGEMENT PLAN	230	$ 25,540	$ 1,000	30	$ 3,162	$ -	30	$ 2,994	$ -	30	$ 2,825	$ -	30	$ 2,825	$ -
TMDL COMPLIANCE * (NO CAPITAL COST INCLUDED)	1060	$ 117,704	$ 500	1043	$ 109,937	$ 500	1043	$ 104,065	$ 500	340	$ 32,012	$ -	240	$ 22,597	$ -
PUBLIC ED / OUTREACH	78	$ 8,661	$ 993	54	$ 5,692	$ 993	54	$ 5,388	$ 993	54	$ 5,084	$ 993	54	$ 5,084	$ 993
ILLICIT DISCHARGE DETECTION & ELIMINATION	495	$ 55,016	$ 1,791	299	$ 31,554	$ 1,791	305	$ 30,454	$ 1,791	295	$ 27,807	$ 1,791	295	$ 27,807	$ 1,791
CONSTRUCTION	112	$ 12,437	$ -	112	$ 11,806	$ -	104	$ 10,378	$ -	104	$ 9,792	$ -	104	$ 9,792	$ -
NEW / REDEVELOP / POST CONSTRUCTION	164	$ 18,211	$ -	128	$ 13,493	$ -	164	$ 16,365	$ -	284	$ 26,740	$ -	104	$ 9,792	$ -
MUNICIPAL GOOD HOUSEKEEPING	303	$ 33,673	$ 34,481	207	$ 21,846	$ 31,981	104	$ 10,416	$ 31,981	104	$ 9,829	$ 31,981	104.39	$ 9,829	$ 31,981
PROGRAM EVALUATION / REPORTING / RECORDKEEPING	590	$ 65,516	$ -	590	$ 62,195	$ -	590	$ 58,873	$ -	590	$ 55,551	$ -	590	$ 55,551	$ -
SUBTOTALS (no inflation)	3073	$ 341,201	$ 38,765	2463	$ 259,685	$ 35,265	2394	$ 238,932	$ 35,265	1802	$ 169,640	$ 34,765	1522	$ 143,277	$ 34,765
Including 2.5% annual inflation					$ 266,178	$ 36,147		$ 251,028	$ 37,050		$ 182,684	$ 37,438		$ 158,151	$ 38,374
Total, Labor & Expenses		$ 379,966			$ 302,324			$ 288,079			$ 220,122			$ 196,525	

Revision Date:

11/1/2016

Assumptions / Exclusions

Existing level of O+M staff time for existing non-compliance related drainage repair / maintenance excluded
Baseline O+M not included. Surcharge for compliance included (assumes 50% increase in street sweeping and catch basin cleaning).
Capital Costs excluded
Inflation rate 2.50%

Millis NPDES MS4 COMPLIANCE COST PROJECTION

ROLLUP SUMMARY

	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5
	YEAR 1	**YEAR 1**	**YEAR 1** Non-Labor	**YEAR 2**	**YEAR 2**	**YEAR 2** Non-Labor	**YEAR 3**	**YEAR 3**	**YEAR 3** Non-Labor	**YEAR 4**	**YEAR 4**	**YEAR 4** Non-Labor	**YEAR 5**	**YEAR 5**	**YEAR 5** Non-Labor
NPDES MS4 PERMIT COMPONENT	Hours	Labor Cost	Expenses	Hours	Labor Cost	Expenses	Hours	Labor Cost	Expenses	Hours	Labor Cost	Expenses	Hours	Labor Cost	Expenses
Administration	938	$ 104,160	$ 1,993	674	$ 71,049	$ 993	674	$ 67,255	$ 993	674	$ 63,460	$ 993	674	$ 63,460	$ 993
Regulation/Enforcement	225	$ 24,972	$ -	225	$ 23,706	$ -	217	$ 21,641	$ -	217	$ 20,420	$ -	217	$ 20,420	$ -
Engineering & Master Planning	490	$ 54,463	$ -	258	$ 27,234	$ -	165	$ 16,464	$ -	285	$ 26,834	$ -	105	$ 9,886	$ -
Operations and Maintenance	1239	$ 137,624	$ 34,981	1126	$ 118,727	$ 32,481	1126	$ 112,386	$ 32,481	423	$ 39,864	$ 31,981	323	$ 30,448	$ 31,981
Monitoring	180	$ 19,983	$ 1,791	180	$ 18,970	$ 1,791	212	$ 21,186	$ 1,791	202	$ 19,062	$ 1,791	202	$ 19,062	$ 1,791
SUBTOTALS (no inflation)	3073	$ 341,201	$ 38,765	2463	$ 259,685	$ 35,265	2394	$ 238,932	$ 35,265	1802	$ 169,640	$ 34,765	1522	$ 143,277	$ 34,765
Including 2.5% annual inflation					$ 266,178	$ 36,147		$ 251,028	$ 37,050		$ 182,684	$ 37,438		$ 158,151	$ 38,374
Total, Labor & Expenses		$ 379,966			$ 302,324			$ 288,079			$ 220,122			$ 196,525	

