

Sustainable Stormwater Funding in the Upper Charles

Town of Franklin, Stormwater Cost of Service

Annual Cost of Service Analysis; Fully-Burdened Personnel Costs, Summary by Cost Subcategory by Year

Major Cost Category	Existing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10*	Description (existing)	Description (future)
Cost Subcategory									
Administration									
General Stormwater Program Administration	\$ 12,510	\$ 18,765	\$ 18,765	\$ 18,765	\$ 18,765	\$ 18,765	\$ 18,765	Periodic review and tracking of tasks & subcontractors	Periodic review and tracking of tasks & subcontractors (50% workload increase due to enhanced program)
Legal Support Services	\$ 1,442	\$ -	\$ 2,885	\$ -	\$ -	\$ 2,885	\$ 2,885	Periodic review of regulatory changes (avg. over 5 years)	Legal review of regulatory changes in Years 2, 5 & 10 (50% increase over existing)
Inter-Agency Coordination (MA Hwy, CRWA, EPA)	\$ 8,017	\$ 8,017	\$ 8,017	\$ 8,017	\$ 8,017	\$ 8,017	\$ 8,017	Share information, attend workshops & seminars, utilize CRWA & EPA fact sheets for public education	Continue existing efforts
Inter-Municipal Coordination (adj. Towns)	N/A	\$ 2,501	\$ 2,501	\$ 2,501	\$ 2,501	\$ 2,501	\$ 2,501	N/A	Meet twice a year to review and coordinate programs
Emergency/Disaster Management Coordination	\$ -	\$ 2,475	\$ 2,475	\$ 2,475	\$ 2,475	\$ 2,475	\$ 2,475	N/A	Coordinate stormwater program with LEPC, meet twice a year
NPDES MS4 NOI and SWMP	N/A	\$ 54,855	\$ -	\$ -	\$ 23,365	\$ -	\$ 64,615	N/A	Year 1 - Prepare NOI and SWMP; Year 4 - ; update SWMP (incorporate PCP); Year 10 - prepare NOI and update SWMP
NPDES MS4 Annual Reporting	\$ 8,575	\$ 17,150	\$ 17,150	\$ 17,150	\$ 17,150	\$ 17,150	\$ 17,150	Completed by consultant, input & review by Town staff	100% increase from existing, completed by consultant, input & review by Town staff
NPDES MS4 Public Education Programs	\$ 6,200	\$ 13,675	\$ 12,725	\$ 12,725	\$ 12,725	\$ 12,725	\$ 12,915	Poster display circulated, articles in DPW newsletter and Milford Daily news, coordination with High School "Green Team", DPW stormwater presentations at Town Council meetings, Middle School stormwater presentations	50% workload increase from existing; purchase new materials in Year 1; distribute at least 2 messages to each of 4 audiences (residents, commercial, industrial, construction); report annually
NPDES MS4 Public Involvement Programs	\$ 9,715	\$ 12,144	\$ 12,144	\$ 12,144	\$ 12,144	\$ 12,144	\$ 12,144	Earth Day cleanup event, stormwater hotline, storm drain marking	Continue existing efforts, provide opportunity for public input on SWMP annually (25% increase in effort)
NPDES MS4 & SPCC Training	\$ 3,000	\$ 7,125	\$ 4,725	\$ 4,725	\$ 4,725	\$ 4,725	\$ 5,205	SPCC & pollution prevention/good housekeeping for DPW (consultant)	SWPPP training for Transfer Station, DPW Facility & pollution prevention/good housekeeping and IDDE for all DPW; SPCC training at DPW Facility; all training done by a consultant; programs developed and training in Year 1, refresher training each year thereafter
RDA Compliance	N/A	\$ 3,750	\$ 3,750	\$ 3,750	\$ 3,750	\$ 3,750	\$ 3,750	N/A	Tracking of regulated entities under the RDA that discharge to the MS4; track RDA that do not discharge to MS4
Certified Municipal Phosphorous Program (CMPP)	N/A	\$ -	\$ -	\$ -	\$ -	\$ 4,545	\$ 4,545	N/A	Recordkeeping, data tracking and correspondence with regulated entities for updating program progress under "Water Quality"
Grants Program (s319, 604b, CZM)	\$ 9,210	\$ -	\$ 9,210	\$ -	\$ -	\$ 9,210	\$ 9,210	None current, but some in the past	Staff efforts to apply for and administer grants received for stormwater programs; assumes one grant in Permit Years 2, 5 and 10
Subtotal:	\$ 58,670	\$ 140,457	\$ 94,346	\$ 82,252	\$ 105,617	\$ 98,891	\$ 164,176		
Billing and Finance (for a Utility)									
Financial Management	N/A							N/A	Costs are included in Indirect Cost Allocations
Indirect Cost Allocations	N/A							N/A	Indirect cost allocations are estimated to be 8% of the total program costs
Billing, Finance and Customer Services	N/A							N/A	Costs are based on approximately @@@@ bills per year
Cost and Rate Analysis	N/A							N/A	Costs are included in Indirect Cost Allocations
General Government Support	N/A							N/A	Costs are included in Indirect Cost Allocations
Subtotal:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Regulation/Enforcement									
MS4 Stormwater Permit Administration	\$ -	\$ 8,520	\$ 8,520	\$ 8,520	\$ 8,520	\$ 8,520	\$ 8,520	No new permits	Anticipated administration of 3 permits annually
RDA/CMPP Compliance	N/A	\$ -	\$ -	\$ -	\$ -	\$ 13,125	\$ 13,125	N/A	Inspection of facilities to verify accuracy of information submitted under the CMPP
Stormwater/Drainage System Inspections	\$ 27,663	\$ 34,579	\$ 34,579	\$ 34,579	\$ 34,579	\$ 34,579	\$ 34,579	Currently conducted by Engineering Department to review compliance of post-construction BMPs or connections with the MS4	25% increase in workload due to various programs
Illicit Discharge and Dumping Program	\$ 2,730	\$ 2,730	\$ 22,920	\$ 22,920	\$ 22,920	\$ 22,920	\$ 18,882	Issues are reported through the stormwater hotline or the Board of Health, mostly related to dumping, very few each year	50% increase in staff workload due to new issues discovered through additional investigations and increased reporting; outside resources required for source identification, assumes 50% of dry-weather sampled outfalls have illicit discharge (50 hits over permit cycle), estimated cost to identify source = \$1,200 per hit, assumes removal costs are borne by property owner or sewer authority, annual cost begins in Year 2
Erosion/sediment Control Inspections	\$ 21,003	\$ 31,505	\$ 31,505	\$ 31,505	\$ 31,505	\$ 31,505	\$ 31,505	Engineering inspects Town projects; private projects are inspected at the cost of the developer or permittee	50% increase in workload due to additional maintenance and construction work
Subtotal:	\$ 51,396	\$ 77,333	\$ 97,523	\$ 97,523	\$ 97,523	\$ 110,648	\$ 106,610		

