

ANNUAL REPORT TMDL BMP IMPLEMENTATION EFFECTIVENESS ASSESSMENT SUMMARY

CITY OF SANTA CRUZ STORM WATER PROGRAM

Due October 15, 2018

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	DPT	DIV.	General Permit Sched. (Permit Year)	Level of Implementation (None, Partial, Full)	BMP Implementation Information	Effectiveness (Low, Med, High)	CASQA Outcome Level (1-6)	Target Priority Pollutant(s)	Evaluation Method	Proposed Modification	Report #4: Storm Water Programs Modification Fifth Year Report					
															1.a.Improvements to Underperforming BMPs	1. b. Continue Effective BMPs	1.c. Discontinue Ineffective BMPs	2. Priority Areas for Program Improvements	3. Modifications to shift priorities for more effective use of resources	4. Time Schedule, Scope, and Frequency of BMP modifications
E.15 TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS																				
	E.15	TMDL 1	Develop Additional BMPs as Necessary in Conjunction With The TMDL For Sediment	Target=Sediment - Additional BMPs and measures	Public Works	Engineering	N/A	FULL	Completed SWMP Task. Per the RWQCB, the WAAP revisions were due June 30, 2015, which the City complied in a county-wide WAAP submittal prepared jointly by the the County of Santa Cruz and the cities of Santa Cruz, Capitola, Scotts Valley, and Watsonville. This year, the cities and County collaborated to update the joint WAAP. The City currently reviews Building Permit plans for erosion and sediment control BMPs including for small residential projects. Project applications are required to include erosion and sediment control BMPs, as appropriate, and related standard notes are required on plan sheets.Open construction sites are inspected multiple times, especially during the rainy season, by various City staff including Building Inspectors, Green Building staff, PW Inspectors and PW Storm Water Staff. The City will consider enhanced street sweeping in certain areas and/or whether to implement a "no parking" policy during scheduled street sweeping days/time. Additional BMPs will be developed and implemented as needed upon review of further analyses of long-term sediment monitoring results by the County.	N/A	1	Sediment	N/A		Continue					
	E.15	TMDL 2	Develop Additional BMPs as Necessary in Conjunction With The TMDL For Pathogens	Target=Bacteria - Additional BMPs and measures	Public Works	Engineering	N/A	FULL	Completed SWMP Task. Per the RWQCB, the WAAP revisions were due June 30, 2015, which the City complied in a county-wide WAAP submittal prepared jointly by the County of Santa Cruz, and the cities of Santa Cruz, Capitola, Scotts Valley, and Watsonville. This year, the cities and County collaborated to update the joint WAAP. The City implemented and/or partnered on additional BMPs/programs to address the TMDL for pathogens and reduce bacterial loadings as described below. 1) Per BMP MO#11, Development and Implementation of a Lateral Inspection Program this year new amendments to the Sewer Use Ordinance were adopted by the City Council on July 16, 2018. Effective dates are follows: Laterals spill requirements is August 1, 2018; Inspection of private sewer collection system effective date is Jan 1, 2019; Lateral inspection on sale of house effective July 1, 2019. 2) Again this year, the City collaborated with the Coastal Watershed Council (CWC) to develop new BMPs and strategies to reduce controllable loadings to the San Lorenzo River and tributaries. The City and CWC partnered on a pilot pet waste campaign to educate pet owners to pick up pet waste in order to reduce bacteria loadings to the river 3) The City also partnered with CWC on a new Neighborhood Outreach and Cleanup Program to increase resident awareness on a variety of water quality issues including: trash/littering, pet waste, and illegal dumping in areas adjacent to the SLR. The first (pilot) neighborhood volunteer cleanup was held in June 2018. The City and CWC plan to continue partnering on this program in FY18-19. Additional BMPs will be added as needed and as new programs or campaigns are developed.	N/A	1	Pathogens	N/A		Continue					
	E.15	TMDL 3	Develop, Submit, and Implement a Wasteload Allocation Attainment Program(s) (WAAP) to Address Controllable Sources Associated with the Storm Water System for Each Impairing Pollutant/TMDLs within the City's Jurisdiction.	Implement WAAPs for pathogens and sediment	Public Works	Engineering	N/A	FULL	Completed SWMP Task. As required, a WAAP for Pathogens was submitted to the CCRWQCB in 2012 and revised/ resubmitted in June 2013. Also, a WAAP for Sediment was submitted in June 2013. The City had its first consultation with RWQCB staff on effectiveness assessment and monitoring on May 27, 2014, and a subsequent telephone meeting, including a discussion on TMDL monitoring and a revised WAAP, on September 2, 2014. The City, along with the County of Santa Cruz, and the cities of Capitola, Scotts Valley, and Watsonville, prepared and submitted a joint WAAP for both pathogens and sediment, including effectiveness assessment, to the RWQCB in June 30, 2015. This year, the cities and County collaborated to update the joint WAAP.	N/A	1	Sediment, Pathogens	N/A		Continue					
✓	E.15	NEW BMP	Comply with the effectiveness assessment schedule and process included in WAAP		Public Works	Engineering	1	FULL	The City, along with the County of Santa Cruz, and the cities of Capitola, Scotts Valley, and Watsonville, prepared and submitted a joint WAAP to the RWQCB in June 30, 2015. This joint WAAP served as a revision to the WAAPs previously submitted by the City. This year, the agencies again collaborated to update the joint WAAP. Also, the City continues to collaborate with the San Lorenzo River Alliance, led by the Coastal Watershed Council, to develop new BMPs, outreach campaigns and strategies to reduce controllable loadings to the San Lorenzo River and tributaries.	N/A	1	Sediment, Pathogens	N/A		Continue					

