CITY OF SANTA CRUZ

Public Works Department
809 Center Street, Room 201 Santa Cruz, CA 95060, 831-420-5160, FAX 831-420-5161

October 10, 2018

PROGRAM EFFECTIVENESS ASSESSMENT IMPLEMENTATION ANNUAL REPORT

The City of Santa Cruz Storm Water Program Effectiveness Assessment and Improvement Plan is a comprehensive effort involving both individual BMP assessment and overall program evaluation. The attached BMP implementation and effectiveness assessment matrix provides a summary of the results of individual BMP evaluation activities conducted during the permit year. The BMP matrix includes the following information:

1) BMP implementation rating, from "None" if the BMP has not been implemented at all to "Full" if the BMP was fully implemented and achieved its measurable goal. A BMP is classified as "Partial" if it was implemented but not fully achieving its measurable goal.

2) BMP implementation summary, providing information on activities conducted during the permit year and associated results.

3) For priority BMPs, as listed in the City's Program Effectiveness Assessment and Improvement Plan, BMP effectiveness ranking, from "Low" if the BMP was marginally effective based on the assessment results to "High" if the BMP was very effective.

4) For BMPs with "low" effectiveness rating, proposed modifications as appropriate.

Additionally, to support overall program evaluation the City has been involved in a collaborative effort with other municipalities of the Central Coast, the Low Impact Development Initiative (LIDI), 2NDNATURE LLC, and the Central Coast Regional Water Quality Control Board (RWQCB) to develop a land-use load estimation model. The model will help estimate pollutant loading from various catchments in the City and load reductions achieved by program elements that can be quantified using land-use load estimates.

As reported in previous permit years, the City completed the following tasks to support model development: delineation of drainage catchments and associated attributes within City limits, and completion of a detailed existing land use map. These elements were included in the Technical Report No.1 uploaded by the City in SMARTS on August 4, 2016, in response to the RWQCB *Water Code Section 13267 Technical Report Order* to Phase II Municipal Storm Water Permittees dated June 13, 2016.

Beginning in July 2016, the City began inventorying existing structural BMPs using the 2NDNATURE Software BMP RAM tool. City catchment and land use mapping required as a base for the model were completed and submitted to the RWQCB on August 4, 2016. In addition, in FY16-17, the City completed an inventory of structural BMPs and pollutant load model for baseline condition using the 2NDNATURE Software BMP RAM tool.

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As required, a Report #2, dated June 27, 2017, was submitted to the RWQCB by June 30, 2017. This report indicated the City's choice of BMP Inventory Option 1 per the RWQCB's *Water Code Section 13267 Technical Report Order*.

The City currently is an "All-In 2NForm suite" subscriber to the 2NDNATURE suite of tools including the BMP RAM assessment tool, TELR catchment modeling, and Parcel RAM. As required per the RWQCB's *Water Code Section 13267 Technical Report Order*, the City submitted Report #2, dated June 27, 2017, to the RWQCB indicating that BMP Inventory Option 1 was chosen and that a contract was in place with 2NDNATURE Software. Thus the mapped inventories of the centralized BMPs and the City-owned decentralized BMPs, and the ranking based on storm water volume and pollutant loading estimates under unmitigated conditions are available to the RWQCB via a link provided by 2NDNATURE. As new projects are completed or information is obtained, the City updates the inventory per the 2NForm BMP RAM Module.

The City's schedule to complete the following elements of model development and program evaluation is as follows, as required in the CCRWQCB Code Section 13267 Order:

- June 30, 2017: Inventory of structural BMPs and pollutant load model for baseline condition (no BMPs)- **DONE**
- June 30, 2018: Comprehensive BMP assessment and pollutant load model including load reductions associated with BMP implementation- **DONE**.
- October 15, 2018: Proposed Storm Water Program modifications- **DONE**.

ANNUAL REPORT AND PROGRAM EFFECTIVENESS ASSESSMENT MATRIX
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.6	**PROGRAM MANAGEMENT ELEMENT**																			
E.6.a	**Legal Authority (update or create ordinance)**				Public Works	Engineering	2													
E.6.b	**Certification**				Public Works	Engineering	2													
	E.6.a, b	**N/A**	**Permittee shall review and revise relevant ordinances or adopt new ordinances to obtain adequate legal authority, and provide certification by its Principal Executive Officer**		Public Works	Engineering	2	FULL	Done in Permit Year 2.	N/A	1	N/A	Documentation			Continue				
E.6.c	**Enforcement Response Plan**						3													
✓	E.6.c	**NEW BMP**	**Develop and implement an Enforcement Response Plan.**		Public Works	Environmental Compliance, Engineering	3	FULL	The City has had an Enforcement Response Plan in place since 2008. In November 2015, the City initiated an update to the ERP to incorporate Storm Water ERP elements required by the Permit, revise Wastewater ERP procedures, and add new ERP procedures in support of the City's upcoming sewer lateral ordinance. The revised ERP was adopted in September 2016. An electronic copy of the updated and finalized ERP was sent to the Water Board.	N/A	1	N/A	Documentation			Continue				Modify as needed
E.7	**EDUCATION AND OUTREACH PROGRAM**																			
E.7.a	**Public Outreach and Education**																			
✓	*E.7.a*	***NEW BMP***	***Select a Public Outreach & Education option***		*Public Works*	Engineering	*1*	FULL	The City's public outreach & education program is a combination of options E.7.a. items 2-3. The City participates in multiple regional outreach and educational efforts including the Regional Media Campaign and the Monterey Bay Green Business Program. Copies of the Regional Media Campaign billing and the Green Business Program MOU were submitted with the Permit Year 1 Annual Report. The City also contributes funding to regional efforts by local non-profit organizations such as: Save Our Shores; Annual Coastal Cleanup Day; Ecology Action: Our Water Our World & Green Gardner/Monterey Bay Friendly Landscaping Programs; Coastal Watershed Council: Snapshot Day volunteer monitoring event and the San Lorenzo River Alliance; and the Santa Cruz Water Conservation Coalition. The City also conducts a significant amount of outreach within city limits including school education programs; water quality, pollution prevention & riparian education; and river levee cleanups.	*N/A*	*1*	*N/A*	*Documentation*	Include additional programs to address trash		Continue		Include additional programs to address trash		Modify as needed