Engineering and Master Planning									
<i>Stormwater Master Planning, Includes PCP/CIP Planning; Link with SWMP; Planning for Infrastructure Needs, Includes Facility Inventory for SW Retrofit</i>	\$ 14,866	\$ 80,826	\$ 80,826	\$ 80,826	\$ 47,540	\$ 80,826	\$ 74,169	No formal planning evaluation for stormwater; 1997 Town Master Plan; Stormwater Management Plan for Spruce Pond Brook Subwatershed (CRWA, 2010); Optimal Stormwater Management Plan Alternatives: A Demonstration Study in Three Upper Charles River Communities (TETRA TECH, December 2009); Town staff participate in planning efforts by others	Years 1 through 3 & 5 - Town staff participate in planning efforts by others; Year 4 - incorporate existing studies and develop a CIP based on the Phosphorous Control Plan and infrastructure needs
<i>Illicit Discharge Detection and Elimination Plan</i>	\$ 1,800	\$ 18,890	\$ 15,320	\$ -	\$ -	\$ 18,890	\$ 10,620	IDDE Plan developed in 2006, periodic inspection of outfalls to update GIS database	Year 1 - update IDDE Plan to meet new permit requirements, including delineation of and prioritization of catchments; Year 2 - update catchment delineation based on mapping changes/updates; Year 5 - detailed report for illicit discharges removed during the permit period
<i>Catch Basin Inventory Plan (CBIP) Plan and Street Sweeping Optimization</i>	\$ -	\$ 10,625	\$ 11,025	\$ 11,025	\$ 11,025	\$ 11,025	\$ 10,945	N/A	Year 1 - develop CBIP and a Standard Operating Procedure (SOP) to sweep areas with DCIA twice/year; Years 2 through 5 - implement CBIP recordkeeping of CB cleaning and status of CB, investigate CB w/ >50% full sump at 2 consecutive cleanings, record sweeping miles
<i>Waterfowl & Pet Waste Management Programs</i>	\$ -	\$ 11,638	\$ 8,028	\$ 8,028	\$ 8,028	\$ 10,528	\$ 9,250	Completed as part of "Operations & Implementation": Goose egg addling & beaver control by contractor, DPW oversight & management	Year 1 - develop written programs for waterfowl and pet waste management; Year 2 - Oversight of pet waste management program implementation and public awareness activities for waterfowl management; Year 3 - Oversight of pet waste and waterfowl management program implementation, continue public awareness activities for waterfowl management; Year 4 - Continue oversight of pet waste and waterfowl management programs and public awareness activities; Year 5 - Continue oversight of pet waste and waterfowl management programs and public awareness activities; update management programs
<i>Septic, Inflow, and Infiltration Program</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Sanitary sewer (I/I) investigations and improvements tracked to document condition and status of system, approximately 0.6 MGD removed over last 5 years through I/I activities	Continue existing program; evaluate potential impacts from septic systems; 60% of Town has sewer service
<i>Pesticide, Herbicide, and Fertilizer Program</i>	\$ 4,710	\$ 11,870	\$ 4,710	\$ 4,710	\$ 4,710	\$ 4,710	\$ 6,142	Applications follow the principles of an Integrated Pest Management (IPM) Program to reduce chemical applications for pest and turf management	Year 1 - continue IPM & develop/implement fertilizer optimization program; Years 2 through 5 - continue IPM & fertilizer optimization program
<i>Spill Response and Cleanup Program</i>	\$ -	\$ -	\$ 10,125	\$ 4,050	\$ 4,050	\$ 14,175	\$ 6,480	No formal program related to stormwater	Year 2 - Develop a priority response program based on high accident areas, significant pollutant potential and proximity to receiving waters; Years 3 & 4 - track program results and coordinate with Town departments; Year 5 - update priority response program and track program results and coordinate with Town departments
<i>Groundwater and Drinking Water Program</i>	\$ -	\$ 9,725	\$ 3,225	\$ 3,225	\$ 3,225	\$ 3,225	\$ 4,525	No formal evaluation of priorities & results with respect to water supply	Year 1 - technical review memo of drinking water quantity and quality priority areas; Years 2 through 5 - incorporate program results into planning activities for BMPs to address water quality; review status annually
<i>DPW Project Design Engineering and Permitting Assistance</i>	\$ 63,780	\$ 79,725	\$ 79,725	\$ 79,725	\$ 79,725	\$ 95,670	\$ 82,914	~5 projects/year; design of roadway projects that incorporate stormwater improvements (e.g., reduced pavement width, removal of cul-de-sacs); retrofit designs for existing drainage systems (problem areas)	Years 1 through 4 - 25% increase in workload from existing (2 additional projects per year, 7 total); Year 5 - 50% increase in workload from existing as part of PCP implementation following Year 4 (8-9 projects total)
<i>SWPPPs for Transfer Station & DPW Facility</i>	\$ 5,625	\$ 11,625	\$ 2,250	\$ 2,250	\$ 2,250	\$ 13,875	\$ 6,450	Municipal facility inventory completed to evaluate pollution prevention and good housekeeping at municipal facilities	Year 1 - develop SWPPPs for Transfer Station & DPW Facility; Years 2 through 4 - implement SWPPP recommendations, manage SWPPP activities, conduct site inspections and track results; Year 5 - manage SWPPP activities, conduct site inspections, track results and update SWPPPs
<i>Maintenance and Field Engineering Support</i>	\$ 25,350	\$ 31,688	\$ 31,688	\$ 31,688	\$ 31,688	\$ 38,025	\$ 50,700	Engineers assist DPW on an on-call basis	Years 1 through 4 - 25% increase in workload from existing increase; Year 5 - 50% increase in workload from existing following Year 4 implementation of PCP; Year 10 - 100% increase in workload due to new capital projects
<i><u>Storm Drain System</u>: Data Collection, Database Management, Mapping</i>	\$ 20,625	\$ 45,430	\$ 123,450	\$ 123,450	\$ 42,010	\$ 42,010	\$ 75,270	Field data collected for existing infrastructure and new projects (GIS update)	Year 1 - mapping of entire drainage network (schematic only) ; Years 2 and 3 - field mapping and verification of drainage attributes; Years 4 and 5 - field data collected for new projects (GIS update)
<i><u>Sanitary Sewer System</u>: Data Collection, Database Management, Mapping</i>	\$ -	\$ -	\$ 80,580	\$ 80,580	\$ 60,040	\$ -	\$ 44,240	N/A, updated/managed with I/I investigations as part of the sanitary sewer program	Years 2 and 3 - update sewer schematic with attribute data from as-built plans and I/I studies; Year 4 - Field data collection to address data gaps; incorporate groundwater elevation data from various sources & overlay to identify zones of separation/saturation
<i>Technical Services/Public Assistance (hotlines)</i>	\$ 2,940	\$ 4,410	\$ 4,410	\$ 4,410	\$ 4,410	\$ 4,410	\$ 4,410	Handle calls related to flooding and illicit discharges	50% increase in workload from existing
<i>Code Development and Zoning Support Services</i>	\$ 12,975	\$ 12,975	\$ 32,320	\$ 32,320	\$ 12,975	\$ 12,975	\$ 20,713	Updates completed to comply with 2003 NPDES MS4 Permit; ongoing compliance support for stormwater requirements	Year 1 - ongoing compliance support for stormwater requirements; Year 2 - report on local regulations affecting impervious areas; ongoing compliance support for stormwater requirements; Year 3 - report on feasibility of green practices and other green techniques; ongoing compliance support for stormwater requirements; Years 4 and 5 - ongoing compliance support for stormwater requirements
<i>Hazard Mitigation Planning and Flood Insurance Updates</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,585	\$ 8,517	N/A	Year 5 - allowance for H&H analysis (consultant) for specific areas of concern identified throughout the permit term; review results of FEMA mapping updates for Norfolk County, anticipated within 5 years
Subtotal:	\$ 152,671	\$ 329,426	\$ 487,681	\$ 466,286	\$ 311,675	\$ 392,929	\$ 415,345		