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BMPs per City of Santa Cruz WAAP for Pathogens (Showing only BMPs not already identified in previous sections)																				
✓	E.11.f, E.15	NEW BMP	Develop procedures to prioritize storm drain system maintenance		Public Works	Wastewater Collection/Flood Control	2	FULL	Staff prioritizes efforts to maintain and clean storm drains/catch basins in areas with direct impact to the ocean or the San Lorenzo River. hus, maintenance of the San Lorenzo River pump stations is also a high priority. Areas with the highest vehicle and pedestrians traffic are also prioritized. Thus, the highest priority areas are the Beach Flats, Downtown, and lower Ocean Street areas. Staff also reviews the areas during the previous year which needed attention and adds these areas to the priority list.	N/A	1	Sediment, Trash, Pathogens	Documentation		Continue					
✓	E.11.g, E.15	NEW BMP	Begin maintenance of all high priority storm drains on an on-going schedule according to procedures & priorities developed per E.11.f		Public Works	Wastewater Collection/Flood Control	3	FULL	The City continues to maintain all high priority storm drains on an on-going schedule. The Division's CMMS database provides an on-going maintenance schedule, provides notices when maintenance is due, and track completed maintenance & repairs.	High	5	Sediment, Trash, Pathogens	Land-use-load estimation (TELRL)		Continue					
	E.11.g, E.15	MO-4	Inspection, Cleaning, and Repair of City Catch Basins and Inlets	1. Clean 90% of catch basins and inlets located in the Downtown, Beach Flats, and lower Ocean Street areas annually in the Fall	Public Works	Wastewater Collection/Flood Control	N/A	FULL	In FY2017-18, 90% of catch basins and inlets were cleaned in Downtown, B. Flats, and lower Ocean Street areas in Fall 2017. Almost all drainage from these areas goes to the San Lorenzo River pump stations. A total of 13.5 cubic yards of debris was collected from both catch basins and storm drain lines during the Fall cleaning. Wastewater Collection Division staff made extensive efforts to accomplish this.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)		Continue					
				2. Clean and repair 100% of storm drains or catch basins identified as clogged or non-functional annually in the fall or as soon as possible	Public Works	Wastewater Collection/Flood Control	N/A	FULL	In FY2017-18, 100% of clogged or non-functional storm drains and catch basins were cleaned and repaired citywide. Priority and response is placed on any report from the public for non-functioning or plugged drains.	High	4	Sediment, Trash	Documentation		Continue					
				3. After large storm events during the wet season, inspect 90% of catch basins in the Downtown, Beach Flats, and lower Ocean Street areas and re-clean them as needed	Public Works	Wastewater Collection/Flood Control		FULL	In FY2017-18, 100% of clogged or non-functional storm drains and catch basins were cleaned and repaired citywide. Priority and response is placed on any report from the public for non-functioning or plugged drains.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	Proposed Measurable Goal Modification: 3. After large storm events during the wet season, inspect 50-75% or more of catch basins in the Downtown, Beach Flats, and lower Ocean Street areas and re-clean them as needed and time allows depending upon severity of storm, flooding incidents, complaints, and staffing levels.	Continue, see #3 Modification			Proposed Measurable Goal Modification: 3. After large storm events during the wet season, inspect 50-75% or more of catch basins in the Downtown, Beach Flats, and lower Ocean Street areas and re-clean them as needed and time allows depending upon severity of storm, flooding incidents, complaints, and staffing levels.	Next permit year	
				4. Inspect 50% of the catch basins in the outlying areas of the City annually and clean as needed	Public Works	Wastewater Collection/Flood Control		Partial	There are at least 1,400 catch basins in the City. As mentioned above, City efforts focused on the high priority areas including the Beach, Downtown, and lower Ocean Street areas. The Downtown and Ocean Street areas flow, via the City storm drain system, to the San Lorenzo River. Thus, due to the focus on higher priority areas, approximately 20% of the catch basins in outlying areas were inspected and then cleaned if necessary.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	Proposed Measurable Goal Modification: Inspect the catch basins in the outlying areas of the City annually and clean as needed as time allows after the high priority areas catch basins, the river pump stations and any complaints are addressed. (modify so efforts address high priority areas first).	Continue, see #3 Modification			Proposed Measurable Goal Modification: Inspect the catch basins in the outlying areas of the City annually and clean as needed as time allows after the high priority areas catch basins, the river pump stations and any complaints are addressed. (modify so efforts address high priority areas first).	Next permit year	
	E.15	MO-6	Clean Pump Stations Along the San Lorenzo River	Target=Sediment & Bacteria Clean Twice Per Year (Spring & Fall) Additional cleanings if needed during wet season and after large storm events	Public Works	Wastewater Collection/Flood Control	N/A	FULL	Fall cleaning was conducted on 10/18/17 and again as needed due to heavy winter storms. Spring cleaning was completed by 5/22/18, with all stations including Neary Lagoon Pump Station cleaned with 13.5 yards of debris removed. Each station is inspected daily during wet weather and any floating trash is removed. Of the two seasonal cleaning events, spring cleaning of the pump stations is the most important due to debris from winter runoff/storms.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)		Continue					
	E.15	MO-8 (same as ID-4)	Conduct Inspections of Storm Drain Lines	Target=Bacteria & Sediments TV or visual inspect the inside of an average of 1000 feet of pipeline each year over a 5 year period	Public Works	Engineering, Wastewater Collection/Flood Control		FULL	During the permit year, approximately 20,000 feet of storm drain lines were cleaned by WW Collection/Flood Control staff. In addition, 1000 feet of pipeline on Chestnut, 200 feet on Market and 1200 feet on Cayuga Street and Soquel Avenue were video inspected. Another 1,000 feet of storm drain pipe in various locations was also video inspected in FY 17-18. A total of 600 feet of storm drain pipe were TV'd in FY2016-2017 at various locations including Harbor Drive and Market St. The total number of feet of storm drain pipe TV'd in previous years was: 4,000 feet in FY2015-2016; 3,000 feet in FY2014-2015; 200 feet in FY2013-2014; 2,000 feet in FY2012-2013; 260 feet in FY2011-2012; 290 feet in FY2010-2011; and 13,732 feet in FY2009-2010.	N/A	1	Sediment, pathogens, trash	Documentation		Continue					

