Total Costs Workbook

August 24 2018 Template

Overview:

This workbook was developed by the Environmental Finance Center (EFC) at California State University, Sacr
municipalities and rural communities in EPA Region 9 of to facilitate the creation of an asset management pl
by a USEPA grant.

How to use this Workbook:

The Total Costs Workbook can be used by municipalities to compute a complete, annual sum of costs for per

Instructions

Instructions are listed below for completing the worksheets and compiling the total costs for the exis

The estimated costs for the identified LOS can be copied from the Level of Service Workbook by copying all v

Estimated costs for permit compliance can be similarly copied from the Permitting Costs Workbook or simpl

Estimated costs for future buildouts do not have a current template in the toolkit, as these are likely to be as

assessed time period.

amento (Sacramento State) for
an for stormwater infrastructure. Funded

mit compliance, existing system

ting system and future buildouts.
alues in the "Baseline LOS" tab and pasting

y recorded directly into the tabs associated

sessed and financed in many different

Categories	2018 Current Annual Costs	2019 Yr 1 Costs	2020 Yr 2 Costs
O&M of Existing Assets	$126,862	$130,668	$134,588
Permit Compliance	$1,049,398	$1,080,880	$1,113,306
Future Buildouts	$3,225,000	$3,644,000	$4,062,000
TOTAL	$4,401,260	$4,855,548	$5,309,894

Yr 2 costs and beyond are based on assumed inflation factor:		3%
Assumes Current year is:	2018	

2021	2022	2023	2024	2025	2026	2027	2028
Yr 3 Costs	Yr 4 Costs	Yr 5 Costs	Yr 6 Costs	Yr 7 Costs	Yr 8 Costs	Yr 9 Costs	Yr 10 Costs
$138,626	$142,784	$147,068	$151,480	$156,024	$160,705	$165,526	$170,492
$1,146,705	$1,181,106	$1,216,540	$1,253,036	$1,290,627	$1,329,346	$1,369,226	$1,410,303
$17,538,000	$19,119,000	$20,701,000	$38,158,000	$39,646,000	$41,134,000	$14,801,000	$14,853,000
$18,823,331	$20,442,891	$22,064,607	$39,562,516	$41,092,651	$42,624,051	$16,335,752	$16,433,795

2029	2030	2031	2032	2033	2034	2035	2036
Yr 11 Costs	Yr 12 Costs	Yr 13 Costs	Yr 14 Costs	Yr 15 Costs	Yr 16 Costs	Yr 17 Costs	Yr 18 Costs
$175,607	$180,875	$186,301	$191,890	$197,647	$203,576	$209,684	$215,974
$1,452,612	$1,496,190	$1,541,076	$1,587,308	$1,634,928	$1,683,975	$1,734,495	$1,786,529
$14,904,000	$14,956,000	$15,008,000	$15,060,000	$15,112,000	$15,163,000	$15,215,000	$15,267,000
$16,532,219	$16,633,065	$16,735,377	$16,839,198	$16,944,574	$17,050,552	$17,159,178	$17,269,504

2037 Yr 19 Costs	2038 Yr 20 Costs
$222,453	$229,127
$1,840,125	$1,895,329
$0	$0
$2,062,579	$2,124,456

Inputs

Inflation Rate	3%
Current Year	2018

COMPARING COSTS FOR VARIOUS LOS's

Level of Service (LOS)	2018 Current Annual Costs[2]	2019 Yr 1 Costs	2020 Yr 2 Costs	2021 Yr 3 Costs
Baseline LOS	$126,862	$130,668	$134,588	$138,626
Improved LOS	$0	$0	$0	$0
Advanced LOS	$0	$0	$0	$0
Selected Level of Service and Additional O&M				
Selected LOS (from above)	$126,862	$130,668	$134,588	$138,626
Additional O&M Not Included in LOS				
SUBTOTAL: O&M of Existing Assets	**$126,862**	**$130,668**	**$134,588**	**$138,626**
Yr 2 costs and beyond are based on assumed inflation factor:		3%		
Assumes Current year is:	2018			