Operations and Implementation									
Operations and Maintenance Management	\$ 32,460	\$ 48,690	\$ 48,690	\$ 48,690	\$ 48,690	\$ 48,690	\$ 48,690	Highway Foreman coordinates work schedules, equipment and product needs, oversees progress and completion of work	50% increase in effort from existing due to new projects and tracking of results (measurable goals) for each activity
CIP/Infrastructure Implementation	\$ 249,250	\$ 311,563	\$ 311,563	\$ 311,563	\$ 311,563	\$ 311,563	\$ 311,563	No formal program; infrastructure needs incorporated into Highway Budget for operations, CIP funded through grants or CHP 90 or s319; stormwater improvements completed as part of Highway and Water Department Projects, including decreases to roadway width and removal of cul-de-sacs	Annual needs evaluation, incorporate capital projects, evaluate stormwater improvement opportunities (25% increase overall)
PCP Implementation	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	Year 5 - implementation & construction of BMPs by Town (2 projects annually above and beyond CIP projects); same in Year 10
Voluntary CMPP/RDA Implementation	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	Year 5 - Town implementation of CMPP or construction of BMP (2 projects annually above and beyond CIP and PCP projects); same in Year 10
Illicit Discharge Removal	N/A	\$ 19,725	\$ 19,725	\$ 19,725	\$ 19,725	\$ 19,725	\$ 19,725	No formal program; no cross connections to MS4 identified thus far; illegal dumping removed by Highway Department and disposal coordinated with Board of Health	Address illicit discharges within 6 months (1 identified annually)
Storm Sewer and Culvert Maintenance/Repair	\$ 76,983	\$ 96,228	\$ 96,228	\$ 96,228	\$ 96,228	\$ 96,228	\$ 96,228	Repair/re-setting of catch basin grates, damaged headwalls, collapsed culverts and structures, rebuilding of manholes and catch basins	25% increase due to degraded infrastructure
Inlet, Catch Basin, and Manhole Cleaning	\$ 81,263	\$ 135,708	\$ 135,708	\$ 135,708	\$ 135,708	\$ 135,708	\$ 135,708	Clean approximately 1,800 catch basins and manholes per year	Clean all catch basins and manholes each year (~3,000 structures, 67% increase in effort)
Stormwater BMP Facility Maintenance	\$ 47,288	\$ 47,288	\$ 47,288	\$ 47,288	\$ 47,288	\$ 49,371	\$ 59,109	Cleaned as issues arise; inventory completed for 185 locations; have not accepted many roads in Town (~60 miles), so access to BMPs is limited	Continue routine maintenance in Years 1-4 and address major rehabilitation as part of the capital improvements/retrofits as part of PCP implementation. Increased maintenance effort in Year 5 (5%) and Year 10 (25%) due to increased PCP maintenance schedules.
Street Sweeping	\$ 81,888	\$ 81,888	\$ 81,888	\$ 81,888	\$ 81,888	\$ 81,888	\$ 81,888	All streets are swept once a year; downtown streets are swept twice a year	Continue existing activities
Fall Leaf-pickup	N/A	\$ -	\$ -	\$ -	\$ -	\$ 72,355	\$ 72,355	N/A - leaf pickup program not in place	Leaf collection program for priority areas based on PCP recommendations; same in Year 10
Maintenance/Repair/Installation of ESC practices	\$ 14,013	\$ 14,013	\$ 14,013	\$ 14,013	\$ 14,013	\$ 14,013	\$ 14,013	Repair of areas in spring damaged by snow plowing; repair of other eroded areas due to major rain events (road repairs - budgeted amount)	Continue existing activities
Stream Restoration/Stabilization	N/A	\$ -	\$ -	\$ 34,065	\$ -	\$ -	\$ 34,065	N/A	Complete one stream restoration project every 3 years; 1 project in Year 10
Ditch and Channel Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	N/A
Waterfowl & Pet Waste Management Programs	\$ 8,700	\$ 9,825	\$ 13,280	\$ 14,280	\$ 14,325	\$ 17,780	\$ 13,898	Goose egg addling & beaver control by contractor (average cost), DPW oversight & management	Install waterfowl education signs at congregation areas by Year 2; install pet waste stations at key areas of concern by Year 3; implement waterfowl deterrents by Year 4; maintain programs after Year 4
Public Assistance Program	\$ 17,550	\$ 22,095	\$ 22,095	\$ 22,095	\$ 22,095	\$ 22,095	\$ 22,095	No program for the storm sewer system; Town requires inflows to the sanitary sewer system to be disconnected. Town caps improper connections in the street.	Continue existing program for inputs to the sanitary sewer system. Create public awareness & incentive program to encourage disconnection of impervious areas to the storm sewer system
Toxic and Hazardous Materials Control Program	\$ 33,485	\$ 33,485	\$ 33,485	\$ 33,485	\$ 33,485	\$ 33,485	\$ 33,485	Annual household hazardous waste collection	Continue existing program
Emergency Drainage Repairs	\$ 34,975	\$ 34,975	\$ 34,975	\$ 34,975	\$ 34,975	\$ 34,975	\$ 34,975	Annual allowance for unexpected repair of failed drainage structures	Continue existing practices; 50% increase in Year 10 due to aged structures, new/additional infrastructure overall
Land, Easement, and Rights Acquisition	\$ -	\$ 7,212	\$ 7,212	\$ 7,212	\$ 7,212	\$ 7,212	\$ 7,212	N/A	Future costs reflect estimated legal time associated with capital projects
Subtotal:	\$ 677,853	\$ 862,693	\$ 866,148	\$ 901,213	\$ 867,193	\$ 945,086	\$ 985,008		
Monitoring									
Catchment Assessment & Outfall Monitoring (dry weather)	\$ -	\$ -	\$ 75,180	\$ 75,180	\$ 75,180	\$ 75,180	\$ -	All outfalls inspected once during dry weather conditions during the 2003 permit term	Assess 50% of catchments by Year 3, monitor 50% of outfalls by Year 4 and 100% of catchments and outfalls by Year 5; 501 outfalls and sampling of 10%; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes); no additional effort anticipated for Year 10
Stormwater Outfall Monitoring (wet weather)	N/A	\$ 26,398	\$ 81,720	\$ 81,720	\$ 81,720	\$ 81,720	\$ 70,656	N/A	Develop Permittee Specific Monitoring Plan in Year 1; sample 25% of outfalls each year beginning in Year 2
Surface Water Quality Monitoring	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	Monitoring to be completed as part of Stormwater Master Planning activities
Subtotal:	\$ -	\$ 26,398	\$ 156,900	\$ 156,900	\$ 156,900	\$ 156,900	\$ 70,656		
TOTAL:	\$ 940,590	\$ 1,436,307	\$ 1,702,599	\$ 1,704,175	\$ 1,538,908	\$ 1,704,455	\$ 1,741,795	Cost in 2011 Dollars	
TOTAL (w/inflation):	\$ 940,590	\$ 1,472,215	\$ 1,787,729	\$ 1,831,988	\$ 1,692,799	\$ 1,917,512	\$ 2,177,244	2.5% Annual Inflation Starting in Year 1	

Note: *Unless otherwise noted, the Year 10 costs represent the average cost over the 5-Year permit term.

