

Sustainable Stormwater Funding in the Upper Charles

Town of Bellingham, Stormwater Cost of Service

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

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	\$ 2,760	\$ 4,140	\$ 4,140	\$ 4,140	\$ 4,140	\$ 4,140	\$ 4,140	Periodic review and tracking of tasks & subcontractors	Periodic review and tracking of tasks & subcontractors (50% workload increase due to enhanced program)
Legal Support Services	N/A		\$ 5,000			\$ 5,000	\$ 5,000	N/A	Legal review of regulatory changes in Years 2, 5, & 10
Inter-Agency Coordination (MA hwy, CRWA, EPA)	\$ 1,275	\$ 1,913	\$ 1,913	\$ 1,913	\$ 1,913	\$ 1,913	\$ 1,913	Share information, attend workshops & seminars, utilize CRWA fact sheets for public education	50% increse to existing efforts
Inter-Municipal Coordination (adj. Towns)	N/A	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	N/A	Meet twice a year to review and coordinate programs
Emergency/Disaster Management Coordination	\$ -	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	N/A	Meet twice a year to review and coordinate programs
NPDES NOI and SWMP	N/A	\$ 36,040	\$ -	\$ -	\$ 16,275		\$ 36,040	N/A	Prepare NOI and SWMP in Year 1, assume prepared by consultant, Year 4 incorporate PCP plan into SWMP, prepare NOI and update SWMP in Year 10
NPDES Annual Reporting	\$ 3,660	\$ -	\$ 7,320	\$ 7,320	\$ 7,320	\$ 7,320	\$ 7,320	Completed by DPW Director, input & review by Town staff	100% increase from existing, completed by program director and reviewed by town staff,
NPDES MS4 Public Education Programs	\$ 3,000	\$ 10,170	\$ 10,842	\$ 4,860	\$ 8,940	\$ 10,307	\$ 9,024	Distribution of fact sheets for stormwater & water resource and Illicit Discharge, CBTV Posting on Runoff/Re-use/recharge and photos of Illicit Discharge.	Workload increase from existing; distribute at least 2 messages to each of 4 audiences (residents, commercial, industrial, construction), measure & report message effectiveness
NPDES MS4 Public Involvement Programs	\$ 4,275	\$ 9,600	\$ 9,600	\$ 8,600	\$ 8,600	\$ 8,600	\$ 9,000	Water Resource Comm. (WRC) 2 televised public meetings per yr. & Youth summer water awareness program	2x WRC Public meetings, update website w/ annual report&events,river clean-up day, storm drain stencil, rain barrel workshop or similar presentation
NPDES MS4 & SPCC Training	\$ 1,591	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	SPCC & pollution prevention/good housekeeping for DPW, DPW staff training on IDDE with written memo and photos	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
RDA Compliance	N/A	\$ -	\$ -	\$ -	\$ -	\$ 4,000	\$ 800	N/A	Tracking of regulated entities under the RDA that discharge to the MS4
Certified Municipal Phosphorous Program (CMPP)	N/A	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ 1,000	N/A	Recordkeeping, data tracking and correspondence with regulated entities for updating program progress under "Water Quality"
Grants Program (s319, 604b, CZM)	\$ 1,860	\$ -	\$ 1,860		\$ 1,860		\$ 1,860	604b pilot study grant, chapter 90 grant (for exist. Transp. Infrastructure improvements)	Staff efforts to apply for and administer grants received for stormwater programs; assumes one permit every two years
Subtotal:	\$ 18,421	\$ 69,413	\$ 48,225	\$ 34,383	\$ 56,598	\$ 53,830	\$ 83,646		
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	\$ -	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	1 new permit for construction site 1+ Acre (review by consultant paid for by developer)	Anticipated administration of 3 permits annually- review by consultant paid for by developer, cost of program coordination
RDA/CMPP Compliance	N/A	\$ -	\$ -	\$ -	\$ -	\$ 10,875	\$ 2,175	N/A	Inspection of facilities to verify accuracy of information submitted under the CMPP
Stormwater/Drainage System Inspections	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	DPW inspects Town projects; private projects are inspected at the cost to the developer or permittee, town inspector inspects some	25% increase in workload due to various programs
Illicit Discharge and Dumping Program	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750	Issues are reported through hotline or BOH, very few (1 pursued in 8yrs)	Includes identification of IDDE sources- assume 50% of dry-weather sampled outfalls have illicit discharge (24 hits over permit cycle-start YR2), estimate cost to identify source \$1200 per hit. Removal costs are borne by owner of source/discharge, staff time for coordination and enforcement
Erosion/sediment Control Inspections	\$ 900	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	DPW inspects Town projects; private projects are inspected at the cost to the developer or permittee, town inspector inspects some	50% increase in workload due to additional maintenance and construction work
Subtotal:	\$ 1,800	\$ 3,975	\$ 13,725	\$ 13,725	\$ 13,725	\$ 24,600	\$ 15,900		