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	E.7	**PE-17**	**Assess Community-Based Social Marketing Strategies and Incorporate Them Where Appropriate**	Develop pilot CBSM project	Public Works	Engineering	1	FULL	In FY17-18, staff coordinated with the other Santa Cruz County municipalities and hired the same survey firm as in FY13-14 to do a second and follow-up public education survey. Again, the survey was done by conducting interviews with residents using an electronic tablet. In FY14-18, the City funded a plastic bag reduction project for the smaller vegetable/fruit plastic bags conducted by Save Our Shores (SOS). This project includes CBSM measures such as pledges and photos/videos which were then posted on the SOS Facebook page.This year and last year, the project was extended to several San Lorenzo River (SLR) volunteer cleanup events where reusable produce bags was given out to volunteers who also took the pledge. CBSM methods, such as posting on Facebook and Twitter, were also used in other programs such as river cleanups, etc. This year, the City funded a Pet Waste Campaign in partnership with Coastal Watershed Council (CWC) to educate pet owners with the goal of reducing bacteria loadings to the SLR and other waterways. Volunteers help conduct outreach to dog owners and also conduct pet waste surveys along the SLR. CWC ordered doggie waste bags that were given out to dog owners, volunteers, and also residents participating in a volunteer neighborhood cleanup adjacent to the SLR. The campaign will continue in FY19. Beginning in FY17-18, PW storm water staff partnered with CWC staff to increase neighborhood awareness regarding trash/littering, illegal dumping and water quality issues in areas draining to the SLR. This partnership will organize and cohost neighborhood cleanups in the Beach Flats and Ocean's 11 neighborhoods.	Medium	3	Pathogens, trash	Behavior Survey			Continue				
✔	*E.7.a (ii)*	***NEW BMP***	***Develop and implement a comprehensive storm water public education and outreach program***	*Develop and Implement a public education strategy that establishes education tasks, based on WQ problems, target audiences, and anticipated task effectiveness*	*Public Works*	*Engineering*	*2*	FULL	The City has a comprehensive and extensive storm water public education & outreach program, which has been in place for many years. Please see the above items for additional information. During the previous years and this year as well, the program strategy was re-evaluated as required with regard to education tasks, WQ problems, target audiences, and estimated task effectiveness.	*N/A*	*1*	*N/A*	*Documentation*							
	E.7.a (b)	**PE-18***	**Conduct Surveys to Assess the Effectiveness of the Education Efforts. Conduct a Baseline Evaluation Survey in Year 4 and Conduct an Evaluation Survey Every 5 Years Thereafter.**	Survey results that provide feedback on Program effectiveness and indicate areas that need improvement or change	Public Works	Engineering	2 (2x during permit period)	FULL	The City, in coordination with the County of Santa Cruz and the Cities of Scotts Valley, Capitola, and Watsonville, jointly hired a firm to conduct a public education survey during the spring of 2018. The 2018 survey was comprised of 38 questions and was conducted by interviewing people at various locations using an IPAD. The results were compiled both into a report specifically for the City and also into a report summarizing the results for the entire County. The results of this 2018 survey are compared to the baseline survey completed in 2014. The 2018 survey included a few new questions on the topics of construction and cigarette litter. A copy of the survey summary report is available upon request. Some key findings from the 2018 survey report include: - City of Santa Cruz residents demonstrated a high level of awareness and understanding of storm water concepts. Nearly three quarters (72%) indicated that they are familiar with the term "Watershed", up 22% from the 2014 survey results. - Just over two thirds (67%) correctly identified that "Water that flows into storm drains goes into local creeks, rivers, and the Bay without being treated". - City residents believe that "Garbage…", "Oil…", and "Pesticides…" are the three pollutants that have the largest impact on the Bay.	N/A	2	N/A	Documentation			Completed				

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	E.7.a (c,f,h)	**PE-3***	**Distribute Informational Brochures for Residents**	Distribute educational brochures at Public Works counter, City Public Library, and one or more special events.	Public Works	Engineering, Environmental Compliance	2	FULL	Brochures were distributed to the public via a variety of methods including the PW Public Counter, the Public Library and at special events such as Earth Day. The focus is now on distributing the revised Monterey Bay Begins On Your Street brochures (in English & Spanish) in lieu of the individual Pollution Prevention Tips brochures, and a combined total of all these brochures distributed equaled 361 brochures. These brochures were also distributed to residents households during the City's public education survey. Additionally, Gardening with CA Native Plants & Sharp Solutions (Sharps and Meds Disposal) brochures were given out at special events. These brochures are also available on the city website. Lastly, brochures on sewer lateral safety were also handed out to 18 residents on the city's Eastside during the year.	Low	2	Sediment, pathogens, trash	Public Awareness Survey			Continue				
	E.7.a (c,d,f)	***PE-4***	***Utilize Door Hangers As Needed By Environmental Compliance Inspectors***	*Distribute door hanger at 100% of residences when responding to a complaint and the resident is not home*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*2*	*Pathogens*	*Documentation*							
	E.7.a (c,d,f, h)	**PE-5***	**Distribute BMP Brochures for Businesses**	Distribute BMP brochures at 100% of new food and vehicle service facilities during the initial site visit by the Environmental Compliance Inspector and once during permit period to existing food and vehicle service facilities	Public Works	Environmental Compliance	2	FULL	Staff distributed the BMPs at all new FSF and VSFs. There were approximately 5 new FSFs and 7 new FSF grease trap size evaluations. These BMPs were revised in 2010. BMPS are distributed by inspectors during visits to businesses and at public events. The BMPS are also posted at the City website.	Not assessed	2	Pathogens, trash	Documentation			Continue				
	E.7.a (c,d,f,h)	**PE-6* (same as CF-3, CF-5)**	**Implement the Clean Ocean Business Program**	1. Annual inspections of 100% of food and vehicle service facilities, 2. Annual recognition for 100% of Clean Ocean Businesses	Public Works	Environmental Compliance	2	FULL	Of the 96 Vehicle Service Facilities (VSFs), 67 businesses qualified for the 2018 Clean Ocean Businesses (COB) recognition, which equals 70% of the VSFs. Of the 300 Food Service Facilities (FSFs), 225 businesses qualified for the 2018 recognition, which equals 75% of the FSFs. Recognition letter were sent to COBs on May 8, 2018. The City ran COB recognition ads in 2 local newspapers during the week of May 13, 2018. An online banner ad ran on one local newspaper's website from May 13-27, 2018.	High	3	Pathogens, trash	Inspection			Continue				
	E.7.a (c,d,f)	**PE-7***	**Partner and Co-sponsor of the Monterey Bay Area Green Business Program**	Initiate the Green Business certification (audit) process for 20 business applicants or re-certifications per year	Public Works, Water	Engineering, Refuse & Recycling, Water Cons.	2	FULL	The City's participation in the Monterey Bay Green Business (MBAGBP) program includes staff time for program coordination and business audits, and financial support for the Green Business promotional work. The promotional efforts vary slightly from year to year but typically include newspaper ads and web/social media advertising. In FY2017-2018, 53 businesses became either certified or recertified (required every 3 years). There are currently 166 certified businesses in the City. An additional 35 businesses are "in process" which means they have applied to become certified or recertified "Green" and are working on achieving program requirements. A list of all the certified businesses within the City and in the Monterey Bay area, plus program details, may be viewed on the GBP website at: http://www.montereybaygreenbusiness.org/. The certification process includes audits by four auditors (water conservation, wastewater and storm water, energy, and waste reduction) and completing all the required measures. Program metrics are tracked in the Green Business Database and indicate that the certified businesses in the City account for 586 gals of hazardous waste reduction, 38,991 gals of grease recycled and 4.6 million gals of water saved.	High	4	Sediment, Pathogens, Trash	Inspection, load reduction estimate (metric tracking by the program)			Continue				