Sustainable Stormwater Funding in the Upper Charles																
Town of Franklin, Stormwater Cost of Service																
Program Administration: Existing & Future Cost Supporting Data																
		Subcontractors (units = fee)			Fully Burdened Personnel (rate = salary + 50%, units = FTE)						Expenses			Total (\$) Total (FTE) Description		
	Source	Consulting Engineer	Legal Counsel	Town Attorney	Town Administrator	DPW Director	Highway Superintendent	GIS Technician	DPW Office Manager	DPW Clerk	Mileage	Postage	Other			
	Rate	1	1	\$144,237	\$213,000	\$157,500	\$112,500	\$90,000	\$78,000	\$58,500	\$0.51	\$0.44	1			
Administration	# Units															
General Stormwater Program Administration	Existing				0.01	0.02		0.05	0.02	0.02				\$ 12,510	0.12	Periodic review and tracking of tasks & subcontractors
	Proposed				0.02	0.03		0.08	0.03	0.03				\$ 18,765	0.18	Periodic review and tracking of tasks & subcontractors (50% workload increase due to enhanced program)
Legal Support Services	Existing			0.01										\$ 1,442	0.01	Periodic review of regulatory changes (avg. over 5 years)
	Proposed (Year 2)			0.02										\$ 2,885	0.02	Legal review of regulatory changes in Year 2 (50% increase over existing)
	Proposed (Year 5)			0.02										\$ 2,885	0.02	Legal review of regulatory changes in Year 5 (50% increase over existing)
	Proposed (Year 10)			0.02										\$ 2,885	0.02	Legal review of regulatory changes in Year 10 (50% increase over existing)
Inter-Agency Coordination (MA Hwy, CRWA, EPA)	Existing				0.01	0.02		0.02	0.01		300	10		\$ 8,017	0.06	Share information, attend workshops & seminars, utilize CRWA & EPA fact sheets for public education
	Proposed				0.01	0.02		0.02	0.01		300	10		\$ 8,017	0.06	Continue existing efforts
Inter-Municipal Coordination (adj. Towns)	Existing													\$ -	0.00	N/A
	Proposed					0.01		0.01			50			\$ 2,501	0.02	Meet twice a year to review and coordinate programs
Emergency/Disaster Management Coordination	Existing													\$ -	0.00	N/A
	Proposed					0.01		0.01						\$ 2,475	0.02	Coordinate stormwater program with LEPC, meet twice a year
NPDES MS4 NOI and SWMP	Existing													\$ -	0.00	N/A
	Proposed (Year 1)	\$46,080				0.02	0.01	0.05						\$ 54,855	0.08	Prepare NOI and SWMP in Year 1
	Proposed (Year 4)	\$14,590				0.02	0.01	0.05						\$ 23,365	0.08	Update SWMP Year 4 (incorporate PCP)
	Proposed (Year 10)	\$55,840				0.02	0.01	0.05						\$ 64,615	0.08	Prepare NOI and update SWMP in Year 10
NPDES MS4 Annual Reporting	Existing	\$2,500				0.01		0.05						\$ 8,575	0.06	Completed by consultant, input & review by Town staff
	Proposed	\$5,000				0.02		0.10						\$ 17,150	0.12	100% increase from existing, completed by consultant, input & review by Town staff
NPDES MS4 Public Education Programs	Existing					0.02		0.03					\$350	\$ 6,200	0.05	Poster display circulated, articles in DPW newsletter and Milford Daily news, coordination with High School "Green Team", DPW stormwater presentations at Town Council meetings, Middle School stormwater presentations
	Proposed (Year 1)	\$4,200				0.03		0.05					\$700	\$ 13,675	0.08	50% workload increase from existing; purchase new materials; distribute at least 2 messages to one of 4 audiences (residents, commercial, industrial, construction); report annually
	Proposed (Years 2-5)	\$3,600				0.03		0.05					\$350	\$ 12,725	0.08	50% workload increase from existing; distribute at least 2 messages to one of 4 audiences (residents, commercial, industrial, construction); report annually
NPDES MS4 Public Involvement Programs	Existing					0.01	0.02	0.05		0.02		500		\$ 9,715	0.10	Earth Day cleanup event, stormwater hotline, storm drain marking
	Proposed					0.01	0.03	0.06		0.03		625		\$ 12,144	0.13	Continue existing efforts, provide opportunity for public input on SWMP annually (25% increase in effort)
NPDES MS4 & SPCC Training	Existing	\$3,000												\$ 3,000	0.00	SPCC & pollution prevention/good housekeeping for DPW (consultant)
	Proposed (Year 1)	\$6,000					0.01							\$ 7,125	0.01	SWPPP training for Transfer Station, DPW Facility & pollution prevention/good housekeeping and IDDE for all DPW; SPCC training at DPW Facility; all training done by a consultant; programs developed and training in Year 1
	Proposed (Years 2-5)	\$3,600					0.01							\$ 4,725	0.01	Refresher training: SWPPP training for Transfer Station, DPW Facility & pollution prevention/good housekeeping and IDDE for all DPW; SPCC training at DPW Facility; all training done by a consultant
RDA Compliance	Existing													\$ -	0.00	N/A
	Proposed							0.02	0.01	0.02				\$ 3,750	0.05	Tracking of regulated entities under the RDA that discharge to the MS4; track RDA that do not discharge to MS4
Certified Municipal Phosphorous Program (CMPP)	Existing													\$ -	0.00	N/A
	Proposed (Year 5)					0.01		0.02		0.02				\$ 4,545	0.05	Recordkeeping, data tracking and correspondence with regulated entities for updating program progress under "Water Quality"
Grants Program (s319, 604b, CZM)	Existing					0.02		0.05	0.02					\$ 9,210	0.09	None current, but some in the past
	Proposed (Year 2)					0.02		0.05	0.02					\$ 9,210	0.09	Staff efforts to apply for and administer 1 grant for stormwater programs
	Proposed (Year 5)					0.02		0.05	0.02					\$ 9,210	0.09	Staff efforts to apply for and administer 1 grant for stormwater programs
	Proposed (Year 10)					0.02		0.05	0.02					\$ 9,210	0.09	Staff efforts to apply for and administer 1 grant for stormwater programs
Total:	Existing	\$5,500	\$0	0.01	0.02	0.10	0.02	0.25	0.05	0.04	300	510	\$350	\$58,670	0.49	
	Proposed Year 1	\$56,280	\$0	0.00	0.03	0.15	0.05	0.39	0.05	0.08	350	635	\$700	\$140,457	0.74	
	Proposed Year 2	\$12,200	\$0	0.02	0.03	0.15	0.04	0.39	0.07	0.08	350	635	\$350	\$94,346	0.77	
	Proposed Year 3	\$12,200	\$0	0.00	0.03	0.13	0.04	0.34	0.05	0.08	350	635	\$350	\$82,252	0.66	
	Proposed Year 4	\$26,790	\$0	0.00	0.03	0.15	0.05	0.39	0.05	0.08	350	635	\$350	\$105,617	0.74	
	Proposed Year 5	\$12,200	\$0	0.02	0.03	0.16	0.04	0.41	0.07	0.10	350	635	\$350	\$98,891	0.82	