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E.15	MO-10	MO-10	Replace or Rehabilitate Sanitary Sewer Main Lines	Target=Bacteria & Sediments Replace or rehabilitate sewer main pipeline as needed each year	Public Works	Engineering, Wastewater Mains		FULL			4	Pathogens	Tabulation (# sewer overflows)							
E.15	MO-10	MO-10	Replace or Rehabilitate Sanitary Sewer Main Lines	Target=Bacteria & Sediments Replace or rehabilitate sewer main pipeline as needed each year	Public Works	Engineering, Wastewater Mains		FULL	In 2017-18, the City Replaced 200 feet of 6 inch sewer pipeline on East Cliff Drive.		4	Pathogens	Tabulation (# sewer overflows)		Continue					
E.15	MO-11	MO-11	Development and Implementation of a Lateral Inspection Program	Implementation of Program starting 2016	Public Works	Engineering	3	Partial	The new amendments to the Sewer Use Ordinance were adopted by the City Council on July 16, 2018. Effective dates are follows: Laterals spill requirements is August 1, 2018; Inspection of private sewer collection system effective date is Jan 1, 2019; Lateral inspection on sale of house effective July 1, 2019. Below is a brief description for each: <ul style="list-style-type: none"> The owner of a property with a sewer spill is responsible for stopping the spill immediately and will be subject to fines and penalties if inspections and repairs are not completed within 14 days. Prior to the sale of a property, the property owner must have the sewer lateral inspected by an authorized inspector, make any needed repairs, and submit an inspection form to verify compliance. The property is exempted from inspection for newer laterals or laterals that have passed inspection within the past five years. Private sanitary sewer collection systems and pumps (at apartment buildings, homeowner associations and businesses) must pass inspection every 10 years. Their pipelines must be cleaned every two to five years depending on size. Privately-owned pump stations must pass inspection every one to five years depending on size. 	N/A	4	Pathogens	Tabulation (# lateral repairs, # lateral overflows)	Effective dates are follows: Laterals spill requirements is August 1, 2018; Inspection of private sewer collection system effective date is Jan 1, 2019; Lateral inspection on sale of house effective July 1, 2019.		Continue				Effective dates are follows: Laterals spill requirements is August 1, 2018; Inspection of private sewer collection system effective date is Jan 1, 2019; Lateral inspection on sale of house effective July 1, 2019.
E.15	MO-13	MO-13	CBI Grant #1: Dry Weather Diversion of Storm Water from SLR Pump Stations 1, 2, and 1A to the Wastewater Treatment Facility (WWTF)	Divert the SLR pump station water to the WWTF during the dry season until the SLR shoals	Public Works	Engineering, Wastewater Collection/Flood Control	Year 1-5	FULL	During the dry season, water is diverted to the treatment plant until the River shoals, which is typically by August 1st. Water accumulates daily in the pump stations and is pumped out weekly to the treatment plant after testing. Total gallons diverted per pump station from June 30, 2017 to June 30, 2018: 4 pump stations reporting Pump Station 1, Pump Station 2, Pump Station 1A and Pump Station 1B for a total of 301,740 gallons *Diversion not possible once river shoals. The diversion work (re equipment & piping) was completed at Pump Station # 1B by January 2008 and at Pump Station # 3 on May 27, 2008. Summer diversion stations are tested by City Environmental Compliance Division and must meet WWTF requirements prior to discharge into sanitary sewer. All summer diversion pumps are run until the wet well is dry. None of the main pumps are operated during dry weather unless river mouth closes and pumps are needed to relieve ground pressure.	High	4	Sediment, pathogens, trash	Direct load /volume measurement		Continue					
E.15	MO-14	MO-14	CBI Grant #2: After CBI Grant Project Completion, Dry Weather Diversion of Storm Water from SLR Pump Stations 1B & 3 to the WWTF	Divert the SLR pump station water to the WWTF during the dry season until the SLR shoals	Public Works	Engineering, Wastewater Collection/Flood Control	Year 1-5	FULL	During the dry season, water is diverted to the treatment plant until the River shoals, which is typically by August 1st. Water accumulates daily in the pump stations and is pumped out weekly to the treatment plant after testing. Total gallons diverted per pump station from June 30, 2017 to June 30, 2018: 4 pump stations reporting Pump Station 1, Pump Station 2, Pump Station 1A and Pump Station 1B for a total of 301,740 gallons *Diversion not possible once river shoals. The diversion work (re equipment & piping) was completed at Pump Station # 1B by January 2008 and at Pump Station # 3 on May 27, 2008. Summer diversion stations are tested by City Environmental Compliance Division and must meet WWTF requirements prior to discharge into sanitary sewer. All summer diversion pumps are run until the wet well is dry. None of the main pumps are operated during dry weather unless river mouth closes and pumps are needed to relieve ground pressure.	High	4	Sediment, pathogens, trash	Direct load /volume measurement		Continue					
E.15	MO-16	MO-16	Implement Illegal Campsite Clean-Up Program In City Parks and Open Spaces	Cleanup of illegal campsites at the appropriate locations on an annual basis	Public Works	Parks-Rangers	Year 1-5	FULL	The illegal campsite cleanup is ongoing and conducted routinely. The City devotes considerable effort and staff time on this in order to protect waterways, riparian habitats, open spaces, and preserves. The general cleanup locations are: 1) San Lorenzo River from the Tate Street intake to the river mouth. Cleanup occurs along the river levee, banks, and slopes; 2) Branciforte and Arana Creeks; and 3) Open spaces including Pogonip, Neary Lagoon, DeLaveaga Park, Arana Gulch, and Moore Creek Preserve. This permit year, there were a total of 461 illegal campsite contacts with the majority of them resulting in some level of cleanup by City staff. Of the 461, approximately 105 campsites were near or adjacent to the San Lorenzo River. In addition, staff conducts additional "major" cleanups at specific areas throughout the year as needed.	Not assessed	4	Pathogens, trash	Direct trash load measurement		Continue					