Engineering and Master Planning									
Stormwater Master Planning	N/A	\$ 92,600	\$ 88,100	\$ 75,100	\$ 75,100	\$ 19,980	\$ 19,980	Master Plan on Hold, CIP on Hold , planning for infrastructure -currently no money	Develop a CIP based on the Phosphorous Control Plan and infrastructure needs, develop PCP by year 4, yr-5 GIS update of new BMPs , resulting TP reductions, YR 5 CIP development by consultant
Illicit Discharge Detection and Elimination plan	N/A	\$ 16,275	\$ 5,000	\$ -	\$ -	\$ 6,275	\$ 5,510	N/A	Update IDDE Plan in Year 1 to meet new permit requirements (assume \$10000), Year 1 -Director time for coordination SSO, including delineation of and prioritization of catchments (\$5000) YR1, and coordination with Sewer/Health Dept for mapping requirements, YR 2 update mapping, performed under data collection and mapping task. yr5 detailed report of removals
Catchbasin Inventory Plan (CBIP) Plan and Street sweeping optimization	N/A	\$ 6,170	\$ 3,670	\$ 3,670	\$ 3,670	\$ 3,670	\$ 3,670	GIS map complete of known infrastructure, pipes&outfalls, cont. updates , currently sweep some streets and catch basins are cleaned infrequently as needed	Year 1 upfront cost of tracking and recordkeeping system, implement CBIP record keeping of CB cleaning and status of CB, investigate CB w/ >50% full sump at 2 consecutive cleanings, SOP year 1 to sweep areas DCIA 2x-record miles, YR 10 continue program
Waterfowl & Pet Waste Management Programs	N/A	\$ 10,000	\$ 2,175	\$ 2,175	\$ 2,175	\$ 2,175	\$ 3,740	N/A	Develop programs by end of Year 1, assume cost management plan, annual coordination and reporting
Septic, Inflow, and Infiltration Program	N/A	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	Sanitary sewer (I/I) investigations and improvements tracked to document condition and status of system,	Continue existing program; evaluate potential impacts from septic systems (assume this is done in IDDE prioritization mapping), this includes cost of coordination with Health and Sewer Departments
Pesticide, Herbicide, and Fertilizer Program	N/A	\$ 2,550	\$ 2,550	\$ 2,550	\$ 2,550	\$ 2,550	\$ 2,550	Applications follow the principles of an Integrated Pest Management (IPM) Program to reduce chemical applications for pest and turf management,	Continue IPM & Implement fertilizer optimization program Year 1, assume requires coordination with multiple depts.
Spill Response and Cleanup Program	N/A		\$ 5,775	\$ 2,550	\$ 2,550	\$ 7,050	\$ 4,481	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
Groundwater and Drinking Water Program	N/A	\$ 7,250	\$ 2,550	\$ 2,550	\$ 2,550	\$ 2,550	\$ 3,490	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
DPW Project Design Engineering and permitting assistance	N/A	\$ 6,275	\$ 6,275	\$ 6,275	\$ 6,275	\$ 16,375	\$ 16,375	Design of roadway projects that incorporate stormwater improvements; retrofits designs for existing drainage systems (problem areas)	Increase in workload from existing, 2 projects per year, additional increase in projects for year 5 implementation of PCP
SWPPPs for Transfer Station & DPW Facility	\$ -	\$ 17,500	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	\$ 1,275	Municipal facility inventory completed (previous to 2010) to evaluate pollution prevention and good housekeeping at municipal facilities	Develop SWPPPs by end of Year 1; implement recommendations by end of Year 2; update every 5 years
Maintenance and Field Engineering Support	\$ 10,000	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 15,000	\$ 15,000	Engineers assist DPW on an on-call basis	25% increase in workload from existing, 100% increase in YR5+
<u>Drainage</u> -Data Collection,Database Management, Mapping	\$ 7,000	\$ 127,550	\$ 128,750	\$ 33,050	\$ 33,050	\$ 33,050	\$ 71,090	Field Data collected for existing infrastructure and new projects (GIS update) - consultant	complete system mapping Year 2 cost includes mapping of entire drainage network (schematic only); continue data collection, field verification and update mapping annually, YR5 tracking and update mapping for IC reduction (PCP implementation)
<u>Sewer</u> -Data Collection,Database Management, Mapping		\$ -	\$ 29,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 8,800	Field Data collected for existing infrastructure and new projects (GIS update) - consultant	sewer infrastructure mapping, (assume that this update includes time to collect plans, schematics, and info from Sewer/Health Dept. ,incorporate existing attribute data into GIS), continue field verification and update mapping annually, YR 10 continue map updates
Technical Services/Public Assistance (hotlines)	\$ -	\$ 1,860	\$ 1,860	\$ 1,860	\$ 1,860	\$ 1,860	\$ 1,860	Handle calls for Illicit Discharge	increase in workload, handle calls related to illicit discharge and flooding
Code Development and Zoning Support Services	N/A	\$ 7,500	\$ 17,500	\$ 12,500	\$ 6,275	\$ 6,275	\$ 10,010	N/A-bylaws for illicit discharge , stormwater mgmt and ESC are in place (2007)	Review and update ESC, SW, IDDE as needed by YR2, Report on local regulations affecting impervious areas in Year 2, report on feasibility of green practices and other green techniques in Year 3, Year 4 & 5 ongoing compliance support
Hazard Mitigation Planning and Flood Insurance Updates	N/A	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 5,000	N/A	Allowance for H&H analysis (consultant) in Year 5 for specific areas of concern identified during the permit term
Subtotal:	\$ 17,000	\$ 309,050	\$ 308,000	\$ 162,075	\$ 155,850	\$ 149,105	\$ 173,851		