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	E.7.a (d,f) E.7.b.2.b E.8. (d)	**PE-16***	**Maintain Environmental Programs and Environmental Compliance Web Pages, and post the City's Draft and Final Storm Water Management Program (SWMP) on the City's Website**	1. Environmental Compliance Web Pages, 2. Environmental Programs Web pages 3. SWMP Posted on City Website	Public Works	Environmental Compliance	2	FULL	Staff continually evaluates and updates the City website and Environmental webpages with current info. During the permit year, the Storm Water page was updated re the new "Mobile Food Vendor Best Management Practices. During the previous permit years, the webpage was updated with the revised Residential Pollution Prevention Tips Brochure (Gardens, Landscaping, and Pools & Spas). In addition, miscellaneous text was updated, as well as the Spills and Illegal Dumping phone numbers. New "friendly" URLs were also added for the stormwater pages (www.cityofsantacruz.com/stormwater and www.cityofsantacruz.com/bmps) for ease of communication. The storm water annual reports are also posted annually upon submittal.	High	2	Sediment, Trash	Tabulation (tracking page views), public awareness survey			Continue				
	E.7.a (d)	**PE-1***	**Replace Worn Stencils or Apply New Stencils to Storm Drain Inlets**	24 stencils replaced or newly applied annually	Public Works	Engineering, Streets	2	FULL	Again this year, 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, checked 247 drain inlets in total, and posted photos of the storm drain marking project on social media websites, for example posting on Instagram resulted in 78 "likes." SOS also used social media as a platform for residents to report damaged or missing storm drain decals in their neighborhood.	Medium	2	Trash	Public Awareness Survey			Continue				
	E.7.a (d)	**Added BMP***	**Regional Media Campaign**	Participate in Regional Media Campaign annually when implemented by the storm water agencies in the Monterey region	Public Works	Engineering	N/A	FULL	The Regional Municipal SW group (including the City of Santa Cruz and 13 other municipal entities located w/in the counties of Monterey and Santa Cruz) again collaborated on and jointly funded a storm water ed media campaign, which was coordinated by a hired consultant. Storm water educational PSAs were run on local TV stations during the permit year. The TV stations were: FOX-KCBA, CBS-KION, KMUV (Spanish) and CW-NION. The ads were on the following topics: marine debris, pet waste, storm drains, and "fowl" water (ad shows urban runoff sources). A total of 668 ads aired on four stations. Of those ads, 220 were bonus ads donated by the stations for the campaign. In addition, KION546.com added a digital display for 5 months with 25,000 impressions per month. This yielded a total of 125,000 impressions. KMUV (Telemundo-Spanish station) aired 207 ads, and the three English language stations aired a combined total of 461 ads.	Not assessed	2	Litter, pathogens, trash, detergents	Documentation			Continue				
	E.7.a (e)	**PP-1, PE-15***	**Hold Public Meetings for SWMP Related Issues**	Hold Public Meetings as needed for SWMP Related Issues and update City Council and Public Works Commission as needed.	Public Works	Engineering	2	FULL	Two Transportation and Public Works Commission meetings, which are both public meetings, were held as follows: 1) on July 17, 2017 on the new State Trash Provisions and City efforts; and 2) on 1/22/18 on the City Storm Water Management Program, Storm Water budget/fund, and the Trash Provision. At both meetings there was an opportunity for public comment. The previous spring, staff gave a presentation to the Clean River, Beaches, and Ocean fund committee regard the City's storm water program and expenses on May 8, 2017. The presentation included budget and highlights of the City storm water program accomplishments during the past year. Also presented were upcoming storm water permit requirements and new planned projects or campaigns.	Not assessed	2	N/A	Documentation			Continue				
	E.7.a (f)	**PE-2***	**Participate in Public Events**	Participate in at least 1 Public Event annually	Public Works	Engineering, Environmental Compliance	2	FULL	Staff participated in multiple events throughout the year including: 1) Earth Day Santa Cruz on April 21, 2018 where approx. 2,500 people attended the all day event; 2) State of the San Lorenzo River Symposium on March 17, 2018; and 3) City Hall to You neighborhood outreach meetings on August 31, 2017 and November 15, 2017. 4) "Connecting the Drops" Forum on Feburary 1, 2018. Environmental Compliance staff also participated in the September 2017 *CWEA Pollution Prevention event* at the Pasatiempo Inn.	Not assessed	2	N/A	Documentation			Continue				

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	E.7.a (g)	**Added BMP***	**LID & Water Efficient Landscaping Outreach & Education for Residents**	Water efficient and storm water friendly landscape outreach via for example: RCD, Green Gardner, similar programs, events, advertising, City website, brochures, and/or rebates.	Public Works	Engineering	2	FULL	The City provided funding for, or implements programs and outreach re, water efficient and storm water friendly landscape programs. These programs include: 1) the Green Gardner Program, run by Ecology Action, which educates landscapers and the public on water conserving irrigation techniques, mulching, herbicide/pesticide use, etc. Typicallly this outreach is thru an Adult Ed class series. 2) the Monterey Bay Friendly Landscape incentive program run by Ecology Action which provides recognition for local gardens meeting the program standards. 3) Staff disseminates the Resource Conservation District "Slow it, Spread it, Sink it!" Guide for residents re home retrofits, including LID bmps, at the PW public counter, upon request, special events, and on the city website. 4) City Water Dept. implements rebate programs for rain barrels and lawn removal. 5) SW staff developed and distributes a "Garden, Pool, and Spa Maintenance" Pollution Prevention Tips brochure at the PW public counter, the Main Library, at special events, and on the City website. 6) City Water Conservation and Storm Water Programs participate in the Santa Cruz County Water Conservation Coalition. One of the outreach programs includes a video contest for local high school and college students. Videos were on water conservation or pollution prevention topics. Winning videos were shown on a local TV station, KION and as previews in local movie theaters during summer 2018. The Coalition also sponsored 2 Spring 2017 Water Conservation classes at the local junior college, Cabrillo College. The two classes were on Rain Water Harvesting and Graywater Use.	Not assessed	2	N/A	Documentation			Continue				
	E.7.a (i)	**PE-9***	**Partner and Co-sponsor the Regional Pesticide Management Education Program-Our Water Our World Program or similar**	Pesticide/herbicide/fertilizer outreach via Our Water Our World, Green Gardener, or similar program using 1 or more of the following methods: brochures or flyers, contractor or employee training, tabling or classes, advertising, PSAs.	PW	Engineering	2	FULL	The City continues to participate in the Our Water Our World (OWOW) program, which is a herbicide/pesticide education program, run by Ecology Action in the city and area-wide. This FY17-18 the OWOW program provided direct IPM training to 73 residents and/or households in the City, including 1) OWOW IPM training for 3 employees at two participating retailers of pestcides and fertilizers. 2) 65 residents at community tabling events at San Lorenzo Garden Center and local Farmers Markets. 3) 8 Monterey Bay Friendly Landscaping site asessments. OWOW fact sheets/flyers ("shelftalkers") are provided at the two local nurseries/garden retail stores in the city. Of the shelftalkers, the Ants, Healthy Lawns, and Aphids fact sheets are the most popular. The City also participates in the area-wide Green Gardner Program run by Ecology Action and Monterey Bay Friendly Landscaping Program, which Ecology Action developed with a Prop 84 Planning Grant. This later countywide program is a residential sustainable landscape incentive and recognition program.	Not assessed	2	N/A	Documentation			Continue				
	E.7.a (j)	**PE-8***	**Support for O'Neill Sea Odyssey Education Program**	Annual support for 10 school classes or 300 students per year	Public Works	Engineering	2	FULL	The City provides funding for two O'Neill Sea Odyssey (OSO) Education Program programs: 1) *Storm Water Runs to It Program* -This program includes 3 Fourth grade classes and 2 Fifth grade classes with a total of 117 students educated this year. The program includes both a boat field trip on the OSO catamaran with on-board ocean & watershed education, and a classroom presentation at the OSO office; and 2) *Ocean Protectors Program* -This program includes 8 classes, primarily Fourth and Fifth graders, with a total of 150 students educated this year. The program has various components including a OSO boat field trip with on-board ocean & watershed education and a classroom presentation at the OSO offices. In addition, a subcontractor, Save Our Shores (SOS), conducted classroom presentations, including interactive marine debris activities, at the respectiv schools. SOS also led beach cleanups with these classes as part of the program and, in total, the students removed 64 pounds of waste during cleanups at Twin Lakes and Seabright Beach.	High	2	Trash	Survey			Continue				