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	E.9.d, E.15	ID-2	Conduct Spill and Illegal Discharge Response	Target-Sediment & Bacteria Respond to 100% complaints and reports of illegal discharges	Public Works	Environmental Compliance	Year 1-5	FULL	Below are the Environmental Compliance Inspector's spill and illegal discharge response summaries for the permit year: <i>Inspector #1</i> - responded to 13 residential sanitary sewer overflows, 8 food service storm water violations, 2 hotel storm water violations, 5 construction storm water violations, 4 commercial storm water violations, 3 vehicle service storm water violations, issued a warning to 1 mobile washer and responded to 6 general inquiries. <i>Inspector #2</i> - responded to 15 sanitary sewer overflows, 11 restaurant violations, 1 Significant Industrial User violation, issued 1 restaurant NOV, 2 sanitary sewer overflow NOVs, 1 construction warning (storm water) and issued 1 vehicle hanger warning. <i>Inspector #3</i> - responded to 3 residential sanitary sewer overflows, 2 liquid waste hauler spills on City property, 1 construction SW compliant and 1 RV leaking compliant. In addition, there were approximately 41 sanitary sewer overflows responded to by Wastewater Collection/Flood Control. All issues were resolved.	High	4	Trash, Pathogens	Inspection		Continue					
	E.7.a, E.11.g, E.15	PE-1	Replace Worn Stencils or Apply New Stencils to Storm Drain Inlets	24 stencils replaced or newly applied annually	Public Works	Engineering	2	FULL	The City funded Save Our Shores (SOS) to assess storm drain catch basins and apply new "No Dumping" markers to unmarked catch basins or those with worn stencils. In total, SOS applied markers to 69 catch basins out of the 201 checked, and posted photos of the storm drain marking project on social media websites.	Medium	2	Trash	Public Awareness Survey							
	E.8.c, E.15	Added BMP	Sponsor river and/or creek cleanups	Programs e.g.: Adopt-A-Levee (in partnership with Save Our Shores), River & Creek Cleanups (Save Our Shores)	Public Works	Engineering	Year 1-5	FULL	This year, the City continued funding or contributed support for several river levee volunteer cleanup programs as follows: 1) San Lorenzo River Adopt-A-Levee Program-this is a volunteer group river levee cleanup program funded by the City and implemented by Save Our Shores. Each adopting group is asked to commit to doing 3 or more cleanups per year. This year, there were 2 AAL groups with a combined total of more than 81 volunteers who removed greater than 822 pounds of trash and 115 pounds of recycling from the SLR levee. 2) San Lorenzo River Community Volunteer River cleanups-this is a citizen volunteer river levee cleanup program funded by the City and implemented by Save Our Shores. This year, there were four seasonal river cleanups with a combined total of 101 volunteers who removed 700 pounds of trash and 50 pounds of recycling. The City also provides funding support for Annual Coastal Cleanup Day which includes several river levee sites.	High	4	Pathogens, trash	Direct trash load measurement		Continue					
	E.13.b, E.15	Added BMP	Bacteria Monitoring Pilot Program	Bacteria monitoring in San Lorenzo River, Branciforte Creek, and Carbonera Creek, per specs in WAAP	Public Works	Environmental Compliance		FULL	The City continues to conduct a monitoring program for bacteria in the San Lorenzo River, Branciforte Creek, and Carbonera Creek re the TMDL for Pathogens. Sampling is done by Environmental Compliance staff & analyzed by the City Environmental Laboratory. Please see attached monitoring report for details on the monitoring program and sampling results. As reported last year, the City developed better quality analytical data that enable us to identify probable control points for bacteria associated with anthropogenic signatures within City limits. These signatures include: caffeine; molecular markers of Bacteroides (HF183 and/or HumM2) associated with high levels of fecal indicator bacteria. Preliminary analyses show promise that the TMDL goals are feasible if these analytical strategies are applied throughout the course of the river. In addition, the City is an active partner in the SLRA Working Group efforts coordinated by Coastal Watershed Council (CWC).	N/A	6	N/A	N/A		Continue					
✓	E.13.b, E.15	NEW BMP	TMDL Monitoring	Comply with the monitoring requirements included in WAAP and/or consult w/ RWQCB to determine monitoring study design and monitoring implementation schedule	PW	Environmental Compliance		FULL	The City conducts a monitoring program for bacteria in the San Lorenzo River, Branciforte Creek, and Carbonera Creek re the TMDL for Pathogens. The program is associated with a comprehensive data driven effort to identify controllable sources of bacteria in the river while the bacteria levels remain higher than the REC-1 limits. The additional analytical work done with the bacteria sampling include molecular markers of Bacteroides bacteria-HF183 and HumM2- derived from human enteric sources; caffeine and where appropriate, fecal sterol ratios. All sampling is done by Environmental Compliance staff & analyses by scientists at the City Environmental Laboratory. Please see attached monitoring report for monitoring program details and sampling results. In addition, the City contributed funding to the San Lorenzo River Alliance (SLRA) Water Quality Working Group monitoring study, in previous years, for bacteria in the San Lorenzo River. The City is an active partner in the SLRA Working Group efforts led by Coastal Watershed Council (CWC). The City has since developed better quality data that enable us to identify probable control points for bacteria associated with anthropomorphic signatures within City limits. These signatures include: caffeine; molecular markers (HF183 and/or HumM2) associated with high levels of fecal indicator bacteria. Results tracked in db and on spreadsheet.	N/A	6	N/A	N/A		Continue					

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	E.11, E.15	MO-1	Sweep City Streets By Mechanical Sweepers	1. Sweep primary streets in downtown & main beach areas once to twice per week	Public Works	Streets	Year 1-5	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2017 through June 2018, there was a total of 25,625 curb miles swept (or an average of 2,135 curb miles swept per month). Total tonnage collected was 856 tons or an average of 71.3 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TEL.R)		Continue					
				2. Sweep primary streets in other commercial areas weekly to twice per month	Public Works	Refuse	Year 1-5	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2017 through June 2018, there was a total of 25,625 curb miles swept (or an average of 2,135 curb miles swept per month). Total tonnage collected was 856 tons or an average of 71.3 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TEL.R)		Continue					
				3. Sweep 75% of residential streets once to twice per month	Public Works	Refuse	Year 1-5	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2017 through June 2018, there was a total of 25,625 curb miles swept (or an average of 2,135 curb miles swept per month). Total tonnage collected was 856 tons or an average of 71.3 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TEL.R)		Continue					
	E.11, E.15	MO-3	Sweep Public Parking Lots and Parking Garages Regularly	Target-Sediment & Bacteria. Clean lots w/a mechanical sweeper 2 or more times per week depending upon which location	Public Works	Traffic/Parking Prog	Year 1-5	FULL	PW staff cleans 25 municipal parking lots 6x per week w/a mechanical sweeper. This includes four parking garages with 14 levels total. This permit year, over 1,872 yards of debris were collected.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TEL.R)		Continue					
✓	E.10.a	NEW BMP	Maintain an inventory of all projects subject to the local construction site SW runoff control ordinance, incl. location of project with respect to waterbodies, threat to WQ, construction phase, required inspection frequency, date of erosion control plan approval		Public Works	Engineering	1	FULL	The City inventories all new discretionary approval applications and ministerial permits via its TRAKIT online database. TRAKIT keeps record of the permit type, location, application status, inspections, and LID requirements. All new permit applications that trigger a grading or building permit are subject to stormwater runoff control requirements. TRAKIT is queried to develop a report of all new permit applications subject to stormwater runoff control and the results are categorized by project type (commercial or residential), status (applied, approved, permit issued, finalized), and whether LID is required. The results are mapped using GIS to identify projects located within TMDL watersheds. Commercial/multifamily projects that create or replace over 5,000 sf of impervious surface are considered higher potential threat and are further tracked in an excel spreadsheet maintained by the PW Department - those projects are inspected by both Building and PW to ensure compliance with storm water BMPs. The PW tracking spreadsheet includes additional information, including: project area, SWPPP threat level as applicable, if it is adjacent to a creek, if it is in a TMDL watershed, project description and status, and PW inspections.	N/A	1	Sediment	Documentation	N/A	Continue					
✓	E.10.b	NEW BMP	Develop/revise procedures to review and approve relevant construction plan documents.	Require operator of construction activity to prepare and submit erosion and sediment control plan for review.	PW, Planning	Engineering	1	FULL	Projects that increase the square footage of a building (including single-family dwellings) are required to meet CalGreen requirements, including providing an erosion and sediment control plan for review. Projects that do not include a building but disturb over 50 cy of soil are required to obtain a grading permit. The City revised Chapter 18.45, Excavation and Grading Regulations, of the Municipal Code to require that all projects subject to the grading permit provide a site plan showing the general vicinity of the proposed project, dimensions of grading cut and fill, the location of surrounding buildings or structures, and the location of construction Best Management Practices (BMP's) as required by the City's mandatory Storm Water BMP manual. The ordinance revision was approved by City Council on July 22, 2014 and published August 22, 2014.	Not assessed	2	Sediment	Documentation	N/A	Continue					
				Require rationale for BMPs used	PW, Planning	Engineering	1	FULL	Additionally, Public Works revised the mandatory BMPs for Construction Projects to incorporate minimum requirements for the preparation of Erosion Control Plans, published on June 30, 2014. All construction projects that trigger a grading or building permit are required to abide by the mandatory construction BMPs.	Not assessed	3	Sediment	Documentation	N/A	Continue					