Operations and Implementation									
Operations and Maintenance Management	\$ 14,250	\$ 19,250	\$ 14,250	\$ 14,250	\$ 14,250	\$ 21,375	\$ 21,375	DPW coordinates work schedules, equipment and product needs, oversees progress and completion of work (2% DPW Director time + Asst DPW + Foreman)-Labor is fully burdened	50% increase in effort from existing due to new projects and tracking of results and measurable goals for each activity, YR5/YR10 increse in maint. oversight due to PCP implementation
CIP/Infrastructure Implementation	N/A							No formal program; infrastructure needs incorporated into Highway Budget for operations, CIP funded through grants or CHP 90 or 319	Annual needs evaluation, incorporate capital projects, evaluate stormwater improvement opportunities (25% increase overall)
PCP implementation	N/A								Year 5 - implementation & construcion of BMP's
voluntaryCMPP/RDA implementation	N/A								Year 5- implementation of CMPP or construction of BMP
IDDE	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	IDDE's not detected, cost of private IDDE source elimination to be re-imbursed to town, if applicable per bylaw	Assume cost of removal is borne by owner or sewer dept., cost to identify is included in enforcement category
Storm Sewer and Culvert Maintenance/Repair	\$ 1,000	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	500 LF of storm drain cleaned	increase due to degraded infrastructure, address and maintain infrastructure
Inlet, Catch Basin, and Manhole Cleaning	\$ 25,070	\$ 92,250	\$ 92,250	\$ 92,250	\$ 92,250	\$ 92,250	\$ 92,250	Clean some of the 158 catch basins and manholes, disposed of 183 tons material- hgwy budget	Clean/ inspect all catch basins (approx. 2025) and manholes each year
Stormwater BMP Facility Maintenance	\$ 13,838	\$ 13,583	\$ 13,583	\$ 13,583	\$ 13,583	\$ 14,566	\$ 17,148	BMPs - 24 cleaned regularly, others as issues arise. Seven in-line bmp strctures inspected quarterly and cleaned as needed	Continue cleaning and maintenance of all BMP locations in first 4 years;5% increase year 5 maintenance increase due to PCP plan implementation , 25% increase year 10
Street Sweeping	\$ 109,200	\$ 226,400	\$ 226,400	\$ 226,400	\$ 226,400	\$ 226,400	\$ 226,400	continuous sweeping as weather permits ~8mos/yr average once/yr	Sweep streets 2x and directly connected municipal parking areas 2x per year
Fall Leaf-pickup	N/A	\$0	\$0	\$0	\$ -	\$ 117,480	\$ 117,480	N/A - leaf pickup program not in place	Begin leaf collection in Year 5
Maintenance/Repair/Installation of ESC practices	\$ -	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	\$ 7,850	Repair of areas in spring damaged by snow plowing; repair of other eroded areas due to major rain events, (road repairs - budgeted amount)	Allowance for repair activities
Stream Restoration/Stabilization	N/A			\$ 19,785			\$ 19,785	N/A	Complete one stream restoration project every 3 years; 1 project in Year 10
Ditch and Channel Maintenance	N/A							N/A	N/A
Waterfowl & Pet Waste Management Programs	N/A	\$ -	\$4,000	\$8,500	\$6,500	\$6,500	\$6,500	N/A	Install waterfowl education signs at congregation areas by Year 2; install pet waste stations at key areas of concern by Year 2; implement waterfowl deterrents by Year 3; maintain programs annually
Public Assistance Program	N/A	\$ 3,720	\$ 3,720	\$ 3,720	\$ 3,720	\$ 3,720	\$ 3,720	public awareness but No incentive program in place to encourage Relocation of roof leaders into catch basins; disconnection of identified illicit discharges	continue creating public awareness & encourage disconnection of impervious areas
Hazardous / Toxic Materials Collection Program	\$ 11,860	\$ 11,860	\$ 11,860	\$ 11,860	\$ 11,860	\$ 11,860	\$ 11,860	Annual household hazardous waste collection, 25% participation, includes cost of staff coordination for program.	Continue existing practices
Emergency Drainage Repairs	\$ -	\$ 11,620	\$ 11,620	\$ 11,620	\$ 11,620	\$ 11,620	\$ 17,430	Annual allowance for unexpected repair of failed drainage structures	Allowance for repairs; 50% increase in Year 10 due to aged structures, new/additional infrastructure overall
Land, Easement, and Rights Acquisition	N/A				\$ 5,000	\$ 5,000	\$ 5,000	N/A	estimated legal time asociated with capital projects
Subtotal:	\$ 175,218	\$ 394,383	\$ 393,383	\$ 417,668	\$ 400,883	\$ 526,471	\$ 554,648		
Monitoring									
Catchment Assessment & Inventory /Outfall Monitoring (dry weather)	\$ -	\$ 1,275	\$ 54,930	\$ 54,930	\$ 54,930	\$ 54,930	\$ 44,199	Inventory completed 2003-permit, 240 outfalls	Assess 50% of catchments by Year 3, monitor 50% of outfalls by Year 4 and 100% of catchments and outfalls by Year 5; 240 outfalls and sampling of 20%; catchment assessments include key junction manhole inspections (i.e., damming of inlet pipes), no additional cost in Year 10
Stormwater Outfall Monitoring (wet weather)	N/A	\$ 16,375	\$ 47,300	\$ 47,300	\$ 47,300	\$ 47,300	\$ 41,115	N/A	Develop Permittee Specific Monitoring Plan in Year 1; sample 25% of outfalls each year beginning in Year 2
Subtotal:	\$ -	\$ 17,650	\$ 102,230	\$ 102,230	\$ 102,230	\$ 102,230	\$ 85,314		
TOTAL:	\$ 212,439	\$ 794,471	\$ 865,563	\$ 730,081	\$ 729,286	\$ 856,235	\$ 913,359		Cost in 2011 Dollars
Future Total Including 2.5% Annual Inflation:	\$ 212,439	\$ 814,332	\$ 908,841	\$ 784,837	\$ 802,214	\$ 963,265	\$ 1,170,429		Annual inflation of 2.5% is an average of historic inflation values reported for the last 10 years based on Consumer Price Index

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

Sustainable Stormwater Funding in the Upper Charles
Town of Bellingham, Stormwater Cost of Service
Program Administration: Existing & Future Cost Supporting Data