2022	2023	2024	2025	2026	2027	2028	2029	2030
Yr 4 Costs	**Yr 5 Costs**	**Yr 6 Costs**	**Yr 7 Costs**	**Yr 8 Costs**	**Yr 9 Costs**	**Yr 10 Costs**	**Yr 11 Costs**	**Yr 12 Costs**
$142,784	$147,068	$151,480	$156,024	$160,705	$165,526	$170,492	$175,607	$180,875
$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0
$142,784	$147,068	$151,480	$156,024	$160,705	$165,526	$170,492	$175,607	$180,875
$142,784	**$147,068**	**$151,480**	**$156,024**	**$160,705**	**$165,526**	**$170,492**	**$175,607**	**$180,875**

2031	2032	2033	2034	2035	2036	2037	2038
Yr 13 Costs	**Yr 14 Costs**	**Yr 15 Costs**	**Yr 16 Costs**	**Yr 17 Costs**	**Yr 18 Costs**	**Yr 19 Costs**	**Yr 20 Costs**
$186,301	$191,890	$197,647	$203,576	$209,684	$215,974	$222,453	$229,127
$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0
$186,301	$191,890	$197,647	$203,576	$209,684	$215,974	$222,453	$229,127
$186,301	**$191,890**	**$197,647**	**$203,576**	**$209,684**	**$215,974**	**$222,453**	**$229,127**

Baseline LOS

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains	Visually Inspect 25 ft weekly; TV 25 additional 25 ft twice/month	$ 26,452	Hydro-jet 250 ft monthly	$ 13,476
Force Mains				
Catch Basins				
Outfalls				
Detention Basins				
Culverts				
Total		$ 26,452		$ 13,476
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

Improved LOS

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains				
Force Mains				
Catch Basins				
Outfalls				
Detention Basins				
Culverts				
Total		$ -		$ -
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

Advanced LOS

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains				
Force Mains				
Catch Basins				
Outfalls				
Detention Basins				
Culverts				
Total		$ -		$ -
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

Preventative Maintenance		Replacement		Total Cost
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
Repair 10 ft quarterly	$ 69,870	Replace 100 ft annually	$ 17,064	$ 126,862
				$ -
				$ -
				$ -
				$ -
				$ -
	$ 69,870		$ 17,064	$ 126,862
				$ 109,798
				$ 17,064

Preventative Maintenance		Replacement		Total Cost
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
	$ -		$ -	$ -
				$ -
				$ -

Preventative Maintenance		Replacement		Total
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
	$ -		$ -	$ -
				$ -
				$ -

Baseline LOS

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains		$ -	Respond to failures and complaints for all sewer components.	$ 200,000
Force Mains	Visual inspection every 2 weeks during pump station inspection.	Cost is associated with pump station inspections		$ -
Catch Basins		$ -	Clean 2500 annually and perform corrective maintenance.	$ 600,000
Outfalls		$ -		$ -
Detention Basins		$ -		$ -
Culverts		$ -	Clean debris, corrective maintenance.	$ 20,000
Total		$ -		$ 820,000
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

LOS "C" (Improved)

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains	PACP CCTV inspect pipes greater than 75 years old over 10-year period.	$ 110,000	Replace 15% of assets that have reached end of EEL over 10 years.	$ 299,000
Force Mains	Visual inspection every 2 weeks during pump station inspection. PACP CCTV inspect every 15 years.	$ 200		
Catch Basins	Clean and inspect 25% annually (Approx. 4264). Record and monitor debris levels for cleaning prioritization.	$ 639,000	Clean 2500 annually and perform corrective maintenance.	$ 24,000
Outfalls	Inspect all outfall points every 5 years per MS4 requirements.	$ 28,000	Replace top 10% by POF each cycle.	$ 66,000
Detention Basins	Complete site inspection 3 times annually including routine maintenance.	$ 6,500		
Culverts	CCTV/walk/inspect 50% of culverts annually.	$ 9,700	Replace/rehabilitate top 5% by POF.	