Sustainable Stormwater Funding in the Upper Charles

Town of Franklin, Stormwater Cost of Service

Regulation/Enforcement: Existing & Future Cost Supporting Data

		Subcontractors (units = fee)		Fully Burdened Personnel (rate = salary + 50%, units = FTE)								Expenses			Total (\$)	Total (FTE)	Description
	Source	Consulting Engineer	Legal Counsel	Town Administrator	DPW Director	Town Engineer	Highway Superintendent	Staff Engineer/ Inspector	GIS Technician	DPW Office Manager	DPW Clerk	Mileage	Postage	Other			
	Rate	1	1	\$213,000	\$157,500	\$142,500	\$112,500	\$72,000	\$90,000	\$78,000	\$58,500	\$0.51	\$0.44	1			
Regulation/Enforcement	# Units																
MS4 Stormwater Permit Administration	Existing														\$ -	0.00	No new permits
	Proposed					0.02		0.05	0.01		0.02				\$ 8,520	0.10	Anticipated administration of 3 permits annually
RDA/CMPP Compliance	Existing														\$ -	0.00	N/A
	Proposed (Year 5)					0.01		0.10	0.05						\$ 13,125	0.16	Inspection of facilities to verify accuracy of information submitted under the CMPP
Stormwater/Drainage System Inspections	Existing					0.05	0.05	0.18	0.02			300			\$ 27,663	0.30	Currently conducted by Engineering Department to review compliance of post-construction BMPs or connections with the MS4
	Proposed					0.06	0.06	0.23	0.03			375			\$ 34,579	0.38	25% increase in workload due to various programs
Illicit Discharge and Dumping Program	Existing									0.02	0.02				\$ 2,730	0.04	Issues are reported through the stormwater hotline or the Board of Health, mostly related to dumping, very few each year
	Proposed (Year 2-5)					0.01	0.02			0.03	0.03			\$15,000	\$ 22,920	0.09	50% increase in staff workload due to new issues discovered through additional investigations and increased reporting; outside resources required for source identification, assumes 50% of dry-weather sampled outfalls (20% of total have flow) have illicit discharge (50 hits over permit cycle), estimated cost to identify source = \$1,200 per hit (1 day for TV inspection), assumes removal costs are borne by property owner or sewer authority, annual cost begins in Year 2
Erosion/sediment Control Inspections	Existing					0.02		0.25				300			\$ 21,003	0.27	Engineering inspects Town projects; private projects are inspected at the cost of the developer or permittee
	Proposed					0.03		0.38				450			\$ 31,505	0.41	50% increase in workload due to additional maintenance and construction work
Total:	Existing	\$0	\$0	0.00	0.00	0.07	0.05	0.43	0.02	0.02	0.02	600	0	\$0	\$51,396	0.61	
	Proposed YR1	\$0	\$0	0.00	0.00	0.11	0.06	0.65	0.04	0.02	0.04	\$825	\$0	\$0	\$77,333	0.92	
	Proposed YR2-4	\$0	\$0	0.00	0.01	0.11	0.08	0.65	0.04	0.03	0.05	\$825	\$0	\$15,000	\$97,523	0.97	
	Proposed YR5	\$0	\$0	0.00	0.01	0.12	0.08	0.75	0.09	0.03	0.05	825	0	\$15,000	\$110,648	1.13	

Sustainable Stormwater Funding in the Upper Charles
Town of Franklin, Stormwater Cost of Service
Engineering & Master Planning: Existing & Future Cost Supporting Data