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	DPT	DIV.	General Permit Sched. (Permit Year)	Level of Implementation (None, Partial, Full)	BMP Implementation Information	Effectiveness (Low, Med, High)	CASQA Outcome Level (1-6)	Target Priority Pollutant(s)	Evaluation Method	Proposed Modification	Report #4: Storm Water Programs Modification Fifth Year Report					
															1.a.Improvements to Underperforming BMPs	1. b. Continue Effective BMPs	1.c. Discontinue Ineffective BMPs	2. Priority Areas for Program Improvements	3. Modifications to shift priorities for more effective use of resources	4. Time Schedule, Scope, and Frequency of BMP modifications
				Require that erosion/sed control plan list applicable permits associated w/ grading activity (CGP, 401, 404, 1600 agreement)	PW, Planning	Engineering	1	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory construction BMPs published by Public Works and updated in June 2014. The BMPs include guidance on information that shall be included in erosion control plans. At a minimum, erosion control plans must include: site topography, nearby watercourses, proposed grading contours, location of utilities, location of proposed erosion control measures, location of proposed sediment control measures, location of construction waste control measures, stockpile and equipment staging areas total area of disturbance, and a list of other required permits associated with grading such as State Construction General Permit, U.S. Army Corps of Engineers 404 permit, State Water Board 401 Water Quality Certification, California Department of Fish and Wildlife 1600 Agreement, as applicable.	N/A	1	N/A	Documentation	N/A		Continue				
				Document review using a checklist	PW, Planning	Engineering	1	FULL	The Public Works Department created a checklist, based on the revised construction BMPs, for review of erosion control plans for projects that create or replace over 5,000 sf of impervious surface area. Staff also requested that the third party QSD consultants reviewing ECPs use the checklist for project review. In addition, many checklist items have been incorporated into standard review notes/comments and also the spreadsheet used to track all development projects. Lastly, this permit year, one of the City's third party QSD consulting firms created a plan application guidance checklist for development project applicas and use by PW staff. The Green Building Program in the Building Department has its own Green Building Checklist it uses to document review of project plans.	Not assessed	2	Sediment	Documentation	N/A		Continue				
				SWPPP may substitute for erosion control plan where a SWPPP is developed	PW, Planning	Engineering	1	FULL	Typically, projects that are required to create a SWPPP first submit an erosion control plan for plan review purposes and then develop the SWPPP once most plan approvals are received. Once the project is approved, Public Works coordinates with the QSP to conduct a pre-construction meeting to go over the SWPPP, erosion control measures, and inspections.	N/A	1	Sediment	Documentation	N/A		Continue				
✓	E.10.c	NEW BMP	Use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary.		Planning	Building	1	FULL	Building Staff conducts BMP inspections at residential and commercial sites per CalGreen requirements. This year, there were 182 Green Building (GB) final inspections conducted in addition to miscellaneous GB inspections. Building staff also conducts inspections at active construction sites prior to major rain events and at 50% or more sites after rain events. During the permit year, 1 large/medium site was visited at least 3 times by Building Inspectors due to a BMP failure (Warning Letter issued by Env. Comp.) and 19 (logged) BMP inspections were conducted at open sites. Building Code Enforcement also follows up on construction projects done without the required permit(s). Public Works also provides additional oversight and inspects medium and large commercial projects before, after, and/or during rain events. Follow-up inspections are conducted at sites with compliance issues. PW Staff conducts a final site inspection to ensure that all disturbed areas are stabilized. PW Storm Water and Env. Compliance staff also respond to complaints, and may issue verbal or written warnings or Notices of Violation. This year, one medium priority site was issued a Letter of Warning by PW Env. Compliance. This site took action and corrected its issues, and all other sites that were given verbal or email warnings were promptly brought into compliance. There were no stop work orders issued this year as verbal, email and written warnings were effective in sites correcting an issue in a timely manner. Regular inspections by multiple City staff were effective at prompting sites to maintain compliance with erosion control & construction BMP requirements.	Medium	3	Sediment	Inspection (# sites fully implementing BMPs at 1st visit, 2nd visit, 3rd visit, addtl visits, observation of sediment leaving site)		Continue					
	E.10.c.	CON-1	Planning/Building Inspectors Will Inspect All Construction Sites Requiring a Grading Permit. Inspections Will Also Be Conducted Prior to Well-Forecasted Rain Events at High Priority Construction Projects. Inspectors Will Also Inspect 50% or More of the Open Sites After Major Rain Events or Storms.	1. During the grading process, 100% of small sites will be inspected 2 times and 100% of large sites will be inspected 3 times (Small sites are defined as generally less than 1/2 acre. Large sites are greater than 1/2 acre.)	Planning	Building	1	FULL	This permit year, all small and large sites were inspected as required. Inspections were done prior to and also after rain events. In total, there were 51 Building permits for residential ADUs, 25 single family homes and 10 garages. There were numerous types of Building permits for commercial projects including 3 for multi-residential and 1 for amuse/rec. Public Works Storm Water staff inspected all sites that triggered special grading/erosion control inspections. In addition, there was 1 Grading Permit issued for a residential site and 5 Grading Permits issued for commercial sites. Sites are inspected multiple times particularly if they are medium to large sites, or adjacent to sensitive waterbodies, or need followup after a detected problem or complaint. This permit year, 1 site received a written warning letter from Public Works. Results indicate that regular inspections are critical to reminding sites to maintain compliance with erosion control BMP requirements.	Medium	3	Sediment	Inspection (# sites fully implementing BMPs at 1st visit, 2nd visit, 3rd visit, addtl visits)		Continue					