Preventative Maintenance		Replacement		Total Cost
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
	$ -		$ 1,537,000	$ 1,737,000
	$ -			
	$ -			$ 600,000
	$ -			
	$ -			
	$ -			$ 20,000
	$ -		$ 1,537,000	$ 2,357,000
				$ 820,000
				$ 1,537,000

Preventative Maintenance		Replacement		Total Cost
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
Perform rehabilitation to extend EEL for 10% of inspected sewers over 10 years.	$ 647,000	Replace every 150 years.	$ 2,439,000	**$ 3,495,000**
		Replace every 100 years.	$ 1,000	**$ 1,200**
Replace 15% of assets that have reached end of EEL over 10 years.	$ 14,000	Replace every 100 years.	$ 560,000	**$ 1,237,000**
Stabilize bank and erosion control at 5% of assets each cycle.	$ 1,200	Replace every 150 years.	$ 12,000	**$ 107,200**
		Facility renovation every 100 years. Includes regrading, seeding, renew inlet/outlet structures.	$ 11,300	**$ 17,800**
Clean 20% of all assets annually.	$ 43,000	Replace every 150 years.	$ 11,000	**$ 63,700**

Total		$ 793,400		$ 389,000
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

LOS "A" (Advanced)

Asset Type	Inspection		Corrective Maintenance	
	Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary
Gravity Mains	PACP CCTV inspect system over 10-year period.	$ 482,000	Replace 50% of assets that have reached end of EEL over 10 years.	$ 996,000
Force Mains	Visual inspection every 2 weeks during pump station inspection. PACP CCTV inspect every 5 years.	$ 500		
Catch Basins	Clean and inspect 50% annually (Approx. 8527). Record and monitor debris levels for cleaning prioritization.	$ 1,276,500	Replace 50% of assets that have reached end of EEL over 10 years.	$ 80,000
Outfalls	Inspect all outfall points every 3 years to satisfy MS4 requirements.	$ 47,000	Replace top 10% by POF each cycle.	$ 142,000
Detention Basins	Complete site inspection 3 times annually including routine maintenance.	$ 6,500		
Culverts	CCTV/walk/inspect all culverts annually.	$ 19,300	Replace/rehabilitate top 10% by POF.	
Total		$ 1,831,800		$ 1,218,000
O&M (inspection, corrective and preventative maintenance)				
Capital Renewal (system renewal)				

	$ 705,200		$ 3,034,300	**$ 4,921,900**
				$ 1,887,600
				$ 3,034,300

Preventative Maintenance		Replacement		Total
Activities & Frequencies	Cost Summary	Activities & Frequencies	Cost Summary	
Perform rehabilitation to extend EEL for 10% of inspected sewers over 10 years.	$ 3,252,000	Replace every 100 years.	$ 8,388,000	**$ 13,118,000**
		Replace every 75 years.	$ 1,800	**$ 2,300**
Perform rehabilitation to extend EEL for 10% of inspected catch basins over 10 years.	$ 94,000	Replace every 50 years.	$ 1,119,000	**$ 2,569,500**
Stabilize bank and erosion control at 15% of assets each cycle.	$ 27,000	Replace every 100 years.	$ 1,700	**$ 217,700**
		Facility renovation every 50 years. Includes regrading, seeding, renew inlet/outlet structures.	$ 22,500	**$ 29,000**
	$ 86,000	Replace every 100 years.	$ 17,000	**$ 122,300**
	$ 3,459,000		$ 9,550,000	**$ 16,058,800**
				$ 6,508,800
				$ 9,550,000