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	E.7.a (j)	**Added BMP***	**Conduct education in local schools (e.g. classroom visits, assemblies, field trips)**		Public Works	Engineering	2	FULL	The City funds a variety of school education programs such as the O'Neill Sea Odyssey programs, Save the Whales marine species/ecological/water pollution prevention presentations, Save Our Shores marine debris presentations, and Musical Assemblies in local elementary schools. 1) The O'Neill Sea Odyssey (OSO) programs are focused on 4th grade classes and include both a boat field trip on the OSO catamaran with on-board ocean & watershed education, and a classroom presentation at the OSO office. Thes programs are described in more detail in above line item. 2) Save the Whales gave presentations to local elementary, middle, and high school classes on ecology, marine debris, and the effects of pollution. Presentation are offered on: Sea Otters; Marine Mammals; and Sea Turtles. During the permit year, a total of 43 elementary and 16 middle/high school class presentations were conducted with 937 and 417 students educated respectively. 3) Save Our Shores (SOS) conducted 12 school presentations at local middle and high schools on storm water pollution, pathways of pollution and marine debris, with a total of 269 students educated. 4) Musical Assemblies focusing on storm water ed & outreach messages are also offered to local elementary schools. This permit year, a musical ensemble named ZunZun conducted musical assemblies at 3 local schools with a total of 1,378 students educated during the 6 musical assemblies. Another benefit of the program is indirect outreach to the parents. Another musical ensemble, The Banana Slugs, conducted a musical assembly at Monarch School including several other schools.	High	3	Trash	Survey			Continue				
	E.7.a.(ii) (k)	**CF-1***	**Revise the BMPs for Vehicle Service Facilities, Food Service Facilities, and Retail and Commercial Businesses As Needed**	Revise all 3 brochures per sidewalk cleaning regulations and other additional topics if any	Public Works	Engineering, Environmental Compliance	2	FULL	The BMP brochures are revised as needed and the revisions posted immediately on the City website. This permit year a new BMP brochure for Mobile Food Vendors was developed and published on 1/17/18. The BMP brochures for Vehicle Service Facilities, Food Service Facilities, and Commercial Facilities were last revised in June 2010. The City's Municipal Operations BMPs were revised in Januaray 2016 and uploaded to the City website. Also, the Residential Pollution Prevention Brochure: Garden, Pool and Spa was revised in June 2016 and uploaded to the City website, and Monterey Bay Begins At Your Front Door was revised in 2016-2017 and re uploaded to the website as well.	N/A	1	N/A	Documentation			Continue				
		PE-14, PC-13*	***Develop and Implement an Education Program Addressing the Restoration and Protection of Riparian and Wetland Areas***	*1. Complete development of program plan* *2. Implementation of educational measures, ie.e. hold workshops distribute brochures*	*Public Works*	*Engineering*	*N/A*			*Not assessed*	*2*	*N/A*	*Documentation*							
✓	E.7.a (k)	**NEW BMP**		Develop and convey messages specific to reducing discharges from organized car washes, mobile cleaning/pressure washing operations	Public Works	Engineering	2	FULL	Again this permit year, storm water messages regarding car wash fundraising events and mobile/pressure washing activities were incorporate in letters sent to City schools and outreach/invitation cards sent to local mobile/pressure washers. The letter to local schools re car wash fundraising events was sent on March 23, 2018. The outreach/ invitation letter was sent to local mobile/pressure washers on March 23, 2018.	Not assessed	2	N/A	Documentation			Continue				
✓	E.7.a (l)	**NEW BMP**		Conduct stormwater-friendly education to organized car wash participants	Public Works	Engineering	2	FULL	Again this permit year, in March 2018, a letter was sent out to the City schools (elementary, middle, and high schools) to let them know that water from car wash fund raising events cannot be discharged to the street or storm drain system. The letter also let the schools know that they could borrow the City's special car wash kits to protect storm drains.	Not assessed	2	N/A	Documentation			Continue				
✓	E.7.a (m)	**NEW BMP**		Develop and convey messages specific to mobile cleaning and pressure wash businesses	Public Works	Engineering	2	FULL	During the permit year, an outreach/ invitation card was sent to over 50 local mobile/pressure washers in March 2018.	Not assessed	2	N/A	Documentation			Continue				