		Subcontractors (units = fee)			Fully Burdened Personnel (rate = salary + 50%, units = FTE)					Expenses						Description
	Source	Consulting Engineer	GIS Technician-Consultant	Legal Counsel	Town Administrator	DPW Director	IT Tech. or Consultant	DPW Office Manager	Assistant Director DPW	Mileage	Postage	Disposal	Other	Total Cost	Total FTE	
	Rate	1	1	1	\$187,500	\$127,500	\$84,000	\$58,500	\$90,000	\$0.51	\$0.44	1	1			
Administration	# Units															
General Stormwater Program Administration	Existing					0.010			0.010					\$ 2,175	0.02	Periodic review and tracking of tasks & subcontractors
	Proposed					0.015			0.015					\$ 3,263	0.03	Periodic review and tracking of tasks & subcontractors (50% workload increase due to enhanced program)
Legal Support Services	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed			\$5,000										\$ 5,000	0.00	Legal review of regulatory changes in Years 2.5 & 10
Administrative Support Services	Existing							0.010						\$ 585	0.01	Assist in mailings, preparation of budgets, etc.
	Proposed							0.015						\$ 878	0.02	50% workload increase from existing
Inter-Agency Coordination (CRWA, MA-HWY, EPA)	Existing					0.010								\$ 1,275	0.01	Share information, attend workshops & seminars, utilize CRWA fact sheets for public education
	Proposed					0.015								\$ 1,913	0.02	Continue existing efforts
Inter-Municipal Coordination (adj. Towns)	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed					0.010								\$ 1,275	0.01	Meet twice a year to review and coordinate programs
Emergency/Disaster Management Coordination	Existing														0.00	N/A
	Proposed					0.010								\$ 1,275	0.01	Meet twice a year to review and coordinate programs
NPDES NOI and SWMP	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed-YR1, 10	\$36,040												\$ 36,040	0.00	Prepare NOI and SWMP in Year 1, prepare NOI and update SWMP in Year 10, assume prepared by consultant
	Proposed- YR 4	\$15,000				0.01								\$ 16,275	0.01	Year 4 incorporate PCP into SWMP
NPDES Annual Reporting	Existing					0.01		0.01	0.02					\$ 3,660	0.04	Completed byDPW director, input & review by Town staff
	Proposed-YR 1-5					0.02		0.02	0.04					\$ 7,320	0.08	100% increase from existing, completed by consultant, input & review by Town staff
	Proposed-Average/Year													\$ 7,320	0.00	100% increase from existing, completed by consultant, input & review by Town staff
NPDES MS4 Public Education Programs	Existing												3,000.00	\$ 3,000	0.00	Distribution of fact sheets for stormwater & water resource and Illicit Discharge, CBTV Posting on Runoff/Re-use/recharge and photos of Illicit Discharge.
	Proposed-YR 1	\$4,200				0.03		0.03					1,320.00	\$ 10,170	0.05	2 educational messages one to target residents (radio ad) and one to developers audience (brochures w/ permit application), program measure of effectiveness to meet program goals
	Proposed-YR 2	\$4,200				0.03		0.03			925		1,585.00	\$ 10,842	0.05	2 educational messages one to target commercial (mailed brochure) and one to industrial audience (mailed brochures)
	Proposed-YR 3	\$3,000				0.01		0.01						\$ 4,860	0.02	Consultant-Survey of educational program effectiveness (1000 telephone surveys)
	Proposed-YR 4	\$3,600				0.03		0.03					690.00	\$ 8,940	0.05	2 educational messages to target residents (newspaper ad) and developer audience (brochures w/ permit application)
	Proposed-YR 5	\$3,600				0.03		0.03			925		1,650.00	\$ 10,307	0.05	2 educational messages one to target commercial (mailing &presentation at local business assoc. meeting) and one to industrial audience (mailed brochures)
	Proposed-Average/Year													\$ 9,024	0.00	Workload increase from existing; distribute at least 2 messages to each of 4 audiences (residents, commercial, industrial, construction), measure & report message effectiveness
NPDES MS4 Public Involvement Programs	Existing					0.010							3,000.00	\$ 4,275	0.01	Water Resource Comm. (WRC) 2 televised public meetings per yr. & Youth summer water awareness program
	Proposed-YR 1					0.010	0.010	0.010	0.010			1,000.00	5,000.00	\$ 9,600	0.04	2x water resource comm. Public meetings, update website w/ annual report and events,river clean-up day, and storm drain stencil &supplies
	Proposed-YR 2					0.010	0.010	0.010	0.010			1,000.00	5,000.00	\$ 9,600	0.04	2x WRC Public meetings, update website w/ annual report&events,river clean-up day, storm drain stencil, rain barrel workshop or similar presentation
	Proposed-YR 3-5					0.010	0.010	0.010	0.010			1,000.00	4,000.00	\$ 8,600	0.04	2x WRC Public meetings, update website w/ annual report&events,river clean-up day, storm drain stencil, rain barrel workshop or similar presentation
	Proposed-Averaged/Year													\$ 9,000	0.00	2x WRC Public meetings, update website w/ annual report&events,river clean-up day, storm drain stencil, rain barrel workshop or similar presentation
NPDES MS4 & SPCC Training	Existing							0.010	0.010				106.00	\$ 1,591	0.02	SPCC & pollution prevention/good housekeeping for DPW, DPW staff training on IDDE with written memo and photos
	Proposed	\$5,000												\$ 5,000	0.00	Annual 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	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed	\$4,000												\$ 4,000	0.00	Tracking of regulated entities under the RDA that discharge to the MS4
Certified Municipal Phosphorous Program (CMPP)	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed	\$5,000												\$ 5,000	0.00	Recordkeeping, data tracking and correspondence with regulated entities for updating program progress under "Water Quality"
Grants Program (s319, 604b, CZM)	Existing					0.010		0.010						\$ 1,860	0.02	604b pilot study grant, chapter 90 grant (for exist. Transp. Infrastructure improvements)
	Proposed					0.010		0.010						\$ 1,860	0.02	Staff efforts to apply for and administer grants received for stormwater programs; assumes one permit every two years-same level of effort
Stormwater Advisory Committee Support	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed													\$ -	0.00	Incorporated into general stormwater program administration
Unspecified Overhead	Existing													\$ -	0.00	Copies, postage, consumables
	Proposed													\$ -	0.00	50% increase from existing
Emergency/Disaster Management	Existing	-		-	-	-		-	-	-	-		-	\$ -	0.00	N/A
	Proposed													\$ -	0.00	Coordinate stormwater program with LEPC, meet twice a year
Total:	Existing	\$0		0	0.000	0.050	0.000	0.040	0.040	0.000	0.000	0.000	6.106	\$18,421	0.13	
	Proposed-YR 1	\$54,240	\$0	\$5,000	0.00	0.09	0.01	0.05	0.03	0.00	\$0	\$1,000	\$6,320	\$69,413	0.17	
	Proposed-YR 2	\$18,200	\$0	\$5,000	0.00	0.12	0.01	0.08	0.07	0.00	\$925	\$1,000	\$6,585	\$48,225	0.27	
	Proposed-YR 3	\$17,000	\$0	\$5,000	0.00	0.09	0.01	0.06	0.07	0.00	\$0	\$1,000	\$4,000	\$43,383	0.22	
	Proposed-YR 4	\$32,600	\$0	\$5,000	0.00	0.13	0.01	0.08	0.07	0.00	\$0	\$1,000	\$4,690	\$56,598	0.28	
	Proposed-YR 5	\$17,600	\$0	\$5,000	0.00	0.11	0.01	0.07	0.07	0.00	\$925	\$1,000	\$5,650	\$53,830	0.25	