Revision Date:

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Assumptions / Exclusions

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Capital Costs excluded

Inflation rate 2.50%

Appendix B

Stormwater Program Budget Recommendations FY19-21

KLEINFELDER 215 First Street, Suite 320, Cambridge, MA 02142 p | 617.497.7800 f | 617.498.4630

Town of Millis, MA

Stormwater Utility FY19 Program Costs for Planning Use

Updated: 3/15/2018

Program Component	Task Description	FY 19-21 Costs	Cost Assumption	Cost Frequency	Cost Category
Stormwater Management Plan	SWMP Development	$8,000.00	•Costs estimated from this contract assume approximately 230 hours of consultant hours for SWMP Documentation including IDDE Plan (est. $26,000). Divided by sub-task	One-time	Administration
Public Education & Outreach Program	Implement an Enhanced Public Education Program	$12,000.00	effectiveness •Assumes approx. 120 consultant labor hours	One-time	Administration
Program Evaluation, Record Keeping, and Reporting	2019 Annual Report	$14,000.00	•Consultant costs assumes 100-120 hours for program assessment and annual report preparation assistance •Increased costs attributed to increased program evaluation, documenting, and reporting requirements	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$3,000.00	• Police Details	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$500.00	• Supplies & Expenses	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$750.00	• Clothing	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$2,500.00	• Postage	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$1,000.00	•Annual MUNIS Fees	Annual	Administration
Stormwater Program Administrative Costs	Stormwater Program Administrative Costs	$3,000.00	•SW Utility Bill Mailing	Annual	Administration
Public Education & Outreach Program	Stormwater Engagement / Utility Incentive Program	$1,000.00	•Distribution of Rain Barrels or similar incentive program	Annual	Administration
Capital Improvement Projects	Village & Birch Street Drainage Improvements (and projects of similar scope)	$175,000.00	•Prepare Engineering Design for drainage improvements •Construction	Annual	Capital Projects
Illicit Discharge Detection & Elimination (IDDE)	IDDE Plan - Development	$18,000.00	•Assumes completing SWMP with IDDE Plan; approximately 160 consultant hours	One-time	Engineering & Master Planning
Illicit Discharge Detection & Elimination (IDDE)	Outfall Inspections - Update Procedures	$0.00	Included in IDDE Plan	One-time	Engineering & Master Planning
Illicit Discharge Detection & Elimination (IDDE)	Catchment Investigations - Update Procedures	$0.00	Included in IDDE Plan	One-time	Engineering & Master Planning
Construction Runoff Management	Construction Runoff Management (sediment and erosions controls; other wastes at	$6,000.00	•Consultant costs assumes 40-60 hours to develop procedures	One-time	Engineering & Master Planning
Municipal Good Housekeeping	Develop Stormwater Pollution Prevention Plan(s) (SWPPP)	-	•Consultant costs assumes 140-160 hours for development of each required SWPPP. Kleinfelder has not assessed which Town facilities have an existing SWPPP. Budget assumes one SWPPP developed in FY18	One-time	Engineering & Master Planning
Municipal Good Housekeeping	Good Housekeeping & SWPPP Staff Trainings	-	•Consultant costs assumes 15-20 hours for trainings	One-time	Engineering & Master Planning
Stormwater Management Plan	Annual Training for SWMP / SWMP Implementation Support	$2,000.00	•Consultant costs assumes 10-20 hours of implementation support and integration of SWMP into Stormwater Training(s)	Annual	Operations & Maintenance
Illicit Discharge Detection & Elimination (IDDE)	Sanitary Sewer Overflow (SSO) Inventory	$0.00	Included in IDDE Plan	One-time	Operations & Maintenance
Illicit Discharge Detection & Elimination (IDDE)	Outfall Inventory & Priority Ranking	$0.00	Included in IDDE Plan	One-time	Operations & Maintenance
Illicit Discharge Detection & Elimination (IDDE)	IDDE Plan - Staff Trainings	$2,000.00	•Consultant costs assumes 15-20 hours for training	Annual	Operations & Maintenance
Municipal Good Housekeeping	Update Municipal Good Housekeeping Manual	$20,000.00	•Consultant costs assumes 60-80 hours for development of a revised Municipal Good Housekeeping (O&M) Manual	One-time	Operations & Maintenance
Municipal Good Housekeeping	Develop Catch Basin Optimization Procedures	-	•Included in Good Housekeeping costs	One-time	Operations & Maintenance
Municipal Good Housekeeping	Develop Inspection / Maintenance Procedures for Municipal BMPs	-	•Included in Good Housekeeping costs	One-time	Operations & Maintenance
Municipal Good Housekeeping Operational Expenses	Sweeping: develop and implement procedures for sweeping streets and municipal-owned lots	$25,000.00	•Assumes maintenance and repayment costs based on sweeping of all streets and Town parking lots	Annual	Operations & Maintenance
Operation & Maintenance	O&M Program	$20,000.00	•SW Pipe Jetting •Replacement of Catch Basins, Grates, etc.	Annual	Operations & Maintenance
Municipal Good Housekeeping	Catch basin Cleanout	$24,000.00	•Annual Catch Basin Cleanout & Documentation	Annual	Operations & Maintenance
Illicit Discharge Detection & Elimination (IDDE)	Catchment Investigations	$25,000.00	•Assume approximately 250 hours over 3-years •Refine Delineations and conduct inspections	One-time	Operations & Maintenance
Construction Runoff Management	Update Ordinance - Construction Runoff Management	$10,000.00	with updated regulations. Kleinfelder has not assessed the status of ordinances created under previous permit terms	One-time	Regulation/Enforcement
New / Redevelop / Post Construction	Construction (controls projects that disturb an acre or more)	$4,000.00	ordinance for compliance with updated regulations. Kleinfelder has not assessed the status of Stormwater ordinances created under previous permit terms	One-time	Regulation/Enforcement