		Subcontractors (units = fee)		Fully Burdened Personnel (rate = salary + 50%, units = FTE)										Expenses					
	Source	Consulting Engineer	Legal Counsel	Town Administrator	DPW Director	Town Engineer	Highway Superintendent	Sewer Superintendent	Staff Engineer/Inspector	GIS Technician	DPW Office Manager	Conservation Agent	DPW Clerk	Mileage	Postage	Other	Total (\$)	Total (FTE)	Description
	Rate	1	1	\$213,000	\$157,500	\$142,500	\$112,500	\$112,500	\$72,000	\$90,000	\$78,000	\$65,250	\$58,500	\$0.51	\$0.44	1			
Engineering & Master Planning	# Units																		
Stormwater Master Planning, Includes PCP/CIP Planning; Link with SWMP; Planning for Infrastructure Needs, Includes Facility Inventory for SW Retrofit	Existing			0.02	0.02	0.02				0.05				200	10		\$ 14,866	0.11	No formal planning evaluation for stormwater; 1997 Town Master Plan; Stormwater Management Plan for Spruce Pond Brook Subwatershed (CRWA, 2010); Optimal Stormwater Management Plan Alternatives: A Demonstration Study in Three Upper Charles River Communities (TETRA TECH, December 2009); Town staff participate in planning efforts by others
	Proposed (Year 1)	\$65,960		0.02	0.02	0.02				0.05				200	10		\$ 80,826	0.11	PCP Development and adjust IC loads and % removal from 2000-2009, update (2006) facility retrofit inventory
	Proposed (Year 2)	\$37,700		0.02	0.02	0.02				0.05				200	10		\$ 52,566	0.11	Town staff participate in planning efforts by others; PCP development and Year 2 progress report
	Proposed (Year 3)	\$60,800		0.02	0.02	0.02				0.05				200	10		\$ 75,666	0.11	Town staff participate in planning efforts by others; PCP development
	Proposed (Year 4)	\$61,420		0.02	0.02	0.02				0.05				200	10		\$ 76,286	0.11	Town staff participate in planning efforts by others; PCP development
	Proposed (Year 5)	\$20,720		0.03	0.03	0.03	0.02	0.01		0.08		0.02					\$ 47,540	0.22	Incorporate existing studies; develop a CIP based on the PCP and infrastructure needs; annual tracking of PCP progress; annual reporting of new BMPs & resulting TP reduction
Illicit Discharge Detection and Elimination Plan	Existing									0.02							\$ 1,800	0.02	IDDE Plan developed in 2006, periodic inspection of outfalls to update GIS database
	Proposed (Year 1)	\$26,900			0.01	0.02		0.01		0.02							\$ 34,250	0.06	Update IDDE Plan to meet new permit requirements, including delineation of and prioritization of catchments
	Proposed (Year 2)	\$13,520								0.02							\$ 15,320	0.02	Update catchment delineation based on mapping changes/updates
	Proposed (Year 5)	\$11,540			0.01	0.02		0.01		0.02							\$ 18,890	0.06	Detailed report for illicit discharges removed during the permit period
Catch Basin Inventory Plan (CBIP) Plan and Street Sweeping Optimization	Existing																\$ -	0.00	N/A
	Proposed (Year 1)	\$5,000			0.01		0.02			0.02							\$ 10,625	0.05	Develop CBIP and a Standard Operating Procedure (SOP) to sweep areas with DCIA twice/year
	Proposed (Years 2-5)						0.05		0.05	0.02							\$ 11,025	0.12	Implement CBIP recordkeeping of CB cleaning and status of CB, investigate CB w/ >50% full sump at 2 consecutive cleanings, record sweeping miles
Waterfowl & Pet Waste Management Programs	Existing																\$ -	0.00	Completed as part of "Operations & Implementation": Goose egg addling & beaver control by contractor, DPW oversight & management
	Proposed (Year 1)	\$5,000			0.01					0.02		0.05					\$ 11,638	0.08	Develop written programs for waterfowl and pet waste management
	Proposed (Year 2)				0.01					0.02		0.05	0.02		500		\$ 8,028	0.10	Oversight of pet waste management program implementation and public awareness activities for waterfowl management
	Proposed (Year 3)				0.01					0.02		0.05	0.02		500		\$ 8,028	0.10	Oversight of pet waste and waterfowl management program implementation, continue public awareness activities for waterfowl management
	Proposed (Year 4)				0.01					0.02		0.05	0.02		500		\$ 8,028	0.10	Continue oversight of pet waste and waterfowl management programs and public awareness activities
	Proposed (Year 5)	\$2,500			0.01					0.02		0.05	0.02		500		\$ 10,528	0.10	Continue oversight of pet waste and waterfowl management programs and public awareness activities; update management programs
Septic, Inflow, and Infiltration Program	Existing																\$ -	0.00	Sanitary sewer (I/I) investigations and improvements tracked to document condition and status of system, approximately 0.6 MGD removed over last 5 years through I/I activities
	Proposed					0.05		0.05		0.05							\$ 17,250	0.15	Continue existing program; evaluate and track potential impacts from septic systems; 60% of Town has sewer service
Pesticide, Herbicide, and Fertilizer Program	Existing				0.02						0.02						\$ 4,710	0.04	Applications follow the principles of an Integrated Pest Management (IPM) Program to reduce chemical applications for pest and turf management
	Proposed (Year 1)	\$3,500			0.03						0.03	0.02					\$ 11,870	0.08	Continue IPM & develop/implement fertilizer optimization program
	Proposed (Years 2-5)				0.02						0.02						\$ 4,710	0.04	Continue IPM & fertilizer optimization program
Spill Response and Cleanup Program	Existing																\$ -	0.00	No formal program related to stormwater
	Proposed (Year 2)	\$4,500			0.01		0.02			0.02							\$ 10,125	0.05	Develop a priority response program based on high accident areas, significant pollutant potential and proximity to receiving waters
	Proposed (Years 3-4)						0.02			0.02							\$ 4,050	0.04	Track program results and coordinate with Town departments
	Proposed (Year 5)	\$4,500			0.01		0.04			0.04							\$ 14,175	0.09	Update priority response program and track program results and coordinate with Town departments
Groundwater and Drinking Water Program	Existing																\$ -	0.00	No formal evaluation of priorities & results with respect to water supply
	Proposed (Year 1)	\$3,500			0.01	0.02				0.02							\$ 9,725	0.05	Technical review memo of drinking water quantity and quality priority areas
	Proposed (Years 2-5)					0.01				0.02							\$ 3,225	0.03	Incorporate program results into planning activities for BMPs to address water quality; review status annually
DPW Project Design Engineering and Permitting Assistance	Existing				0.05	0.10	0.05		0.40	0.05	0.02		0.02				\$ 63,780	0.69	~5 projects/year; design of roadway projects that incorporate stormwater improvements (e.g., reduced pavement width, removal of cul-de-sacs); retrofit designs for existing drainage systems (problem areas)
	Proposed (Years 1-4)				0.06	0.13	0.06		0.50	0.06	0.03		0.03				\$ 79,725	0.86	25% increase in workload from existing (2 additional projects per year, 7 total)
	Proposed (Year 5)				0.08	0.15	0.08		0.60	0.08	0.03		0.03				\$ 95,670	1.04	50% increase in workload from existing as part of PCP implementation following Year 4 (8-9 projects total)
SWPPPs for Transfer Station & DPW Facility	Existing				0.01		0.02			0.02							\$ 5,625	0.05	Municipal facility inventory completed to evaluate pollution prevention and good housekeeping at municipal facilities; ongoing BMP oversight and implementation.
	Proposed (Year 1)	\$6,000			0.01		0.02			0.02							\$ 11,625	0.05	Develop SWPPPs for Transfer Station & DPW Facility
	Proposed (Years 2-4)						0.02										\$ 2,250	0.02	Implement SWPPP recommendations, manage SWPPP activities, conduct site inspections and track results
	Proposed (Year 5)	\$6,000			0.01		0.04			0.02							\$ 13,875	0.07	Manage SWPPP activities, conduct site inspections, track results and update SWPPPs
Maintenance and Field Engineering Support	Existing					0.05	0.05		0.15	0.02							\$ 25,350	0.27	Engineers assist DPW on an on-call basis
	Proposed (Years 1-4)					0.06	0.06		0.19	0.03							\$ 31,688	0.34	25% increase in workload from existing increase
	Proposed (Year 5)					0.08	0.08		0.23	0.03							\$ 38,025	0.41	50% increase in workload from existing following Year 4 implementation of PCP
Storm Drain System : Data Collection, Database Management, Mapping	Existing				0.01	0.02			0.10	0.10							\$ 20,625	0.23	Field data collected for existing infrastructure and new projects (GIS update)
	Proposed (Year 1)	\$26,380				0.02			0.10	0.10							\$ 45,430	0.22	Mapping of entire drainage network (schematic only)
	Proposed (Years 2 & 3)	\$104,400				0.02			0.10	0.10							\$ 123,450	0.22	Field mapping and verification of drainage attributes
	Proposed (Years 4 & 5)	\$22,960				0.02			0.10	0.10							\$ 42,010	0.22	Field data collected for new projects (GIS update)
Sanitary Sewer System : Data Collection, Database Management, Mapping	Existing																\$ -	0.00	N/A, updated/managed with I/I investigations as part of the sanitary sewer program
	Proposed (Years 2 & 3)	\$80,580				0.00			0.00	0.00							\$ 80,580	0.00	Update sewer schematic with attribute data from as-built plans and I/I studies
	Proposed (Year 4)	\$60,040				0.00			0.00	0.00							\$ 60,040	0.00	Field data collection to address data gaps; incorporate groundwater elevation data from various sources & overlay to identify zones of separation/saturation
Technical Services/Public Assistance (hotlines)	Existing				0.01						0.01		0.01				\$ 2,940	0.03	Handle calls related to flooding and illicit discharges
	Proposed				0.02						0.02		0.02				\$ 4,410	0.05	50% increase in workload from existing
Code Development and Zoning Support Services	Existing					0.02			0.05			0.10					\$ 12,975	0.17	Updates completed to comply with 2003 NPDES MS4 Permit; ongoing compliance support for stormwater requirements
	Proposed (Year 1)					0.02			0.05			0.10					\$ 12,975	0.17	Ongoing compliance support for stormwater requirements
	Proposed (Year 2)	\$13,120			0.01	0.04			0.05	0.02		0.10					\$ 32,320	0.22	Report on local regulations affecting impervious areas; ongoing compliance support for stormwater requirements
	Proposed (Year 3)	\$13,120			0.01	0.04			0.05	0.02		0.10					\$ 32,320	0.22	Report on feasibility of green practices and other green techniques; ongoing compliance support for stormwater requirements
	Proposed (Years 4 & 5)					0.02			0.05			0.10					\$ 12,975	0.17	Ongoing compliance support for stormwater requirements
Hazard Mitigation Planning and Flood Insurance Updates	Existing																\$ -	0.00	N/A
	Proposed (Year 5)	\$25,560			0.02	0.05	0.02			0.05							\$ 42,585	0.14	Allowance for H&H analysis (consultant) for specific areas of concern identified throughout the permit term; review results of FEMA mapping updates for Norfolk County, anticipated within 5 years
Total:	Existing	\$0	\$0	0.02	0.12	0.21	0.12	0.00	0.70	0.26	0.05	0.10	0.03	200	10	\$0	\$152,671	1.61	
	Proposed Year 1	\$126,880	\$0	\$0	0.18	0.29	0.17	0.01	0.84	0.34	0.07	0.17	0.04	\$200	\$10	\$0	\$329,426	2.12	
	Proposed Year 2	\$282,080	\$0	\$0	0.15	0.28	0.22	0.00	0.89	0.36	0.06	0.15	0.06	\$200	\$510	\$0	\$487,681	2.18	
	Proposed Year 3	\$264,060	\$0	\$0	0.14	0.28	0.22	0.00	0.89	0.34	0.06	0.15	0.06	\$200	\$510	\$0	\$466,286	2.15	
	Proposed Year 4	\$103,720	\$0	\$0	0.14	0.27	0.24	0.01	0.89	0.34	0.06	0.17	0.06	\$0	\$500	\$0	\$311,675	2.20	
	Proposed Year 5	\$139,020	\$0	\$0	0.19	0.37	0.30	0.01	1.03	0.45	0.07	0.15	0.07	\$200	\$510	\$0	\$392,929	2.64	