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Town of Bellingham, Stormwater Cost of Service
Regulation/Enforcement: Existing & Future Cost Supporting Data

		Subcontractors (units = fee)			Fully Burdened Personnel (rate = salary +50%, units = FTE)				Expenses					Description
	Source	Consulting Engineer	GIS Technician-Consultant	Legal Counsel	Town Administrator	DPW Director	Asst. DPW Director	DPW Office Manager	Mileage	Postage	Other	Total Cost	Total FTE	
	Rate	1	1	1	\$187,500	\$127,500	\$90,000	\$58,500	\$0.51	\$0.44	1			
Regulation/Enforcement	# Units													
MS4 Stormwater Permit Administration	Existing											\$ -	0.00	No new permits
	Proposed					0.01	0.01					\$ 1,275	0.02	Anticipated administration of 3 permits annually, cost borne by developer
RDA/CMPP Compliance	Existing											\$ -	0.00	N/A
	Proposed		\$5,000			0.05	0.05					\$ 10,875	0.10	Inspection of facilities to verify accuracy of information submitted under the CMPP
Stormwater/Drainage System Inspections	Existing						0.010					\$ 900	0.01	Currently conducted by Engineering Department to review compliance of post-construction BMPs or connections with the MS4, \$500 estimate provided by DPW
	Proposed						0.010					\$ 900	0.01	25% increase (round to 1%) in workload due to various programs
Illicit Discharge and Dumping Program	Existing											\$ -	0.00	Issues are reported through the stormwater hotline or the Board of Health, mostly related to dumping, very few each year
	Proposed					0.02					\$7,200	\$ 9,750	0.02	Includes identification of IDDE sources- assume 50% of dry-weather sampled outfalls have illicit discharge (24 hits over permit cycle), estimate cost to identify source \$1200 per hit. assume removal costs are borne by property owner or sewer authority - annual cost begin YR2, \$2500 (or 2% director effort)per year for oversight/coordination of enforcement, Source-IDDE Manual-cost per hit
Erosion/sediment Control Inspections	Existing						0.010					\$ 900	0.01	Engineering inspects Town projects; private projects are inspected at the cost of the developer or permittee
	Proposed						0.020					\$ 1,800	0.02	50% increase (round to 1%) in workload due to additional maintenance and construction work
Total:	Existing	\$0	\$0	\$0	0.00	0.00	0.02	0.00	\$0	\$0	\$0	\$1,800	0.02	
	Proposed-YR1	\$0	\$0	\$0	0.00	0.01	0.04	0.00	\$0	\$0	\$0	\$3,975	0.05	
	Proposed-YR2	\$0	\$0	\$0	0.00	0.03	0.04	0.00	\$0	\$0	\$7,200	\$13,725	0.07	
	Proposed-YR3	\$0	\$0	\$0	0.00	0.03	0.04	0.00	\$0	\$0	\$7,200	\$13,725	0.07	
	Proposed-YR4	\$0	\$0	\$0	0.00	0.03	0.04	0.00	\$0	\$0	\$7,200	\$13,725	0.07	
	Proposed-YR5	\$0	\$5,000	\$0	0.00	0.08	0.11	0.00	\$0	\$0	\$7,200	\$26,400	0.19	