Town of Millis, MA

Stormwater Utility FY19 Program Costs for Planning Use

Category	Operations & Maintenance	Capital Projects	Indirect Allocation	Administration	Engineering & Master Planning	Regulation/ Enforcement
One-time costs						
Sum of One-time costs	$45,000.00	$0.00	$0.00	$20,000.00	$24,000.00	$14,000.00
Average of One-time costs (FY19-21)	$15,000.00	$0.00	$0.00	$6,666.67	$8,000.00	$4,666.67
Annual costs						
Sum of Annual program costs (FY19-21)	$73,000.00	$175,000.00	$0.00	$25,750.00	$0.00	$0.00
Sub-total						
One-time and average annual costs	$88,000.00	$175,000.00	$0.00	$32,416.67	$8,000.00	$4,666.67
Program Costs - Labor and Expenses						
DPW Labor and Longevity	$122,031.85	$0.00	$0.00	$7,317.02	$0.00	$0.00
Indirect Labor and Expenses	-	-	$130,022.41	-	-	-
Total Non-labor and Labor						
Average Year (FY19-21) Estimate	**$210,032**	**$175,000**	**$130,022**	**$39,734**	**$8,000**	**$4,667**
10% Contingency	$21,003.18	$17,500.00	$13,002.24	$3,973.37	$800.00	$466.67
Average Year (FY19-21) Estimate with 10% Contingency	**$231,035.03**	**$192,500.00**	**$143,024.65**	**$43,707.06**	**$8,800.00**	**$5,133.33**

Total Program Costs - Non-labor Expenses	
One-time costs	
Sum of One-time costs	$103,000.00
Average of One-time costs (FY19-21)	$34,333.33
Annual costs	
Sum of Annual program costs (FY19-21)	$273,750.00
Sub-total	
One-time and average annual costs	$308,083.33
Total Program Costs - Labor and Expenses	
DPW Labor and Longevity	$129,348.87
Indirect Labor and Expenses	$130,022.41
Total Non-labor and Labor	
Average Year (FY19-21) Estimate	**$567,454.61**
10% Contingency	$56,745.46
Average Year (FY19-21) Estimate with 10% Contingency	**$624,200.07**