Baseline LOS

Asset Type	Activity Type	Activity	Asset Units	Quantity of Assets	Personnel	Labor Rate	Hours	Labor Cost	Equipment, Materials, Services	Unit	Quantity	Unit Cost	Cost	Total Cost per Activity	Times Performed Annually	Annual Cost	Annual Activity type cost
Gravity Mains	Inspection	Visual Inspection	Linear Feet	25	Worker 1	$ 18.50	4	$ 74.00	Truck	miles	50	$ 0.54	$ 27.00				
					Worker 1	$ 18.50	4	$ 74.00					$ -	$ 175.00	52	$ 9,100.00	
		Visual Inspection	Linear Feet	25	Worker 1	$ 18.50	8	$ 148.00	Truck	miles	50	$ 0.54	$ 27.00				
					Worker 1	$ 18.50	8	$ 148.00	CCTV Camera Rental	days	1	$ 200.00	$ 200.00				
					Equipment	$ 25.00	8	$ 200.00					$ -	$ 723.00	24	$ 17,352.00	$ 26,452.00
	Preventative Maintenance	Hydro Jetting	Linear Feet	250	Worker 1	$ 18.50	8	$ 148.00	Truck	miles	50	$ 0.54	$ 27.00				
					Worker 1	$ 18.50	8	$ 148.00	Hydro-Jet Machine	Hours	8	$ 100.00	$ 800.00				
														$ 1,123.00	12	$ 13,476.00	$ 13,476.00
	Corrective Maintenance	Failed Asset Repair	Linear Feet	5	Worker 1	$ 18.50	80	$ 1,480.00	Truck	miles	50	$ 0.54	$ 27.00				
					Worker 1	$ 18.50	80	$ 1,480.00									
					Welder	$ 50.00	80	$ 4,000.00						$ 6,987.00	10	$ 69,870.00	$ 69,870.00
	System Renewal	Failed Asset Replacement	Linear Feet	100	Worker 1	$ 18.50	80	$ 1,480.00	Truck	miles	50	$ 0.54	$ 27.00				
					Worker 1	$ 18.50	80	$ 1,480.00	Semi Truck	miles	50	$ 1.54	$ 77.00				
					Welder	$ 50.00	80	$ 4,000.00	Crane	Hours	20	$ 500.00	$10,000.00	$ 17,064.00	1	$ 17,064.00	$ 17,064.00
Catch Basins																	$ -
Outfalls																	
Detention Basins																	
Culverts																	
Laterals																	
Open Channels																	
Ditches																	
Pressurized Mains																	
Siphons																	
Manholes																	
Pumps																	
Bed Filter																	
Dry Basin																	
Infiltration Basin																	
Media Filter																	
Treatment Vault																	
Wet Basin																	
Biostrip																	
Biofiltration																	
Bioretention																	
Bioswale																	
Infiltration Feature																	
Porous Pavement																	
Settling Basin																	
Green Street																	
End	End	End	End	End	End	End	End	End	End	End	End	End	End	End			$ -

Category #
1
2
3
4
5
6
7
8
9

Activities

Construction Site Stormwater Runoff Control
Illicit Discharge Detection and Elimination
Industrial and Commercial Management
Pollution Prevention/Good Housekeeping for Municipal Operations
Post Construction Stormwater Management for New/Re-Development
Public Education, Outreach, Involvement, and Participation
Water Quality Monitoring
Overall Stormwater Program Management
Long-Term Planning (e.g., Trash Amendment, TMDL Compliance, Watershed Management Coordination)

Subtotal

Yr 2 costs and beyond are based on assumed inflation factor:
Assumes Current year is:

2018	2019	2020	2021	2022	2023	2024	2025
Current Annual Costs	**Yr 1 Costs**	**Yr 2 Costs**	**Yr 3 Costs**	**Yr 4 Costs**	**Yr 5 Costs**	**Yr 6 Costs**	**Yr 7 Costs**
$34,536	$35,572	$36,639	$37,738	$38,870	$40,036	$41,238	$42,475
$28,350	$29,201	$30,077	$30,979	$31,908	$32,865	$33,851	$34,867
$37,966	$39,105	$40,278	$41,486	$42,731	$44,013	$45,333	$46,693
$587,125	$604,739	$622,881	$641,567	$660,814	$680,639	$701,058	$722,090
$15,381	$15,842	$16,318	$16,807	$17,311	$17,831	$18,366	$18,917
$5,320	$5,480	$5,644	$5,813	$5,988	$6,167	$6,352	$6,543
$160,000	$164,800	$169,744	$174,836	$180,081	$185,484	$191,048	$196,780
$30,720	$31,642	$32,591	$33,569	$34,576	$35,613	$36,681	$37,782
$150,000	$154,500	$159,135	$163,909	$168,826	$173,891	$179,108	$184,481
$1,049,398	**$1,080,880**	**$1,113,306**	**$1,146,705**	**$1,181,106**	**$1,216,540**	**$1,253,036**	**$1,290,627**