Sustainable Stormwater Funding in the Upper Charles														
Town of Bellingham, 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 Rate	Consulting Engineer	GIS Technician-Consultant	Legal Counsel	Town Administrator	DPW Director	Asst. DPW Director	DPW Office Manager	Mileage	Postage	Other	Total Cost	Total FTE	Description
Engineering & Master Planning	# Units	1	1	1	\$187,500	\$127,500	\$90,000	\$58,500	\$0.51	\$0.44	1			
Stormwater Master Planning, includes PCP/CIP planning, link with comp plan; planning for infrastructure needs, includes facility inventory for SW retrofit	Existing											\$ -	0.00	
	Proposed-YR 1	\$82,500	\$5,000			0.04						\$ 92,600	0.04	PCP Development and Adjust IC loads and % removal from 2000-2009, facility retrofit inventory (1/2 yr 1)
	Proposed-YR 2	\$58,000	\$25,000			0.04						\$ 88,100	0.04	PCP development and YR 2 Progress Report, facility retrofit inventory (1/2 yr2)
	Proposed-YR 3	\$70,000				0.04						\$ 75,100	0.04	PCP development
	Proposed-YR 4	\$60,000		10,000		0.04						\$ 75,100	0.04	PCP development
	Proposed-YR 5	\$15,000	\$1,500		0.01	0.01		0.01				\$ 19,980	0.03	Annual tracking and update GIS with BMPs installed &TP reductions, annual reporting of new BMPs and resulting TP reduction, CIP plan by consultant review by staff
Illicit Discharge Detection and Elimination Plan	Existing											\$ -	0.00	IDDE Plan developed during 2003 permit
	Proposed-YR 1	\$10,000	\$5,000			0.010						\$ 16,275	0.01	Update IDDE Plan in Year 1 to meet new permit requirements, Delineation of and prioritization of catchments ,
	Proposed-YR 2		\$5,000									\$ 5,000	0.00	Update catchment delineation based on mapping changes/updates
	Proposed-YR 5	\$5,000				0.010						\$ 6,275	0.01	detailed report of illicit connection/discharge removals, YR5
Catch Basin Inventory Plan (CBIP) Plan and Street Sweeping Optimization	Existing											\$ -	0.00	N/A
	Proposed-YR 1		\$5,000					0.02				\$ 6,170	0.02	Upfront cost to set up tracking system and route planning, YR1
	Proposed-Annual		\$2,500					0.02				\$ 3,670	0.02	Update & Review previous year CBIP recordkeeping of CB cleaning and status of CB, investigate CB w/ >50% full sump at 2 consecutive cleanings. SOP year 1 to sweep areas DCIA 2x-record miles, optimize programs
Waterfowl & Pet Waste Management Programs	Existing											\$ -	0.00	N/A
	Proposed Annual					0.01	0.01					\$ 2,175	0.02	Annual coordination
	Proposed YR-1	\$10,000										\$ 10,000	0.00	assume pet & waterfowl locations identified in retrofit inventory, Cost of consultant producing written managemnet plan
Septic, Inflow, and Infiltration Program	Existing											\$ -	0.00	Sanitary sewer (I/I) investigations and improvements tracked to document condition and status of system,
	Proposed					0.01						\$ 1,020	0.01	Continue existing program; evaluate potential impacts from septic systems; 60% of Town has sewer service
Pesticide, Herbicide, and Fertilizer Program	Existing											\$ -	0.00	Applications follow the principles of an Integrated Pest Management (IPM) Program to reduce chemical applications for pest and turf management
	Proposed					0.02						\$ 2,550	0.02	Continue IPM & Implement fertilizer optimization program Year 1, assume requires coordination with multiple depts.
Toxic and Hazardous Materials Control Program	Existing											\$ -	0.00	Annual household hazardous waste collection-accounted for in operations and implementation
	Proposed											\$ -	0.00	Continue existing program
Spill Response and Cleanup Program	Existing											\$ -	0.00	No formal program related to stormwater
	Proposed YR2	\$4,500				0.01						\$ 5,775	0.01	Develop a priority response program based on high accident areas, significant pollutant potential and proximity to receiving waters
	Proposed YR 3-4					0.02						\$ 2,550	0.02	Track program results and coordinate with Town departments
	Proposed YR 5	\$4,500				0.02						\$ 7,050	0.02	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- YR1	\$4,700				0.02						\$ 7,250	0.02	Technical review memo of drinking water quantity and quality priority areas , includes consultant GIS map exercise
	Proposed YR- 2-5					0.02						\$ 2,550	0.02	Incorporate program results into planning activities for BMPs to address water quality; review status annually
DPW Project Design Engineering and Permitting Assistance	Existing											\$ -	0.00	design of town roadway projects that incorporate stormwater improvements
	Proposed YR- 1-3	\$5,000				0.01						\$ 6,275	0.01	Increase in workload from existing to 2 projects,
	Proposed YR 5+	\$10,000				0.05						\$ 16,375	0.05	double effort -additional increase in projects for year 4 implementation of PCP
SWPPPs for Transfer Station & DPW Facility	Existing											\$ -	0.00	Municipal facility inventory completed to evaluate pollution prevention and good housekeeping at municipal facilities
	Proposed -YR1	\$17,500										\$ 17,500	0.00	Assume cost \$2500 per site for swppp and 1/4 of town owned bldgs (7) need swppp
	Proposed-YR2-5					0.01						\$ 1,275	0.01	Develop SWPPPPs by end of Year 1; implement recommendations by end of Year 2; update every 5 years- includes annual site inspection by facility managers & reporting by SWMP director
Maintenance and Field Engineering Support	Existing	\$10,000										\$ 10,000	0.00	Engineers assist DPW on an on-call basis
	Proposed	\$12,500										\$ 12,500	0.00	25% increase in workload from existing,
	Proposed YR5+	\$15,000										\$ 15,000	0.00	50% increase year 5, 100% increase year 10 due to increase in BMPs
Data Collection, Database Management, Mapping	Existing	\$7,000										\$ 7,000	0.00	Field data collected for existing infrastructure and new projects (GIS update)
	Proposed-YR 1		\$125,000			0.02						\$ 127,550	0.02	1/2 of stormwater infrastructure system mapping
	Proposed-YR 2- Drainage		\$126,200			0.02						\$ 128,750	0.02	complete system mapping Year 2 cost includes mapping of entire drainage network (schematic only); and
	Proposed-YR 2- Sewer		\$29,000									\$ 29,000	0.00	add sewer infrastructure, (assume that this update includes time to collect plans, schematics, and info from Sewer/Health Dept. incorporate existing attribute data into GIS)
	Proposed-YR 3-5 Sewer		\$5,000									\$ 5,000	0.00	Years 3-5 update septic/ sewer attributes
	Proposed-YR 3		\$30,500			0.02						\$ 33,050	0.02	Years 3 include field mapping and verification of drainage attributes
	Proposed-YR 4		\$30,500			0.02						\$ 33,050	0.02	Years 4 include field mapping and verification of drainage attributes, update with new BMPs and retrofits, IC reduction tracking (\$5500) update gis with layers from developer.
Technical Services/Public Assistance (hotlines)	Existing											\$ -	0.00	Handle calls related to flooding and illicit discharges
	Proposed					0.01		0.01				\$ 1,860	0.02	increase in workload from existing
Code Development and Zoning Support Services	Existing											\$ -	0.00	Updates completed to comply with 2003 NPDES MS4 Permit
	Proposed-YR 1	\$7,500										\$ 7,500	0.00	Consultant Review ESC, SW, and IDDE codes, develop or update written procedures for plan review, inspection, and ESC enforcement
	Proposed-YR 2	\$17,500										\$ 17,500	0.00	Consultant complete Review of ESC, SW, and IDDE codes, review Impervious Cover requirements in codes
	Proposed-YR 3	\$12,500										\$ 12,500	0.00	Report on feasibility of green practices and other green techniques in Year 3
	Proposed-YR4 &5	\$5,000				0.01						\$ 6,275	0.01	Year 4 & 5 code compliance support
Hazard Mitigation Planning and Flood Insurance Updates	Existing											\$ -	0.00	N/A
	Proposed YR5	\$25,000										\$ 25,000	0.00	Allowance for H&H analysis (consultant) in Year 5 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	\$17,000	\$0	0.00	0.00	0.00	0.00	0.00	\$0	\$0	\$0	\$ 17,000	0.00	
	Proposed-YR 1	\$149,700	\$140,000	\$0	0.00	0.14	0.00	0.03	\$0	\$0	\$0	\$309,050	0.17	
	Proposed-YR 2	\$97,500	\$187,700	\$0	0.00	0.16	0.01	0.03	\$0	\$0	\$0	\$308,000	0.20	
	Proposed-YR 3	\$100,000	\$38,000	\$0	0.00	0.16	0.01	0.02	\$0	\$0	\$0	\$162,075	0.19	
	Proposed-YR 4	\$70,000	\$38,000	\$10,000	0.00	0.18	0.01	0.03	\$0	\$0	\$0	\$155,850	0.22	
	Proposed-YR 5	\$79,500	\$39,500	\$0	0.01	0.20	0.01	0.04	\$0	\$0	\$0	\$149,105	0.26	