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	DPT	DIV.	General Permit Sched. (Permit Year)	Level of Implementation (None, Partial, Full)	BMP Implementation Information	Effectiveness (Low, Med, High)	CASQA Outcome Level (1-6)	Target Priority Pollutant(s)	Evaluation Method	Proposed Modification	Report #4: Storm Water Programs Modification Fifth Year Report					
															1.a.Improvements to Underperforming BMPs	1. b. Continue Effective BMPs	1.c. Discontinue Ineffective BMPs	2. Priority Areas for Program Improvements	3. Modifications to shift priorities for more effective use of resources	4. Time Schedule, Scope, and Frequency of BMP modifications
				2. Inspect 100% of high priority sites prior to forecasted rain events	Planning	Building	1	FULL	This permit year, all small and large sites were inspected as required. Inspections were done prior to and also after rain events. In total, there were 51 Building permits for residential ADUs, 25 single family homes and 10 garages. There were numerous types of Building permits for commercial projects including 3 for multi-residential and 1 for amuse/rec. Public Works Storm Water staff inspected all sites that triggered special grading/erosion control inspections. In addition, there was 1 Grading Permit issued for a residential site and 5 Grading Permits issued for commercial sites. Sites are inspected multiple times particularly if they are medium to large sites, or adjacent to sensitive waterbodies, or need followup after a detected problem or complaint. This permit year, 1 site received a written warning letter from Public Works. Results indicate that regular inspections are critical to reminding sites to maintain compliance with erosion control BMP requirements.	Medium	4	Sediment	Inspection (# sites w/ wet weather BMPs fully in place at 1st visit, # sites receiving warning or NOV), photo doc		Continue					
				3. After major rain events, 50% or more of "open" sites will be inspected	Planning	Building	1	FULL	Building Inspectors inspected at least 50%, if not all, of the open sites after major rain events. In addition, Building Inspectors conducted 19 (logged) BMP inspections at construction sites. Building Inspectors also conducted many more inspections at these sites including foundation inspections which check for BMP implementation especially during the wet season. Also, PW Staff conducted inspections during and/or after major rain events at large sites and sites with BMP failures. During the rainy season, staff also frequently inspected medium sites during the rainy season. Staff conducted follow-up inspections at all sites found with BMP inadequacies/ failures to ensure that problems were corrected in a timely fashion. Inadequate BMPs or BMP failures were identified by PW staff at 3 high priority sites and 5 medium size sites. All sites received either verbal warnings and/or an email notice to immediately correct along with photos. One medium site was issued a Letter of Warning by PW Environmental Compliance. All BMP inadequacies or failures were rectified as a result of inspection and City request for correction.	Medium	4	Sediment	Inspection (# sites w/ indication of BMP failure)		Continue					
	E.10.c, E.15	CON-2	PW Staff Will Inspect Installation of Post-construction Treatment Systems and Storm Water Retention Devices at Development Sites Greater Than or Equal to One Acre	Inspect systems and devices at 100% of development sites greater than or equal to one acre	Public Works	Engineering	Year 1-5	FULL	PW Staff reviewed and inspected all projects that triggered Tier 2 or higher of the PCRs. During the permit year, projects equal to or greater than 1 acre were inspected as follows: 1) Delaware Avenue: This commercial development project site was inspected 10 times during the year and, in addition, was regularly inspected by a third party QSP inspector. 2) Riverside: This commercial development project (hotel) was inspected 1 times during the year however the LID/SW treatment systems were not yet installed. These SW systems are expected to be installed in FY18-19. 3) Swift Street: This commercial site's parking lot was inspected 1x during the wet season however work had not begun at this site. LID features, such as the permeable pavers, are being installed in Fall 2018. 4) Jewell Street: This commercial development project, which is a senior care facility was inspected 5 times during the permit year including at least twice by a third party QSP/QSD inspector. 5) Mission Street: This commercial business parking lot was inspected 5 times during the permit year including at least once by a third party QSP/QSD inspector.	High	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELR)		Continue					
	E.12.k, E.15	PC-5	Develop & Enact A Strategy for Implementing LID & Hydromodification Control For New and Redevelopment Projects	Develop, advertise and make available LID BMP Design Guidance suitable for all stakeholders; Specific guidance on how to achieve and demonstrate compliance with the hydromodification control criteria and LID requirements made available to new and redevelopment project applicants	Public Works Planning	Engineering	1	FULL	Completed in Permit Year 1	Not assessed	2	Sediment, Pathogens, Trash	Documentation, tabulation (page hits), public awareness survey		Completed/ Continue					
	E.12.j	PC-10	Develop and/or Modify Enforceable Mechanisms That Will Effectively Implement Hydromodification Controls and LID. Enforceable Mechanisms May Include Municipal Codes, Regulations, Standards, and Specifications.	1. An analysis of all applicable codes, regulations, standards, and/or specifications that identifies modifications and/or additions necessary to effectively implement hydromodification controls and LID (Joint Effort Q2)	Public Works Planning	Engineering				N/A	1	No	Documentation							