3%

2018

2026	2027	2028	2029	2030	2031	2032	2033	2034
Yr 8 Costs	Yr 9 Costs	Yr 10 Costs	Yr 11 Costs	Yr 12 Costs	Yr 13 Costs	Yr 14 Costs	Yr 15 Costs	Yr 16 Costs
$43,749	$45,061	$46,413	$47,806	$49,240	$50,717	$52,238	$53,806	$55,420
$35,913	$36,990	$38,100	$39,243	$40,420	$41,633	$42,882	$44,168	$45,493
$48,094	$49,537	$51,023	$52,554	$54,130	$55,754	$57,427	$59,150	$60,924
$743,752	$766,065	$789,047	$812,718	$837,100	$862,213	$888,079	$914,722	$942,163
$19,484	$20,069	$20,671	$21,291	$21,930	$22,588	$23,265	$23,963	$24,682
$6,739	$6,941	$7,150	$7,364	$7,585	$7,813	$8,047	$8,288	$8,537
$202,683	$208,764	$215,027	$221,477	$228,122	$234,965	$242,014	$249,275	$256,753
$38,915	$40,083	$41,285	$42,524	$43,799	$45,113	$46,467	$47,861	$49,297
$190,016	$195,716	$201,587	$207,635	$213,864	$220,280	$226,888	$233,695	$240,706
$1,329,346	**$1,369,226**	**$1,410,303**	**$1,452,612**	**$1,496,190**	**$1,541,076**	**$1,587,308**	**$1,634,928**	**$1,683,975**

2035	2036	2037	2038
Yr 17 Costs	Yr 18 Costs	Yr 19 Costs	Yr 20 Costs
$57,082	$58,795	$60,559	$62,375
$46,858	$48,264	$49,712	$51,203
$62,752	$64,635	$66,574	$68,571
$970,428	$999,541	$1,029,527	$1,060,413
$25,422	$26,185	$26,971	$27,780
$8,793	$9,057	$9,329	$9,609
$264,456	$272,389	$280,561	$288,978
$50,775	$52,299	$53,868	$55,484
$247,927	$255,365	$263,026	$270,917
$1,734,495	**$1,786,529**	**$1,840,125**	**$1,895,329**

Construction Site Stormwater Runoff Control

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Contracted inspectors		
Labor - City Engineering Technician	0.050	$ 60,000.00
Labor - City Code Enforcement Supervisor	0.050	$ 110,000.00
Labor - City Community Enhancement Officer	0.020	$ 82,000.00
Labor - City staff 4	0.010	$ 240,000.00
Labor - Student interns		
Labor - Stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Totals		

Typical Activities

Develop/update BMP handbook(s)/resources
Issue grading permits
SWPPP reviews
Issue of enforcement actions
Send winterization letters (to property owners with active construction sites to remind contractors to prepare their construction sites for the rainy season and to submit
winterization certifications)
Develop/maintain database to track inspections and enforcement actions (for private development construction sites)

Assumptions and Referenc

	Miscellaneous Costs					
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	Total Cost	Existing Funding
$ 16,340.00					$ 16,340.00	
$ 3,000.00					$ 3,000.00	
$ 5,500.00					$ 5,500.00	
$ 1,655.77					$ 1,655.77	
$ 2,400.00					$ 2,400.00	
					$ -	
$ 4,140.00					$ 4,140.00	
					$ -	
					$ -	
					$ -	
$ 1,500.00					$ 1,500.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 34,535.77				**$ -**	**$ 34,535.77**	**$ -**

es

Funding Source

Illicit Discharge Detection and Elimination

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Contracted Inspectors		
Labor - City Engineering Technician	0.04	$ 63,000.00
Labor - City Public Works Project Supervisor	0.05	$ 135,000.00
Labor - City Code Enforcement Supervisor	0.1	$ 110,000.00
Labor - City Community Enhancement Officer	0.075	$ 82,000.00
Labor - Student interns		
Labor - Stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Totals		

Typical Activities

Investigate calls reporting potential illicit discharge

Issue enforcement actions

Assumptions and Referenc

	Miscellaneous Costs					
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	Total Cost	Existing Funding
$ 730.00					$ 730.00	
$ 2,520.00					$ 2,520.00	
$ 6,750.00					$ 6,750.00	
$ 11,000.00					$ 11,000.00	
$ 6,150.00					$ 6,150.00	
					$ -	
					$ -	
					$ -	
					$ -	
$ 1,200.00					$ 1,200.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 28,350.00				**$ -**	**$ 28,350.00**	**$ -**

es

Funding Source

Industrial and Commercial Management

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Contracted Inspectors		
Labor - City Code Enforcement Supervisor	0.1	$ 110.00
Labor - City Community Enhancement Officer	0.07	$ 82,000.00
Labor - City Public Works Director	0.004	$ 245,000.00
Labor - City staff 4		
Labor - Student interns		
Labor - Stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
	Totals	