Sustainable Stormwater Funding in the Upper Charles
Town of Franklin, Stormwater Cost of Service
Operations & Implementation: Existing & Future Cost Supporting Data

	Source	Subcontractors (units = fee)		Fully Burdened Personnel (rate = salary + 50%, units = FTE)														Expenses								Total (\$)	Total (FTE)	Description
		Consulting Engineer/ Subcontractor	Legal Counsel	Town Attorney	DPW Director	Town Engineer	Highway Superintendent	Sewer Superintendent	GIS Technician	Staff Engineer/ Inspector	DPW Office Manager	DPW Clerk	Mechanic	Working Foreman	Heavy Equip. Operator	Highway Maintenance Craftsman	Seasonal Labor	Equipment Replacement Budget	Disposal	Vehicle Parts	Materials & Supplies	Fuel	Other					
		1	1	\$144,237	\$157,500	\$142,500	\$112,500	\$112,500	\$90,000	\$72,000	\$78,000	\$58,500	\$80,250	\$79,500	\$68,250	\$68,250	\$18,000	1	1	1	1	1	1					
Operations & Maintenance	# Units																											
Operations and Maintenance Management	Existing				0.02		0.15				0.02	0.05		0.10										\$ 32,460	0.34	Highway Foreman coordinates work schedules, equipment and product needs, oversees progress and completion of work		
	Proposed				0.03		0.23				0.03	0.08		0.15										\$ 48,690	0.51	50% increase in effort from existing due to new projects and tracking of results (measurable goals) for each activity		
CIP/Infrastructure Implementation	Existing				0.02	0.05	0.10			0.20	0.05	0.05		0.25	0.25	0.25					150,000	2,500		\$ 249,250	1.22	No formal program; infrastructure needs incorporated into Highway Budget for operations, CIP funded through grants or CHP 90 or s319; stormwater improvements completed as part of Highway and Water Department Projects, including decreases to roadway width and removal of cul-de-sacs		
	Proposed				0.03	0.06	0.13			0.25	0.06	0.06		0.31	0.31	0.31					187,500	3,125		\$ 311,563	1.53	Annual needs evaluation, incorporate capital projects, evaluate stormwater improvement opportunities (25% increase overall)		
PCP Implementation	Existing																							\$ -	0.00	N/A		
	Proposed (Year 5)																							\$ -	0.00	Implementation & construction of BMPs by Town (2 projects annually above and beyond CIP projects); same in Year 10		
Voluntary CMPP/RDA Implementation	Existing																							\$ -	0.00	N/A		
	Proposed (Year 5)																							\$ -	0.00	Town implementation of CMPP or construction of BMP (2 projects annually above and beyond CIP and PCP projects); same in Year 10		
Illicit Discharge Removal	Existing																							\$ -	0.00	No formal program; no cross connections to MS4 identified thus far; illegal dumping removed by Highway Department and disposal coordinated with Board of Health		
	Proposed					0.01	0.02	0.02					0.05	0.05	0.05					2,500	500			\$ 19,725	0.20	Address illicit discharges within 6 months (1 identified annually)		
Storm Sewer and Culvert Maintenance/Repair	Existing						0.05					0.02	0.05	0.25	0.20	0.20			2,500	5,000	10,000	1,500		\$ 76,983	0.77	Repair/re-setting of catch basin grates, damaged headwalls, collapsed culverts and structures, rebuilding of manholes and catch basins		
	Proposed						0.06					0.03	0.06	0.31	0.25	0.25			3,125	6,250	12,500	1,875		\$ 96,228	0.96	25% increase due to degraded infrastructure		
Inlet, Catch Basin, and Manhole Cleaning	Existing						0.05						0.05		0.50			20,000	10,000	4,000	1,000	2,500		\$ 81,263	0.60	Clean approximately 1,800 catch basins and manholes per year		
	Proposed						0.08						0.08		0.84			33,400	16,700	6,680	1,670	4,175		\$ 135,708	1.00	Clean all catch basins and manholes each year (~3,000 structures, 67% increase in effort)		
Stormwater BMP Facility Maintenance	Existing						0.05							0.15	0.15		0.50		2,000	2,000	5,000	1,500		\$ 47,288	0.85	Cleaned as issues arise; inventory completed for 185 locations; have not accepted many roads in Town (~60 miles), so access to BMPs is limited		
	Proposed (Years 1-4)						0.05							0.15	0.15		0.50		2,000	2,000	5,000	1,500		\$ 47,288	0.85	Continue routine maintenance in Years 1-4 and address major rehabilitation as part of the capital improvements/retrofits as part of PCP implementation.		
	Proposed (Year 5)						0.05							0.16	0.16		0.53		2,100	2,100	5,250	1,575		\$ 49,371	0.89	Increased maintenance effort in Year 5 (5%) and Year 10 (25%) due to increased PCP maintenance schedules.		
Street Sweeping	Existing						0.02					0.05		0.50				30,000	5,000	4,000		2,500		\$ 81,888	0.57	All streets are swept once a year; downtown streets are swept twice a year.		
	Proposed						0.02						0.05		0.50			30,000	5,000	4,000		2,500		\$ 81,888	0.57	Continue existing activities		
Fall Leaf-pickup	Existing																							\$ -	0.00	N/A - leaf pickup program not in place		
	Proposed (Year 5)						0.02						0.02	0.25	0.25	0.25		5,000	5,000	2,000		2,500		\$ 72,355	0.79	Leaf collection program for priority areas based on PCP recommendations; same in Year 10		
Maintenance/Repair/Installation of ESC practices	Existing						0.01							0.05	0.05						5,000	500		\$ 14,013	0.11	Repair of areas in spring damaged by snow plowing; repair of other eroded areas due to major rain events (road repairs - budgeted amount)		
	Proposed						0							0	0						5,000	500		\$ 14,013	0.11	Continue existing activities		
Stream Restoration/Stabilization	Existing																							\$ -	0.00	N/A		
	Proposed (Year 3)	\$5,000			0.01		0.02			0.02				0.05	0.05	0.05			2,500		10,000	500		\$ 34,065	0.20	Complete one stream restoration project every 3 years; 1 project in Year 10		
Ditch and Channel Maintenance	Existing																							\$ -	0.00	N/A		
	Proposed																							\$ -	0.00	N/A		
Waterfowl & Pet Waste Management Programs	Existing	\$6,000			0.01		0.01																	\$ 8,700	0.02	Goose egg adding & beaver control by contractor (average cost, DPW oversight & management)		
	Proposed (Year 1)	\$6,000			0.01		0.02																	\$ 9,825	0.03	Continue goose egg adding & beaver control by contractor, DPW oversight & management		
	Proposed (Year 2)	\$6,000			0.01		0.02							0.02		0.02					500			\$ 13,280	0.07	Continue goose egg adding & beaver control by contractor, DPW oversight & management; install waterfowl education signs at congregation areas		
	Proposed (Year 3)	\$6,000			0.01		0.02							0.02		0.02					1,500			\$ 14,280	0.07	Continue goose egg adding & beaver control by contractor, DPW oversight & management; install pet waste stations at key areas of concern		
	Proposed (Year 4)	\$8,000			0.01		0.02														2,500			\$ 14,325	0.03	Continue goose egg adding & beaver control by contractor, DPW oversight & management; maintain pet waste stations at key areas of concern; implement waterfowl deterrents		
	Proposed (Year 5)	\$8,000			0.01		0.02							0.02		0.02					3,000			\$ 17,780	0.07	Maintain and manage all programs		
Public Assistance Program	Existing							0.02						0.05	0.05	0.05			1,000	500	2,500	500		\$ 17,550	0.17	No program for the storm sewer system; Town requires inflows to the sanitary sewer system to be disconnected. Town caps improper connections in the street.		
	Proposed				0.01			0.02	0.02			0.02		0.05	0.05	0.05			1,000	500	2,500	500		\$ 22,095	0.22	Continue existing program for inputs to the sanitary sewer system. Create public awareness & incentive program to encourage disconnection of impervious areas to the storm sewer system.		
Toxic and Hazardous Materials Control Program	Existing				0.01				0.05		0.02	0.10												\$20,000	\$ 33,485	0.18	Annual household hazardous waste collection	
	Proposed				0.01				0.05		0.02	0.10												\$20,000	\$ 33,485	0.18	Continue existing program	
Emergency Drainage Repairs	Existing				0.01		0.05							0.10	0.10				2,000		10,000	1,000		\$ 34,975	0.26	Annual allowance for unexpected repair of failed drainage structures		
	Proposed				0.01		0.05							0.10	0.10				2,000		10,000	1,000		\$ 34,975	0.26	Continue existing practices; 50% increase in Year 10 due to aged structures, new/additional infrastructure overall		
Land, Easement, and Rights Acquisition	Existing																							\$ -	0.00	N/A		
	Proposed			0.05																				\$ 7,212	0.00	Future costs reflect estimated legal time associated with capital projects		
Total:	Existing	\$6,000	\$0	0.00	0.07	0.05	0.49	0.02	0.05	0.20	0.09	0.22	0.15	0.95	1.80	0.50	0.50	\$50,000	\$22,500	\$15,500	\$183,500	\$12,500	\$20,000	\$677,853	5.09			
	Proposed Year 1	\$6,000	\$0	0.05	0.10	0.07	0.67	0.04	0.07	0.25	0.11	0.28	0.20	1.18	2.30	0.66	0.50	\$63,400	\$29,825	\$19,430	\$226,670	\$15,675	\$20,000	\$862,693	6.42			
	Proposed Year 2	\$6,000	\$0	0.05	0.10	0.07	0.67	0.04	0.07	0.25	0.11	0.28	0.20	1.20	2.30	0.68	0.50	\$63,400	\$29,825	\$19,430	\$227,170	\$15,675	\$20,000	\$866,148	6.46			
	Proposed Year 3	\$11,000	\$0	0.05	0.11	0.07	0.69	0.04	0.07	0.27	0.11	0.28	0.20	1.25	2.35	0.73	0.50	\$63,400	\$32,325	\$19,430	\$238,170	\$16,175	\$20,000	\$901,213	6.66			
	Proposed Year 4	\$8,000	\$0	0.05	0.10	0.07	0.67	0.04	0.07	0.25	0.11	0.28	0.20	1.18	2.30	0.66	0.50	\$63,400	\$29,825	\$19,430	\$229,170	\$15,675	\$20,000	\$867,193	6.42			
	Proposed Year 5	\$8,000	\$0	0.05	0.10	0.07	0.69	0.04	0.07	0.25	0.11	0.28	0.22	1.45	2.56	0.93	0.53	\$68,400	\$34,925	\$21,530	\$229,920	\$18,250	\$20,000	\$945,086	7.29			