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E.7.b.	**Staff and Site Operator Training**						3													
E.7.b.1	**Illicit Discharge Detection and Elimination Training**						3													
	E.7.b.1	**MO-20**	**Develop A Storm Water BMP Training Piece**	Training brochure, PowerPoint presentation, or other effective method	Public Works, Parks & Rec, Water, Planning	Engineering	3	FULL	Staff developed and finalized a storm water BMP training PowerPoint presentation, entitled "Best Management Practices to Prevent Storm Water Pollution," in May 2012 and circulated it to all field crew supervisors. The PowerPoint presentation is based on the City's BMPs for Municipal Operations. The presentation consisted of many slides with both text and photos. Updates to the text and new photos are added as needed each year. Also, the presentation is updated annually with information on current "hot spot" areas or areas where illegal discharges had occurred within the city. This is based primarily on information from the Environmental Compliance Inspectors and storm water staff. The presentation is used by many crew supervisors when conducting annual storm water training for their staff. Storm Water staff also uses this presentation when conducting staff training for various City departments. A copy of the presentation is available upon request.	NA	1	Pathogens, sediment, trash	Documentation			Done, continue				
	E.7.b.1	**MO-21**	**Train and Educate Appropriate Field Crews**	1. Train 100% of appropriate staff biennially-City TOTAL	Public Works, Parks & Rec, Water, Planning	Engineering, Refuse, Streets, Traffic/Parking, Parks & Rec-Downtown & Central Zone, Parks & Rec-East Zone, Parks & Rec-Neary Lagoon & West Zone, Parks & Rec-Wharf, Water Distribution, Water Production, Building	3	FULL	All field crews and other staff were trained on pollution prevention and good housekeeping measures. Most divisions used the PowerPoint training presentation developed by SW staff based on the City BMPs for Municipal Operations. The Water Dept. also uses department specific SOPs to supplement the training. The storm water training presentation includes informantion re illicit discharges and is updated annually with "hot spot" areas each permit year prior to the spring training sessions. A "pre" and "post" training survey is completed by each staff person. Approximate numbers of field crews and other staff working outdoors that were trained include: PW Fleet Maintenance (19), PW Streets & Traffic (10), PW Solid Waste (28), PW Engineering Staff (15), PW WW Collection/Flood Control (14), Fire Dept. & Police Dept. (72), Parks & Recreation Dept. (55), and Water, Dept. (41). Also, City Planners (10) and Building staff (13) were trained this year using a presentation tailored to include their work specific highlights.	High	2	Pathogens, trash	Pre- and post-training survey			Continue				
				2. Train new staff within 6 months of the beginning of employment-all depts.	Public Works, Parks & Rec, Water, Planning		3	FULL	New Solid Waste, Streets/Traffic, Parking, and WW Collection staff are trained by their Supervisor upon hiring and/or at staff safety/tailgate meetings. All new Water Dept. staff trained by each Supervisor using BMPs, SOPs, & training videos. Parks staff are either trained by their Supervisor upon hiring or attend the annual storm water training conducted in the spring as many new Parks staff are temps that are hired in the spring for the summer season. Storm Water staff sends periodic email reminders to all appropriate supervisors with field crews to ensure that new staff are trained within 6 months of hiring.	High	2	Pathogens, trash	Pre- and post-training survey			Continue				
✓	E.7.b.1 (d)	**NEW BMP**	**Develop and conduct annual assessment of trained staff's knowledge of illicit discharge response and refresher training as needed**		PW, P&R, Water, Planning		3	FULL	In FY16-17 and again this permit year, specific illicit discharge slides were added to the field crew training presentation.	N/A	2	N/A	Documentation			Continue				
✓	E.7.b.1 (f)	**NEW BMP**	**Contact information, including procedures for reporting illicit discharges, shall be included in each of the Permittee's fleet vehicles that are used by field staff**		PW, P&R, Water, Planning		3	FULL	Storm water staff maintains a contact postcard for illicit discharge reporting phone numbers and distributed copies of the post-card to all departments fo placement in field vehicles. It was also provided to admin staff that receive department phone calls from the public. This permit year, storm water staff again circulated copies of the contact postcard either by inter-office mail o distributed them at staff training sessions.	N/A	1	Pathogens, trash	Documentation			Continue				
✓	E.7.b.1 (g)	**NEW BMP**	**Focused education on identified illicit discharges and associated illicit discharge locations**		PW, P&R, Water, Planning		3	FULL	Slides on identified illicit discharges in various areas of the City were included in the field crew, fire, and police training presentations. Each year, storm water staff contacts the Environmental Compliance Inspectors regarding hotspot locations during the past year so that staff presentations can be updated accordingly.	High	2	Pathogens, trash	Pre- and post-training survey			Continue				
E.7.b.2	**Construction Outreach and Education**																			
✓	E.7.b.2.a	**NEW BMP**	**Plan reviewers and permitting staff - QSD training (at least one person on staff providing supervision)**	At least one designated person on staff with QSD credential	PW, Planning		2	FULL	Projects plans are sent to two outside consulting firms for PCR and ECR review by a QSD certified staff person.	Not assessed	2	Sediment	Documentation			Continue				

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	E.7.b.2.a (a)	**CON-7**	**Provide Training to Planning/ Building Inspectors, Public Works Inspectors, and Planning and Public Works Plan Reviewers on Construction Site BMP Requirements**	1.a.Train 100% of Planning/ Building Inspectors, Public Works Inspectors, and Planning and Public Works Plan Reviewers every two years	Public Works, Planning	Public Works	2	FULL	This permit year, ten Building staff, one Planning Code Compliance staff, and four Public Works staff were trained at a construction training workshop on 10/20/2017 entitled "Construction BMPs 101, How to Keep Your Site Operational Rain or Shine" at Aptos Village Park which was sponsored by Santa Cruz municipalities, including the City. The workshop was for both contractors and municpal staff. Storm Water staff conducted a training presentation for 10 Planners on 6/7/18.	High	2	Sediment	Pre- and post-training survey							
				2. Train new Inspectors and Plan Reviewers within 6 months of the beginning of employment-Planning	Planning, PW	Planning	2	FULL	As detailed above, ten Building and one Code Compliance staff were traine at a construction training workshop on 10/20/2018 at Aptos Village Park entitled "Construction BMPs 101" which was sponsored by Santa Cruz municipalities, including the City. New staff are trained by their Supervisor upon hiring.	High	2	Sediment	Pre- and post-training survey			Continue				
				3. Additional training on new or changed BMPs as needed	Planning/Public Works	Planning/Public Works	2	FULL	As detailed above, ten Building and one Code Compliance staff were traine at a construction training workshop on 10/20/2018 entitled "Construction BMPs 101" which was sponsored by Santa Cruz municipalities, including the City.	Not assessed	2	Sediment	Pre- and post-training survey			Continue				

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✓	E.7.b.2.a (b)	**NEW BMP**	**Erosion/sediment control/storm water inspectors - QSP or QSD training (at least one person on staff providing supervision)**	At least one designated person on staff with QSP credential	PW, Planning	Building	2	FULL	Projects plans are sent to two outside consulting firms for PCR and ECR review by a QSD certified staff person.	Not assessed	2	Sediment	Documentation			Continue				
✓	E.7.b.2.a (c)	**NEW BMP**	**Third-party plan reviewers must have QSD training**		PW, Planning	Engineering	2	FULL	Projects plans are sent to two outside consulting firms for PCR and ECR review by a QSD certified staff person.	Not assessed	2	Sediment	Documentation			Continue				
✓	E.7.b.2.c	**NEW BMP**	**Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials**		Planning	Building	3	FULL	Municipalities of the Monterey Bay region partnered to distribute information and provide 2 training events on wet weather and erosion control BMPs for contractors in October 2018 (as mentioned in the above construction staff training line items. The workshop was entitled "Construction BMPs 101, How to Keep Your Site Operational Rain or Shine" and lunch was provided. The training locations were in Aptos and Seaside on 10/2016 and 10/13/16 respectively. The training flyer was sent to contractors via email and by posting on municipal facebook pages and websites. 59 people attended the Aptos workshop.	Not assessed	2	Sediment	Documentation			Continue				
	E.7.b.2.b	**CON-8**	**Distribute Construction BMP Brochure**	1. Available At the Planning Department counter	Planning	Building	3	FULL	The BMPs are continually available on a display turnstile at the Planning Dept. public counter and restocked as needed. The BMPs are also available at the Public Works public counter and on the City website. Additionally, a link to the Construction BMPs was included in the wet weather letters emailed during Fall 2017 to all open construction sites in the City.	Not assessed	2	Sediment	Documentation			Continue				