Typical Activities

Conduct inspections
Develop/update BMP handbook(s)/resources
Issue enforcement actions

Assumptions and Referenc

	Miscellaneous Costs				Total Cost	Existing Funding
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost		
$ 26,975.00					$ 26,975.00	
$ 11.00					$ 11.00	
$ 5,740.00					$ 5,000.00	
$ 980.00					$ 980.00	
					$ -	
					$ -	
$ 5,000.00					$ 5,000.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 38,706.00				**$ -**	**$ 37,966.00**	**$ -**

es

Funding Source

Pollution Prevention/Good Housekeeping for Municipal Operations

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Street sweeping		
Labor - maintenance staff		
Labor - student interns		
Labor - stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Drainage System Maintenance		
Catch Basin Cleaning - Senior Maintenance Worker 1	0.535	$ 75,000.00
Catch Basin Cleaning - Senior Maintenance Worker 2	0.535	$ 80,000.00
Labor - student interns		.
Labor - stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Pollution Prevention		
Labor - maintenance staff		
Labor - student interns		
Labor - stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Pump Station Cleaning		
Labor - maintenance staff		
Labor - student interns		
Labor - stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Public Facility Maintenance and BMPs for Field Activities		

	Miscellaneous Costs					
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	Total Cost	Existing Funding
$ 500,000.00					$ 500,000.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 40,125.00					$ 40,125.00	
$ 42,800.00					$ 42,800.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	

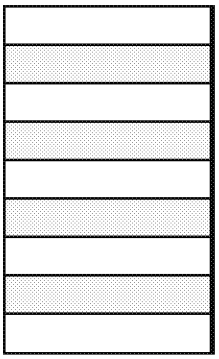
Funding Source

Labor - maintenance staff		
Labor - student interns		
Labor - stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Total		

Typical Activities	**Assumptions and Referenc**
Street sweeping	
Drainage system maintenance	
Pollution prevention	
Pump station cleaning	
Public facility maintenance	

					$ -	
					$ -	
$ 3,000.00					$ 3,000.00	
					$ -	
					$ -	
					$ -	
$ 1,200.00					$ 1,200.00	
$ -					$ -	
$ -					$ -	
$ 587,125.00				**$ -**	**$ 587,125.00**	**$ -**

es



Post Construction Stormwater Management for New/Re-Development

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Contracted Inspectors		
Labor - City Civil Engineering Assistant	0.092	$ 70,000.00
Labor - Ciy Public Works Project Supervisor	0.0115	$ 134,000.00
Labor - Student interns		
Labor - Contracted Stormwater staff		
Materials		
Equipment		
Travel		
Training		
Other		
Totals		

Typical Activities

Develop/update BMP handbook(s)/resources
Review plans and issue permits
Issue enforcement actions
Develop/maintain database to track new infrastructure

Assumptions and Referenc

	Miscellaneous Costs				Total Cost	Existing Funding
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost		
$ 1,400.00					$ 1,400.00	
$ 6,440.00					$ 6,440.00	
$ 1,541.00					$ 1,541.00	
					$ -	
$ 6,000.00					$ 6,000.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 15,381.00				**$ -**	**$ 15,381.00**	**$ -**

es

Funding Source

Public Education, Outreach, Involvement, and Participation

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Student interns		
Labor - Contracted stormwater staff		
Labor - City Code Enforcement Supervisor	0.024	$ 105,000.00
Materials		
Equipment		
Travel		
Fees		
Training		
Other		
	Totals	

Typical Activities	Assumptions and Referenc
Developing Integrated Pest Management (IPM)	
Television	
Radio	
Billboard	
Newspaper	
Mailings	
Participation in public events	
Grants	
Project development	
Agriculture outreach	
Pet outreach	
Elementary education	

	Miscellaneous Costs				Total Cost	Existing Funding
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost		
					$ -	
$ 2,800.00					$ 2,800.00	
$ 2,520.00					$ 2,520.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 5,320.00				**$ -**	**$ 5,320.00**	**$ -**

es

Funding Source

Water Quality Monitoring

Cost Items	# FTE
Labor - student intern	
Labor - stormwater staff	
Materials	
Equipment	
Travel	
Regional/State program fees	
QAPP/SAP preparation	
Sample collection	
Sample laboratory analysis	
Third party modeling/analysis/reporting	
Training	
Other:	
Totals	