Sustainable Stormwater Funding in the Upper Charles
Town of Franklin, Stormwater Cost of Service
Monitoring: Existing & Future Cost Supporting Data

		Subcontractors (units = fee)		Fully Burdened Personnel (rate = salary + 50%, units = FTE)												Expenses			Total (\$) Total (FTE) Description		
	Source	Consulting Engineer	Legal Counsel	Town Administrator	DPW Director	Town Engineer	Highway Superintendent	Sewer Superintendent	Staff Engineer/ Inspector	GIS Technician	DPW Office Manager	Conservation Agent	DPW Clerk	Working Foreman	Highway Maintenance Craftsman	Mileage	Postage	Other			
	Rate	1	1	\$213,000	\$157,500	\$142,500	\$112,500	\$112,500	\$72,000	\$90,000	\$78,000	\$65,250	\$58,500	\$79,500	\$68,250	\$0.51	\$0.44	1			
Monitoring	# Units																				
Catchment Assessment & Outfall Monitoring (dry weather)	Existing																		\$ -	0.00	All outfalls inspected once during dry weather conditions during the 2003 permit term
	Proposed (Year 2)	\$49,830				0.01	0.02	0.05	0.02		0.05				0.05	0.10			\$ 75,180	0.30	Assess 25% of catchments (investigations) and monitor 25% of outfalls; sampling of 10% of outfalls; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes); report of results & next steps
	Proposed (Year 3)	\$49,830				0.01	0.02	0.05	0.02		0.05				0.05	0.10			\$ 75,180	0.30	Assess additional 25% of catchments (investigations) and monitor additional 25% of outfalls (50% total by end of Year 3); sampling of 10% of outfalls; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes); report of results & next steps
	Proposed (Year 4)	\$49,830				0.01	0.02	0.05	0.02		0.05				0.05	0.10			\$ 75,180	0.30	Assess additional 25% of catchments (investigations) and monitor additional 25% of outfalls; sampling of 10% of outfalls; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes); report of results & next steps
	Proposed (Year 5)	\$49,830				0.01	0.02	0.05	0.02		0.05				0.05	0.10			\$ 75,180	0.30	Assess remaining 25% of catchments (investigations) and monitor additional 25% of outfalls (100% total by end of Year 5); sampling of 10% of outfalls; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes); report of results & next steps
Stormwater Outfall Monitoring (wet weather)	Existing																		\$ -	0.00	N/A
	Proposed (Year 1)	\$17,060				0.01					0.05		0.05						\$ 26,398	0.11	Develop Permittee Specific Monitoring Plan (501 outfalls reduced to 400)
	Proposed (Years 2-5)	\$70,020				0.01		0.05			0.05								\$ 81,720	0.11	Sample 25% of outfalls each year beginning in Year 2
Surface Water Quality Monitoring	Existing																		\$ -	0.00	N/A
	Proposed (Years 3 & 4)	\$0																	\$ -	0.00	Monitoring to be completed as part of Stormwater Master Planning activities
Total:	Existing	\$0	\$0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	\$0	\$ -	0.00	
	Proposed Year 1	\$17,060	\$0	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0	0	\$0	\$ 26,398	0.11	
	Proposed Year 2	\$119,850	\$0	0.00	0.02	0.02	0.10	0.02	0.00	0.10	0.00	0.00	0.00	0.05	0.10	0	0	\$0	\$ 156,900	0.41	
	Proposed Year 3	\$119,850	\$0	0.00	0.02	0.02	0.10	0.02	0.00	0.10	0.00	0.00	0.00	0.05	0.10	0	0	\$0	\$ 156,900	0.41	
	Proposed Year 4	\$119,850	\$0	0.00	0.02	0.02	0.10	0.02	0.00	0.10	0.00	0.00	0.00	0.05	0.10	0	0	\$0	\$ 156,900	0.41	
	Proposed Year 5	\$119,850	\$0	0.00	0.02	0.02	0.10	0.02	0.00	0.10	0.00	0.00	0.00	0.05	0.10	0	0	\$0	\$ 156,900	0.41	