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	E.7.b.2.c			Require all new development and remodel projects disturbing soil to include construction notes in plans noting locations of runoff retention basins and/or runoff barriers and construction BMPs.	Planning	Building	3	FULL	The City requires all projects subject to the Grading Ordinance to submit an Erosion Control Plan. Providing sediment and erosion control details on project plans is also a requirement for projects subject to CalGreen (projects that increase the volume or area of buildings). The Green Building plan reviewer checks all proposed residential project plans subject to CalGreen requirements to ensure that erosion and sediment control details are included in plans. Larger projects subject to Post-Construction Requirements (PCR) (multi-family and commercial projects with >5,000SF of new or replaced impervious area) are reviewed by PW Storm Water staff for compliance with the Construction, Post-Construction, and SWPPP requirements (as applicable). In addition, as mentioned in above lines, project plans are sent to a third party reviewer for PCR and ECP review. Finally, Building and PW staff typically hold a preconstruction conference w/builder or developer for all large sites or sites in sensitive areas. These meetings always include a review of the construction and grading BMPs applicable to the project.	Not assessed	2	Sediment	Documentation			Continue				
	E.7.b.2.b	***CON-9***	***Distribute Construction BMP Handouts By Environmental Compliance Inspectors As Needed***	*Give BMP handouts to 100% of problems detected either while out in the field or during complaint*	*Public Works*	*Environ Compliance*	*3*			*Not assessed*	*2*	*Sediment*	*Documentation*						
	E.7.b.2.b	**CON-10**	**Attach BMP Permit Conditions for Public Works Over-the-Counter Street Opening and Concrete Permits**	100% Street Opening and Concrete Permits	Public Works	Engineering	3	FULL	All permits are issued w/storm water BMPs printed on back (this feature was programmed into the computerized permit issuance system).	Not assessed	2	Sediment	Documentation			Continue			
	E.7.a (d,f) E.7.b.2.b E.8. (d)	**PE-16**	**Maintain Environmental Programs and Environmental Compliance Web Pages, and post the City's Draft and Final Storm Water Management Program (SWMP) on the City's Website**	1. Environmental Compliance Web Pages, 2. Environmental Programs Web pages 3. SWMP Posted on City Website	Public Works	Environmental Compliance	3	FULL	Staff continually updates the City website Environmental Programs, Storm Water and Environmental Compliance web pages with current info as needed. The City SWMP and approved Guidance Document are posted on the website, as well as the Storm Water Annual Report upon submission to the Water Board. Other items, such as updated BMPs, are posted. This permit year, updates to environmental pages included: uploading of the newly created Mobile Food Vendor BMP Brochure.	Medium	2	Sediment, Pathogens, Trash	Documentation, Tabulation (page hits), public awareness survey			Continue				

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E.7.b.3	**Pollution Prevention and Good Housekeeping Staff Training**																			
	E.7.b.3 (a)	**MO-21**	**Train and Educate Appropriate Field Crews**	1. Train 100% of appropriate staff biennially-City TOTAL	Public Works, Parks & Rec, Water, Planning	Engineering, Refuse-Solid Waste, Streets & Traffic, Parking, Parks & Rec-Downtown & Central Zone, Parks & Rec-East Zone, Parks & Rec-Neary Lagoon & West Zone, Parks & Rec-Wharf, Water Distribution, Water Production, Building	2	FULL	All field crews and other staff were trained on pollution prevention and good housekeeping measures. Most divisions used the PowerPoint training presentation developed by SW staff based on the City BMPs for Municipal Operations. The Water Dept. also uses department specific SOPs to supplement the training. The storm water training presentation includes information re illicit discharges and is updated annually with "hot spot" areas each permit year prior to the spring training sessions. A "pre" and "post" training survey is completed by each staff person. This year, storm water staff conducted the Parks & Rec training session and at the end, once the post-survey was completed, went over the survey questions to further clarify any questions. Approximate numbers of field crews and other staff working outdoors that were trained include: PW Fleet Maintenance (19), PW Streets & Traffic (10), PW Solid Waste (28), PW Engineering Staff (15), PW WW Collection/Flood Control (14), Fire Dept. & Police Dept. (72), Parks & Recreation Dept. (55), and Water, Dept. (41). Also, City Planners (10) and Building staff (13) were trained this year using a presentation tailored to include their work specific highlights.	High	2	Sediment, Trash	Pre- and post-training survey			Continue					
				2. Train new staff within 6 months of the beginning of employment-all depts.	Public Works, Parks & Rec, Water, Planning		2	FULL	New Solid Waste, Streets/Traffic, Parking, and WW Collection staff are trained by their Supervisor upon hiring and/or at staff safety/tailgate meetings. All new Water Dept. staff trained by each Supervisor using BMPs, SOPs, & training videos. Parks staff are either trained by their Supervisor upon hiring or attend the annual storm water training conducted in the spring as many new Parks staff are temps that are hired in the spring for the summer season. Storm Water staff sends periodic email reminders to all appropriate supervisors with field crews to ensure that new staff are trained within 6 months of hiring.	High	2	Sediment, Trash	Pre- and post-training survey			Continue					
✓	E.7.b.3 (b)	**NEW BMP**	**Develop and conduct annual assessment of trained staff's knowledge of pollution prevention and good housekeeping, and revise training as needed**		PW, P&R, Water,		2	FULL	This permit year, during storm water training events and presentations, all field crew staff were asked to complete a "before" and "after" survey to assess staff's knowledge and effectiveness of the training. Almost all staff improved knowledge after the training. In addition, this permit year storm water staff went over the survey questions upon completion during the training sessions as many staff still had questions and want to confirm or clarify the answers. This in-place review appeared to be a helpful component of taking the surveys. This in-place review also helped storm water staff to immediately revise the presentations in order to clarify slides/text due to questions that came up while disussing the survey questions and answers.	N/A	N/A	N/A	Documentation			Continue					
	E.7.b.3 (c)	**MO-23**	**Develop Boilerplate Contract Language Requiring City Contractors to Abide by the Applicable Mandatory Storm Water BMPs**	Inclusion of boilerplate language for bid masters and/or the City contract master	Public Works, Purchasing	Engineering	2	FULL	Wording requiring contractors to abide by City Storm Water BMPs has been included on our Informal, Formal, and RFP masters since 12/1/10. On 12/13/10, the City's PO Terms and Conditions were also revised and posted on the Internet and City "Intranet." Text on the Finance Dept. webpage also refers those interested in doing business with the City to a link to the City's storm water BMPs.	N/A	1	Sediment, Trash	Documentation			Continue					
✓	E.7.b.3 (d)	**NEW BMP**	**Provide oversight of contractors hired by the permittee to ensure contractors are following BMPs, good housekeeping practices, and following SOPs.**		PW, Water, P&R		2	FULL	Each department is responsible for ensuring that all hired contractors abide by City BMPs, good housekeeping practices, SOPs, etc. Staff are reminded of this requirement during the annual storm water trainings.	N/A	3	Sediment, Trash	Inspections tracked in Year 4 (photo documentation)			Continue					