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

		Subcontractors (units = fee)			Fully Burdened Personnel (rate = salary+50%, units = FTE)						Expenses								Description
	Source	Consulting Engineer/ Subcontractor	GIS Technician- Consultant	Legal Counsel	Town Administrator	DPW Director	Asst. DPW Director	DPW Office Manager	Working Foreman	Seasonal Labor	Equipment Budget	Disposal	Vehicle Parts	Materials & Supplies	Fuel	Other	Total Cost	Total FTE	
	Rate	1	1	1	\$187,500	\$127,500	\$90,000	\$58,500	\$67,500	\$18,000	1	1	1	1	1	1			
Operations & Maintenance	# Units																		
Operations and Maintenance Management	Existing					0.05	0.05		0.05								\$ 14,250	0.15	Highway Foreman coordinates work schedules, equipment and product needs, oversees progress and completion of work
	Proposed YR1	\$5,000				0.05	0.05		0.05								\$ 19,250	0.15	Develop detailed O&M program for municipal facilities, parks, buildings, streets, vehicle storage, infrastructure, and SWPPP
	Proposed YR2-4					0.05	0.05		0.05								\$ 14,250	0.15	Highway Foreman coordinates work schedules, equipment and product needs, oversees progress and completion of work
	Proposed YR5+					0.08	0.08		0.08								\$ 21,375	0.23	50% increase in effort from existing due to new projects and tracking of results (measurable goals) for each activity, Year 5 increase due to pcpi implementation & const. of BMP's maintenance oversight
CIP/Infrastructure Implementation	Existing																	0.00	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																	0.00	Annual needs evaluation, incorporate capital projects, evaluate stormwater improvement opportunities
PCP Implementation	Existing	\$0																0.00	N/A
Voluntary CMPP/RDA Implementation	Proposed YR-4+																	0.00	Year 4 - implementation & construction of BMPs
	Existing	\$0																0.00	N/A
	Proposed																	0.00	Year 5 - implementation of CMPP or construction of BMP
Illicit Discharge Removal	Existing	\$0																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																	0.00	Year 1 - address illicit discharge & Year 5 report on removals, RDA - within 60 days of occurrence.
Storm Sewer and Culvert Maintenance/Repair	Existing	\$1,000															\$ 1,000	0.00	500 LF of storm drain cleaned
	Proposed	\$2,000				0.01	0.01		0.01		3,000						\$ 7,850	0.03	increase due to degraded infrastructure, address and maintain infrastructure
Inlet, Catch Basin, and Manhole Cleaning	Existing								0.23		2,000	7,320					\$ 25,070	0.23	Clean approximately 158 catch basins and manholes per year
	Proposed															\$92,250	\$ 92,250	0.00	Clean all catch basins and manholes each year (~2050 structures) \$45/basin
Stormwater BMP Facility Maintenance	Existing								0.11							\$6,158	\$ 13,838	0.11	BMPs - 24 cleaned regularly, others as issues arise. Seven in-line bmp structures inspected quarterly and cleaned as needed
	Proposed YR 1-4								0.11							\$6,158	\$ 13,583	0.11	Major cleaning and maintenance of all BMP locations in first 4 years;
	Proposed YR 5								0.12							\$6,466	\$ 14,566	0.12	5% increase in activities due to imp. Of PCP plan
	Proposed YR 10								0.14							\$7,698	\$ 17,148	0.14	25% increase in activities due to imp. Of PCP plan yr10
Street Sweeping	Existing								1.40		5,000	9,700					\$ 109,200	1.40	All streets are swept at least once a year
	Proposed								2.80		10,000	19,400				\$8,000	\$ 226,400	2.80	double effort and sweep directly connected municipal parking lots (assume 80% municipal bldgs have parking cost to sweep each 2x per year is \$400)- need to sweep all 2 times per year
Fall Leaf-pickup	Existing																	0.00	N/A - leaf pickup program not in place
	Proposed															\$117,480	\$ 117,480	0.00	Begin leaf collection in Year 4
Maintenance/Repair/Installation of ESC practices	Existing															\$0		0.00	Repair of areas in spring damaged by snow plowing; repair of other eroded areas due to major rain events (road repairs - budgeted amount)
	Proposed					0.01	0.01		0.01					5,000			\$ 7,850	0.03	Allowance for repair activities
Stream Restoration/Stabilization	Existing																	0.00	N/A
	Proposed YR 3 & 10					0.01	0.02		0.02	0.02				15,000			\$ 19,785	0.07	allowance to adress 1 stream project every 3 years, YR 3 and YR10
Ditch and Channel Maintenance	Existing																\$ -	0.00	N/A
	Proposed																\$ -	0.00	Continue existing maintenance activities
Waterfowl & Pet Waste Management Programs	Existing																	0.00	N/A
	Proposed YR-2													\$4,000			\$ 4,000	0.00	install pet waste collection bag stations, stock bags annually
	Proposed YR-3	\$6,000												\$2,500			\$ 8,500	0.00	implement waterfowl controls (goose egg addling) and pet bags stock annually
	Proposed YR 4-5	\$6,000												\$500			\$ 6,500	0.00	continue implementation of measures, stock supplies
Public Assistance Program	Existing																	0.00	
	Proposed					0.02		0.02									\$ 3,720	0.04	Create public awareness & incentive program to encourage disconnection of impervious areas to the storm sewer system
Hazardous / Toxic Materials Collection Program	Existing					0.01		0.01				10,000					\$ 11,860	0.02	collection program, administration time accounted for in Administration category
	Proposed					0.01		0.01				10,000					\$ 11,860	0.02	continue existing activity
Emergency Drainage Repairs	Existing																\$ -	0.00	Annual allowance for unexpected repair of failed drainage structures
	Proposed YR 1-5							0.01	0.01	0.02				10,000			\$ 11,620	0.04	continue existing activity
	Proposed YR 10							0.02	0.02	0.03				15,000			\$ 17,430	0.06	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 YR 4+			\$5,000													\$ 5,000	0.00	Future costs reflect estimated legal time asociated with capital projects, 5% town legal time
Total:	Existing	\$1,000		\$0	0.00	0.06	0.05	0.00	1.80	0.00	\$7,000	\$17,020	\$0	\$0	\$0	\$6,158	\$175,218	1.91	
	Proposed-YR 1	\$7,000	\$0	\$5,000	0.00	0.10	0.07	0.04	2.99	0.02	\$13,000	\$29,400	\$0	\$15,000	\$0	\$106,408	\$394,383	3.22	
	Proposed-YR 2	\$2,000	\$0	\$0	0.00	0.10	0.07	0.04	2.99	0.02	\$13,000	\$29,400	\$0	\$19,000	\$0	\$106,408	\$393,383	3.22	
	Proposed-YR 3	\$8,000	\$0	\$0	0.00	0.11	0.09	0.04	3.01	0.04	\$13,000	\$29,400	\$0	\$30,500	\$0	\$106,408	\$417,668	3.29	
	Proposed-YR 4	\$2,000	\$0	\$5,000	0.00	0.10	0.07	0.04	2.99	0.02	\$13,000	\$29,400	\$0	\$15,000	\$0	\$106,408	\$400,883	3.22	
	Proposed-YR 5	\$8,000	\$0	\$5,000	0.00	0.13	0.10	0.04	3.03	0.02	\$13,000	\$29,400	\$0	\$15,500	\$0	\$224,196	\$526,471	3.31	