Typical Activities

QAPP/SAP preparation
Sample collection
Sample laboratory analysis
Data analysis and reporting
Fee paid for joint monitoring effort conducted by Watershed Group

Labor Costs		Miscellaneous Costs				Total Cost
Salary + Fringe + Accrual	Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
	$ 160,000.00					$ 160,000.00
						$ -
						$ -
						$ -
						$ -
	$ 160,000.00				**$ -**	**$ 160,000.00**

Assumptions and References

Existing Funding	Funding Source
$ -	

Overall Stormwater Program Management

Cost Items	Labor Costs	
	# FTE	Salary + Fringe + Accrual
Labor - Student interns		
Labor - Contracted stormwater staff		
Labor - City Public Works Director	0.028	$ 240,000.00
Materials		
Equipment		
Travel		
Fees		
Professional Organization fees (e.g. CASQA, ASCE)		
NPDES fees		
Legal fees		
Training		
Other		
Totals		

Typical Activities

Program Effectiveness Assessment
Annual Reporting
Permit compliance administration

Assumptions and Referenc

	Miscellaneous Costs					
Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	Total Cost	Existing Funding
					$ -	
$ 24,000.00					$ 24,000.00	
$ 6,720.00					$ 6,720.00	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
$ 30,720.00				**$ -**	**$ 30,720.00**	**$ -**

es

Funding Source

Long-Term Planning (e.g., Trash Amendment, TMDL Compliance, Watershed Management Coordination)

Cost Items	# FTE
Labor - Student interns	
Labor - Contracted Stormwater staff	
Materials	
Equipment	
Travel	
Fees	
Training	
Project 1 - Catch basin retrofits	
Project 2 - 30% design for Cortez Park	
Project 3	
etc.	
Other	
Totals	

Typical Activities

Program coordination/administration
Planning/Design/Permitting of Infrastructure
Operation and maintenance of infrastructure

Labor Costs		Miscellaneous Costs				Total Cost
Salary + Fringe + Accrual	Labor Cost	Units	Cost/Unit	# of Units	Miscellaneous Cost	
						$ -
	$ 5,000.00					$ 5,000.00
						$ -
						$ -
						$ -
						$ -
						$ -
		30	$ 1,500.00		$ 45,000.00	$ 45,000.00
	$ 100,000.00					$ 100,000.00
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
	$ 105,000.00				**$ 45,000.00**	**$ 150,000.00**

Assumptions and References

Existing Funding	Funding Source
$ -	

Activities	2018 Current Annual Costs
EWMP Future Buildouts[1]	$3,225,000
Buildout 2	
Buildout 3	
Total	**$3,225,000**

[1] costs taken from XXXX Enhanced Watershed Management Plan (costs for community YYYY only)

Assumes Current year is: 2018

2019	2020	2021	2022	2023	2024	2025	2026	2027
Yr 1 Costs	**Yr 2 Costs**	**Yr 3 Costs**	**Yr 4 Costs**	**Yr 5 Costs**	**Yr 6 Costs**	**Yr 7 Costs**	**Yr 8 Costs**	**Yr 9 Costs**
$3,644,000	$4,062,000	$17,538,000	$19,119,000	$20,701,000	$38,158,000	$39,646,000	$41,134,000	$14,801,000
$3,644,000	**$4,062,000**	**$17,538,000**	**$19,119,000**	**$20,701,000**	**$38,158,000**	**$39,646,000**	**$41,134,000**	**$14,801,000**

2028	2029	2030	2031	2032	2033	2034	2035
Yr 10 Costs	**Yr 11 Costs**	**Yr 12 Costs**	**Yr 13 Costs**	**Yr 14 Costs**	**Yr 15 Costs**	**Yr 16 Costs**	**Yr 17 Costs**
$14,853,000	$14,904,000	$14,956,000	$15,008,000	$15,060,000	$15,112,000	$15,163,000	$15,215,000
$14,853,000	**$14,904,000**	**$14,956,000**	**$15,008,000**	**$15,060,000**	**$15,112,000**	**$15,163,000**	**$15,215,000**

2036	2037	2038
Yr 18 Costs	Yr 19 Costs	Yr 20 Costs
$15,267,000	-	-
$15,267,000	**$0**	**$0**