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E.7	***Existing BMPs Not Required By the Permit***																			
	N/A	**PP-2**	**Staff Will Contact the Downtown Association Annually; and Will Contact the Chamber of Commerce, Local Trade Organizations, and Business Groups on an "As Needed" Basis**	1. Annual contact with Downtown Association 2. Contact with the Chamber of Commerce, local trade organizations, and business groups as needed	Public Works	Engineering	N/A	FULL		N/A										
	N/A	**PE-12**	**Support for Earth Vision Environmental Film Festival**	300 people attending the event	Public Works	Engineeering	N/A	N/A		N/A										
	N/A	***IF-4***	***Conduct Education and Outreach to Regulated Industrial Facilities***	*Annually distribute BMP brochure at 100% of initial or new sites, and as needed at current sites if the business has not retained a copy.*	*Public Works*	*Environmental Compliance*	*N/A*													
E.8	**PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM**																			
✓	E.8. (a)	**NEW BMP**	**Develop a public participation strategy that establishes who is responsible for specific tasks and goals**		PW, Water, P&R	Engineering	2	FULL	The City is maintaining its current strategy. Storm water staff is responsible for planning, coordinating, implementing and tracking storm water related public involvement and participation activities.	N/A	1	N/A	Documentation			Continue				
✓	E.8. (b)	**NEW BMP**	**Consider development of a Citizen Advisory Group consisting of balanced representation of stakeholders**		Public Works	Engineering	2	FULL	The City already has an appointed citizen oversight committee for storm water program expenditures. Typically, an annual presentation on program highlights and fund expenditures is given to the Clean River, Beaches and Ocean committtee. Potential projects and needs for the next fiscal year are also discussed.	N/A	1	N/A	Documentation			Continue				
✔	E.8. (c)	**NEW BMP**	**Create opportunities for citizens to participate in the implementation of BMPs through sponsoring activities - monitoring**		Public Works	Engineering	2	FULL	The City co-sponsors/contributes funds for activities including citizen participation including volunteer cleanups and water quality monitoring events. As described in other items, these activities include: 1) Annual Coastal Cleanup Day: Run by Save Our Shores (SOS) and includes beach and river levee cleanups. 2) Holiday Outreach & Beach cleanups: Organized by SOS and includes outreach & ed on Memorial Day, July 4th and Labor Day weekends at 2 local beaches. 3) Adopt-A-Levee: Re this partnership program, SOS organizes 3-4 community groups to adopt and clean their section of the San Lorenzo River levee a minimum of 3x/year. 4) Community River Cleanups: SOS organizes volunteer community river levee cleanups 4x/year (typically per season). Newspaper and social media ads are placed to recruit volunteers & educate the public. 5) Snapshot Day: This annual countywide volunteer monitoring program is organized by Coastal Watershed Council (CWC). Local waterbodies are sampled by in this family friendly event occurring each May. 6) Pet Waste Campaign: CWC & the City are conducting a pet waste campaign to help reduce bacteria loadings to the SLR and other waterways. The Campaign includes volunteers to help conduct outreach to dog owners and to conduct before & after surveys. City and CWC staff planned the campaign, and CWC ordered doggie waste bags, with an educational message, to be given out to dog owners. CWC also began outreach to local vets, pet shampoo services, and local pet shelters. Also, the City funded a new SOS program called "Cowell Beach Cleanups." This program included 10 volunteer beach cleanups during spring/summer.	Not assessed	3	N/A	Documentation			Continue				
	E.8. (c)	**PP-3, PE-13 / ID-5***	**Sponsorship of First Flush**	Sponsorship of one volunteer monitoring effort in the City	Public Works	Engineering	2	FULL	The Coastal Watershed Council discontinued running First Flush in the City in order to focus their efforts on the San Lorenzo River Alliance (SLRA) which includes monthly volunteer monitoring at selected sample sites along the river. Thus, instead, the City provided funding suppport for the SLRA and joined as a partner organization. In addition, the City provided funding support for Snapshot Day, which is an annual volunteer monitroing event organized by the Coastal Watershed Council (CWC) and held each year in May. The City has contributed funding for this event annually since Spring 2009. This year, Snapshot Day was held on May 5, 2018. The event included 22 water bodies/sampling sites within the City with 29 volunteers participating at these sites. In total 41 sites were monitored in SC County.	Not assessed	3	N/A	Documentation	CWC efforts now focus on improving water quality in the San Lorenzo River and the First Flush program in the City was discontinued several years ago. The City participates in the San Lorenzo River Alliance (SLRA) led by CWC.						
	E.8. (c)	**PE-10***	**Co-Sponsor Coastal Clean-Up Day**	Sponsorship of the event in the City at level equivalent to $1,000 or more	Public Works	Engineering	2	FULL	This permit year, the City provided funding support for Annual Coastal Cleanup Day, which was held on Sept. 16, 2017. The state-wide event is organized and run locally by Save Our Shores. The event included 6 cleanup sites w/in the City including at beaches, along the river levee, and near Carbonera Creek. Of the 6 sites, 3 were at beaches, 2 were along the SLR levee, and 1 was near Carbonera Creek. In the City, there were 285 volunteers who removed a total of 639 pounds of trash and 85 pounds of recycling.	High	4	Trash	Direct load measurement, tabulation (participation numbers), participant survey							

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	E.8. (c)	**Added BMP***	**Sponsor volunteer monitoring efforts (e.g. Snapshot Day)**	Sponsorship of one volunteer monitoring effort in the City	Public Works	Engineering	2	FULL	1) This permit year, the City provided funding suppport for Snapshot Day, which is an annual volunteer monitoring event organized by the Coastal Watershed Council (CWC) and held each year in May. The City has contributed funding for this event annually since Spring 2009. This year, Snapshot Day was held on May 5, 2018. The event included 22 water bodies/sampling sites within the City with 29 volunteers participating at these sites. In total 41 sites were monitored in Santa Cruz County. 2) As previously described, last year the First Flush monitoring event was discontinued in the City by CWC. However, the City joined and contributed funding to the San Lorenzo River Alliance efforts, organized by CWC, which includes monthly volunteer monitoring of the river.	Not assessed	3	N/A	Documentation			Continue				