Sustainable Stormwater Funding in the Upper Charles																
Town of Bellingham, Stormwater Cost of Service																
Monitoring: Existing & Future Cost Supporting Data																
		Subcontractors (units = fee)			Fully Burdened Personnel (rate = salary+50%, units = FTE)						Expenses			Total Cost	Total FTE	Description
	Source	Consulting Engineer	GIS Technician-Consultant	Legal Counsel	Town Administrator	DPW Director	Asst. DPW Director	Working Foreman	Seasonal Labor	DPW Office Manager	Mileage	Postage	Other			
	Rate	1	1	1	\$187,500	\$127,500	\$90,000	\$67,500	\$18,000	\$58,500	\$0.51	\$0.44	1			
Monitoring	# Units															
Catchment Assessment & Outfall Inventory/Monitoring (dry weather)	Existing													\$ -	0	All outfalls inspected once during dry weather conditions during the 2003 permit term-not required
	Proposed YR1					0.01								\$ 1,275	0.01	SWMP director coordination and planning
	Proposed YR2-5	\$23,830					0.050	0.10	0.15				\$5,600	\$ 54,930	0.3	Inventory 25% of outfalls each year beginning in Year 2- assume 20% of total 240 outfalls have dry flow and require sampling , coordination effort by program director, Assess Key Junction Manholes for dry weather flow in catchments with potential for illicit discharge. The cost to identify the source is included in IDDE enforcement.
Stormwater Outfall Monitoring (wet weather)	Existing													\$ -	0	N/A
	Proposed YR1	\$10,000				0.050								\$ 16,375	0.05	annual monitoring program coordination by program director, Develop Permittee Specific Monitoring Plan in Year 1
	Proposed YR2-5	\$36,425				0.050	0.05							\$ 47,300	0.1	Sample 25% of outfalls each year beginning in Year 2- assume 80% of 240 outfalls are monitored, complete year 5
Surface Water Quality Monitoring	Existing													\$ -	0	N/A
	Proposed YR 3&4	\$0				0.00	0.00							\$ -	0	
Total:	Existing	\$0	\$0	\$0	0.00	0.00	0.00	0.00	0.00	0.00	\$0	\$0	\$0	\$ -	0	
	Proposed YR1	\$10,000	\$0	\$0	0.00	0.06	0.00	0.00	0.00	0.00	\$0	\$0	\$0	\$ 17,650	0.06	
	Proposed YR2	\$60,255	\$0	\$0	0.00	0.10	0.15	0.15	0.00	0.00	\$0	\$0	\$5,600	\$ 102,230	0.4	
	Proposed YR3	\$60,255	\$0	\$0	0.00	0.10	0.15	0.15	0.00	0.00	\$0	\$0	\$5,600	\$ 102,230	0.4	
	Proposed YR4	\$60,255	\$0	\$0	0.00	0.10	0.15	0.15	0.00	0.00	\$0	\$0	\$5,600	\$ 102,230	0.4	
	Proposed YR5	\$60,255	\$0	\$0	0.00	0.10	0.15	0.15	0.00	0.00	\$0	\$0	\$5,600	\$ 102,230	0.4	