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	DPT	DIV.	General Permit Sched. (Permit Year)	Level of Implementation (None, Partial, Full)	BMP Implementation Information	Effectiveness (Low, Med, High)	CASQA Outcome Level (1-6)	Target Priority Pollutant(s)	Evaluation Method	Proposed Modification	Report #4: Storm Water Programs Modification Fifth Year Report					
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	E.12.j	PC-10	Develop and/or Modify Enforceable Mechanisms That Will Effectively Implement Hydromodification Controls and LID. Enforceable Mechanisms May Include Municipal Codes, Regulations, Standards, and Specifications.	Approved new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement hydromodification controls and LID in new and redevelopment projects	Public Works, Planning	Engineering	1	FULL	There were no significant gaps. Staff worked on minor revisions to the parking ordinance to help facilitate LID implementation during a prior permit year. Additionally, the assessment found that the City's mandatory "Storm Water BMPs for Development and Remodel Projects," which are codified by the Municipal Code/Storm Water Ordinance, are currently the best method to implement the new requirements. All development projects were routed through one Public Works development project plan reviewer that ensures that proposed projects meet the revised mandatory BMPs. Beginning in March 2017, 2 outside engineering consulting firms with QSD certified staff were hired to review project plans for PCR compliance.	N/A	1	No	Documentation		Completed/Continue					
	E.12.j	PC-10	Develop and/or Modify Enforceable Mechanisms That Will Effectively Implement Hydromodification Controls and LID. Enforceable Mechanisms May Include Municipal Codes, Regulations, Standards, and Specifications.	Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects.	Public Works, Planning	Engineering	1	FULL	The City began enforcing the new Post-Construction Requirements on March 6, 2014. The City has mandatory BMPs for Development and Remodeling Projects which include the PCR requirements. This year, there were 2 commercial projects subject to the PCRs that were finalized for occupancy and both were subject to Tier 2 requirements. This year, in total there were 8 commercial projects with building permit applications, with 7 of them subject to the PCRs and 1 project whose design permit was approved prior to the PCRs. Of the 7 PCR regulated projects, 5 were Tier 2 and 2 were Tier 4. Also, the City requires LID site design on all residential development and remodeling projects, including projects below the Tier 1 threshold. This year, there were 30 residential building permit applications that triggered LID requirements review. 25 residential projects were below the PCR trigger and 5 residential projects triggered Tier 1. There were no residential projects subject to the PCRs that received certificates of occupancy ("finalized").	N/A	3	No	Documentation		Continue					
	E.12.k, E.15	PC-8	Implement Program to Ensure Long-term BMP Inspection and Maintenance. Spot Inspections Will Be Conducted.	Enforce the proof of annual BMP inspection and maintenance requirement at 100% of sites	Public Works	Engineering	Year 1-5	FULL	The City requires that a BMP Maintenance Agreement be signed by the property owner/developer for all applicable projects with structural control measures per the City's mandatory BMPs for Public and Private Development Projects (Chapter 6B). The maintenance agreements are recorded into the City's permitting database (TRAKIT). Also, a scanned copy is saved in e-files and a paper copy is saved in a binder. Currently, the City has 74 signed maintenance agreements. In order to ensure that maintenance is conducted, the City sends reminder letters to all the parties responsible for BMP maintenance during the Fall. A Reminder Letter was sent to these sites on November 08, 2017 although some sites were still under construction or in the final permit process. All completed projects signed and returned their logs by February 2018. Spot inspections were conducted at 11 of these sites. Again this year, staff spent time educating site contacts and managers due to facility staff changes or because staff at the newly built sites are unfamiliar with the requirements.	High	5	Sediment, Pathogens, Trash	Documentation, Land-use-load estimation (RAM/TELRL)		Continue					
				Implement a spot inspection program at 10% of sites annually	Public Works	Engineering	Year 1-5	FULL	This permit year, storm water staff conducted spot inspections at 11 sites (20%). The BMPs were clean and functioning properly. A few minor improvements were required by storm water staff, which were addressed by property owners.	Medium	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELRL)		Continue					
✓	E.13.b, E.15	NEW BMP	TMDL Monitoring	Comply with the monitoring requirements included in WAAP and/or consult w/RWQCB to determine monitoring study design and monitoring implementation schedule	Public Works	Environmental Compliance		FULL	The City, along with the County of Santa Cruz and the cities of Capitola, Scotts Valley, and Watsonville, prepared and submitted a joint WAAP to the RWQCB in June 30, 2015. This joint WAAP served as a revision to the WAAPs previously submitted by the City. This year, the cities and County collaborated to update the joint WAAP. In addition, during the permit year, the City continued to implement its monitoring program for bacteria and sediment in the San Lorenzo River, and Branciforte and Carbonera Creeks. Sampling for all relevant indices is done by Environmental Compliance staff & samples are analyzed by the City Environmental Laboratory. Please see the attached monitoring report for monitoring program details and sampling results. The City also conducts dry weather outfall monitoring, which included sampling and analyses for turbidity at flowing Branciforte Creek outfalls and flowing SLR outfalls.	N/A	6	N/A	N/A		Continue					
E.16 ANNUAL REPORTING PROGRAM																				
✓	E.16.a	NEW BMP	Use SMARTS to report and certify		Public Works	Engineering	Year 1-5	FULL	The Annual Report will be entered into SMARTS by October 15th annually	N/A	1	N/A	N/A	N/A	Continue					
	E.16.b		Complete and retain annual reports and make available to RWQCB during working hours		Public Works	Engineering	Year 1-5	FULL	Annual reports are available for download on the City website and will be provided to the RWQCB upon request	N/A	1	N/A	N/A	N/A	Continue					
✓	E.16.c	NEW BMP	Submit detailed written or oral report to RWQCB if directed.		Public Works	Engineering	Year 1-5	FULL	The City will submit reports to the RWQCB as directed	N/A	1	N/A	N/A	N/A	Continue					
✓	E.16.d	NEW BMP	May coordinate reporting if regional programs		Public Works	Engineering	Year 1-5	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A					

City of Santa Cruz TMDL Update-FY2017-2018

San Lorenzo River, Branciforte Creek and Carbonera Creek

City of Santa Cruz Improved/New BMPs for Next Permit Year(s):

TMDL for Pathogens

1. Existing BMP #MO-11 (City's SWMP/Guidance Document): Development and Implementation of a Lateral Inspection Program:

In the City of Santa Cruz, the maintenance of the 16,000 private sewer laterals, which carry wastewater from toilets, sinks and drains to City's public sewer pipelines, is the responsibility of each property owner. As private sewer laterals age they can develop leaks, become clogged by fats, oils and grease, and become cracked by roots. Cracked and damaged sewer laterals can cause sewer spills and backups which threaten public health and the environment.

Thus in order to improve private sewer infrastructure and protect the environment and local waterways from bacteria-laden human waste coming from undetected sewer leaks or sanitary sewer spills, the City Council adopted changes to the Sanitary Sewer System Ordinance on June 26, 2018. Prior to the preparation and adoption of these amendments, Staff conducted an extensive outreach program to local realtors, plumbers and other stakeholders.

The new amendments to the City Sewer Use Ordinance regarding private sewer laterals are three-fold:

- The owner of a property with a sewer spill is responsible for stopping the spill immediately and will be subject to fines and penalties if inspections and repairs are not completed within 14 days.
- Prior to the sale of a property, the property owner must have the sewer lateral inspected by an authorized inspector, make any needed repairs, and submit an inspection form to verify compliance. The property is exempted from inspection for newer laterals or laterals that have passed inspection within the past five years.
- Private sanitary sewer collection systems and pumps (at apartment buildings, homeowner associations and businesses) must pass inspection every 10 years. Their pipelines must be cleaned every two to five years depending on size. Privately-owned pump stations must pass inspection every one to five years depending on size.

Effective dates for these new amendments are follows: Laterals spill requirements is August 1, 2018; Inspection of private sewer collection system effective date is Jan 1, 2019; Lateral inspection on sale of house effective July 1, 2019. We offer an incentive program to help offset fees related to the ordinance changes.

<https://www.cityofsantacruz.com/government/city-departments/public-works/wastewater-treatment-facility/wastewater-and-storm-water-collections/sanitary-sewer-system/proposed-changes-to-the-city-s-sanitary-sewer-system-ordinance>

2. *New Pilot BMP- Pet Waste Campaign:*

Beginning in FY16-17, the City and Coastal Watershed Council (CWC) have partnered on pilot pet waste campaign with the goal of educating pet owners to pick up pet waste in order to reduce bacteria loadings to the SLR and tributaries. The Campaign uses volunteers and CWC staff to help conduct outreach to dog owners in areas that drain to the San Lorenzo River, and also to conduct before and after surveys. City and CWC staff did the initial research, planned the campaign and CWC ordered colorful doggie waste bags that are given out to dog owners. An informational tag was developed and printed to be attached to the doggie waste bags.



CWC staff also began outreach to local vets, pet shampoo services, and local pet shelters. The campaign logo is based on the "There is no Poop Fairy" signage above used by City Parks and Recreation along the San Lorenzo River and West Cliff Drive.

In FY17-18, the campaign continued including conducting “before” surveys along the San Lorenzo River levee. On November 1 and 22, 2017, CWC staff and volunteers surveyed pet waste along the Santa Cruz Riverwalk, a recreational path adjacent to the San Lorenzo River. Over 100 dropping were tallied near the levee. The surveys identified hot spots for pet waste and the best locations for additional "Poop Fairy" signs (there are currently two "Poop Fairy" pet waste educational signs on the levee). As a result of these efforts, the City Parks & Recreation Department is planning to install additional “Poop Fairy” signage (up to new 10 signs) along the Santa Cruz Riverwalk in FY18-19.

Also in FY17-18, CWC worked with BirchBark Foundation, with WoofPack, a hiking camp that leads monthly dog walks along the San Lorenzo River, and with the Santa Cruz SPCA to distribute 350 doggie bag holders with water quality information cards to Santa Cruz dogs and their parents.

Lastly, in June 2017 CWC conducted a pilot volunteer neighborhood cleanup in an area adjacent to the San Lorenzo River. The area is dubbed the “Oceans 11” neighborhood and residents that participated in the cleanup each received a doggie waste bag.

In FY18-19, the City and CWC are planning to work with local organizations and veterinary clinics and pet stores located near the San Lorenzo River to distribute an additional 300 doggie bag holders with water quality information cards. CWC staff and volunteers will visit the Mimi de Marta Dog Park, adjacent to the San Lorenzo River to pilot a pet waste education program with dog owners visiting the River and nearby park spaces. Education regarding pet waste and water quality will also be included in outreach efforts to residents in selected neighborhoods draining to the San Lorenzo River, and doggie waste bags may also be distributed to volunteers during future cleanup events.

3. New Pilot Neighborhood Outreach and Cleanup Program:

In FY 17-18, the Coastal Watershed Council (CWC) and the City coordinated efforts to increase neighborhood awareness regarding trash/littering, pet waste, illegal dumping and water quality issues in order to improve water quality in the San Lorenzo River. On June 23, 2018, CWC led the first pilot neighborhood volunteer cleanup in an area adjacent to the San Lorenzo River dubbed the “Oceans 11” neighborhood. Residents along primarily Felker and Pryce Streets participated in the cleanup. As part of the project, volunteers kept track of the trash items collected, such as: cigarette butts, dog poop, plastic bottles, cans, wrappers, etc. Each participant also received a doggie waste bag, with an educational message (see Pet Waste Campaign below), as a thank you.



In FY19-18, the City plans to co-fund similar CWC led volunteer neighborhood cleanups. For example, CWC plans to organize and cohost 2 neighborhood cleanups each in the Beach Flats and Ocean’s 11 neighborhoods. CWC will partner with interested neighbors to identify cleanup areas, hear community concerns, and also conduct storm water and water quality outreach. CWC will also create pre- and post-surveys, in conjunction with City staff, to assess trash levels and measure increases in storm water knowledge among clean-up participants. Also, City staff and CWC are collaborating on an educational post-card that will be mailed to residents in these two neighborhoods.

4. Additional Source Investigations re Branciforte Creek

Monitoring results have shown that Branciforte Creek has the highest percentage of fecal coliform exceedances compared to the other TMDL waterbodies in the City of Santa Cruz. The City intends to investigate potential contamination sources including sewer main lines, septic systems and sewer lateral lines.

TMDL for Sediment

The City currently reviews Building Permit plans for erosion and sediment control BMPs including for small residential projects. Project applications are required to include erosion and sediment control BMPs, as appropriate, and related standard notes are required on plan sheets. Open construction sites are inspected multiple times, especially during the rainy season, by various City staff including Building Inspectors, Green Building staff, PW Inspectors and PW Storm Water Staff.

The City also conducts extensive street sweeping as detailed in storm water program’s suite of Municipal Operations BMPs. However, the City will consider options such as enhanced street sweeping in certain areas and/or whether to implement a "no parking" policy during scheduled street sweeping days/time. Additional BMPs will be developed and implemented as needed upon review of further analyses of long-term sediment monitoring results by the County and City.

TMDL Wasteload Allocations and Milestones:

TMDL for Pathogens

Wasteload Allocation:

The City of Santa Cruz, County of Santa Cruz and the City of Scotts Valley are assigned the following concentration based wasteload allocation for fecal coliform: Based on a minimum of not less than five samples for any 30-day period, fecal coliform shall not exceed a log mean of 200 MPN per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 MPN per 100 mL.

Effective date is June 8, 2011

Allocations shall be achieved no later than June 8, 2024.

Permit Year 5 Milestone Date: December 2017

Next Milestone Date: December 2020

Milestone Goal: Discernable, sustained trends showing a reduction in the number of samples exceeding the wasteload allocation (see above) in the San Lorenzo River (SLR), Branciforte Creek and Carbonera Creek.

Summary: In general, City monitoring results show that the fecal coliform levels in the SLR watershed did not decrease in any appreciable trend in spite of the continued implementation of BMPs. Also, monitoring has shown that the fecal coliform exceedances trend less frequently at the upstream SLR locations than the downstream SLR locations; which reflects the more urbanized setting of the downstream SLR. Of the three waterbodies, Branciforte Creek was found to have the highest average percentage levels of fecal coliform exceedances. Levels in the San Lorenzo River were, in general, lower than Branciforte Creek but higher than Carbonera Creek which had the lowest percentage number of exceedances.

TMDL for Sediment

Wasteload Allocation:

The County of Santa Cruz, City of Santa Cruz, and City of Scotts Valley are assigned the following wasteload allocations: sediment discharges from public roads to the San Lorenzo River shall be reduced by 27%, sediment discharges from public roads to Lompico Creek shall be reduced by 24%, sediment discharges from public roads to Carbonera Creek shall be reduced by 27%, sediment discharges from public roads to Shingle Mill Creek shall be reduced by 27%.

Effective date is December 18, 2003

Allocations shall be achieved by December 18, 2028.

Permit Year 5 Milestone Date: December 2017

Next Milestone Date: December 2020

Milestone Reductions/Improvements Goal: Discernable, sustained improvement (a reduction) in sediment loads at the various monitoring stations within the City.

Summary: The City data for sediments is not yet sufficient to present a year-to-year analysis of trends in SLR, Branciforte Creek and Carbonera Creek within the city. However, monitoring data indicates that sediment loading to the waterbodies is affected by the frequency and intensity of storm events. Please see the County of Santa Cruz (County) October 2018 “TMDL Report for the San Lorenzo River, Soquel Creek, and Aptos Creek Watersheds” for additional information as the County has conducted long-term monitoring for sediment in the SLR watershed including sites within the City.

The City will continue to collaborate with the County of Santa Cruz and City of Scotts Valley to ensure a comprehensive monitoring program and further analyses regarding the input and transport of sediments through the SLR watershed. This will allow us to further and more effectively evaluate results and, in turn, modify existing BMPs or implement additional BMPs.

In summary, the City will continue to collaborate with the County of Santa Cruz and the City of Scotts Valley in a comprehensive approach to address the TDMLs in the San Lorenzo River watershed and achieve TMDL goals. In addition, the City will continue to coordinate and implement programs with local NGOs such as the Coastal Water Council, the San Lorenzo River Alliance, and Save Our Shores, and other interested parties in order to reduce pollutant sources and improve water quality in the SLR watershed.