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	E.8. (c)	**Added BMP***	**Support for river, creek and/or beach volunteer cleanups (e.g. Adopt-A-Levee Program, community river cleanups, Save Our Shores July 4 & 5th Poll Prev. Outreach and Star Spangled Beach Cleanup)**		Public Works	Engineering	2	FULL	This year, the City continued funding or contributed support for several river and beach 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. 3 Holiday Clean Beaches-This year, the July 4 & 5th Pollution Prevention Outreach and Star Spangled Beach Cleanup effort, which is a countywide program developed and run by Save Our Shores (SOS), was expanded in the City to include outreach for Labor and Memorial Day weekends. Typically, the July 4th outreach efforts included Cowell and Main Beaches in the City and volunteer beach cleanups at Cowell and Main Beaches are done on July 5th. SOS tracks the number of trash bags distributed on July 4th, and the amount of trash and recycling collected on July 5th, and the numer of cleanup volunteers. The City also provides funding support for Annual Coastal Cleanup Day (see above).	High	4	Trash	Direct load measurement, tabulation (participation numbers), participant survey			Continue					
	E.8. (d)	**PE-11**	**Ensure the public can easily find information about the Permittee's storm water program**	Co-Sponsor & Participate in Public Event Annually (e.g. Earth Day Santa Cruz)	Public Works	Engineering	2	FULL	The City co-sponsored the annual Earth Day Santa Cruz event on April 21, 2018. Approximately 2,500 people attended the all day event. Multiple City staff tabled at the event and distributed storm water pollution prevention, Low Impact Development, waste reduction & recycling, sharps & pharms disposal, and Green Business program information.	N/A	1	N/A	Documentation								
		PE-15		Continue Development of the SWMP List of Interested Parties and Use It for Notification of SWMP Developments and Public Meetings	Public Works	Engineering	2	FULL	Staff created lists of interested parties' email addresses and contact info during the SWMP approval process. New interested parties are added to lis upon request or as identified, and the list is updated as needed due to NGO, business or agency staff changes.	N/A	1	N/A	Documentation			Continue					
		PE-16		Maintain Environmental Programs and Environmental Compliance Web Pages, and post the City's Draft and Final Storm Water Management Program (SWMP) on the City's Website	Public Works	Engineering, Environmental Compliance	2	FULL	Staff continually updates the City website Environmental Programs, Storm Water and Environmental Compliance web pages with current info as needed. The City SWMP and approved Guidance Document are posted on the website, as well as the Storm Water Annual Report upon submission to the Water Board. Other items, such as updated BMPs, are posted. This permit year, updates to environmental pages included: uploading of the newly created Mobile Food Vendor BMP Brochure.	Medium	2	Sediment, Pathogens, Trash	Documentation, Tabulation (page hits)			Continue					

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✓	E.8. (e)	**NEW BMP**	**Actively engage in the IRWMP or other watershed-level planning effort**		Public Works	Engineering	2	FULL	This year and in previous years, City departments continue to participate in and co-fund the Santa Cruz IRWM group including attending meetings and submitting projects for inclusion in the IRWM list of priority projects. In previous years, a subset of the IRWM group including PW staff worked on preparing a countywide Storm Wate Resource Plan as required by the current round of Prop 1 grant funding. In June 2017, SWRCB issued a concurrence letter for the SWRP.	N/A	1	No	Documentation			Continue				
E.8	***Existing BMPs Not Required By the Permit***																			
	N/A	***PP-4***	***Involve City Staff in the Development and Implementation of the SWMP***	*4 meetings per year with the appropriate personnel*	*Public Works*	*Engineering*	*N/A*													
E.9	**ILLICIT DISCHARGE DETECTION AND ELIMINATION**																			
E.9.a	**Outfall Mapping**						2													
✓	E.9.a	**NEW BMP**	**Create and maintain an up-to-date and accurate outfall map**		IT, PW	Engineering	2	FULL	The City's storm drain GIS map is updated several times per year as needed. Additionally, once a year, information is requested from environmental compliance inspectors on emerging areas of concern for illic discharge and this information is used to update and re-evaluate the City's priority area map.	N/A	1	N/A	Documentation	N/A		Completed/ Continue				
E.9.b	**Illicit Discharge Source/Facility Inventory**						2													
✓	E.9.b	**NEW BMP**	**Maintain (update annually) an inventory of all industrial/commercial facilities/sources within the Permittee's jurisdiction that could discharge pollutants to the MS4. Use the inventory to ID facilities for inspection of potential illicit discharges**		IT, PW	Environmental Compliance	2	FULL	The City maintains a database of all commercial and industrial facilities located within City limits, including vehicle service and food service operations. The database includes the following information for each facility: name, address, business type, location of nearest gutter or storm drain inlet (if onsite), receiving water.	N/A	1	N/A	Documentation	N/A		Continue				
	E.9.b	***IF-1***	***Conduct Site Visits at Significant Industrial Users (SIUs)***	*Conduct site visits at 100% of SIUs*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*4*	*Sediment, Trash, Pathogens*								

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	E.9.b	**IF-2**	**Identify and Verify That Regulated Facilities Have Filed a NOI, Notify RWQCB of Discrepancies**	1. Annual review of list of regulated industries that have filed a NOI with the RWQCB and comparison to the City's list of permitted industrial facilities	Public Works	Engineering, Environmental Compliance	2	FULL	This permit year, the following actions were conducted to identify industrial facilities potentially subject to the State IGP: - Staff reviewed the list of facilities covered under the State IGP to identify discrepancies with the City's IU list; - Staff searched the City's business license database for facilities with listed SIC codes matching one of the codes in the industrial permit. 12 facilities with matching SIC codes were identified and staff conducted aerial photo review and inspections to identify which, if any, had outdoor operations tha might be exposed to storm water and/or cause a potential for storm water impact. It was determined that 6 businesses, mostly manufacturing, needed a site visit assessment. -During summer of 2018, site inspections indicated that the 6 businesses conducted their operations indoors and did not have the potential to impact storm water. However, there were 3 businesses identified last permit year with outdoor activities and the City followed up with them this year to mov their operations indoors. As a result, two of the businesses did move their operations indoors. The third business has moved out of the city. Follow-up inspections were conducted at the two businesses in June 2018 and no storn water violations were noted. - Staff researched the remaining businesses on the list this permit year and inspected any sites that may have been a potential IGP facility. No sites were identifed as an IGP.	N/A	1	N/A	Documentation	N/A		Continue				
	E.9.b			2. Notify the RWQCB of 100% of discrepancies re industries that should have filed a NOI and did not	Public Works	Environmental Compliance	2	FULL	There weren't any facilities that necessitated referral to the RWQCB for IGP coverage.	N/A	1	N/A	Documentation	N/A		Continue				
	E.9.b (e)	***ID-1***	***Environmental Compliance Inspectors Conduct Site Inspections at Regulated Businesses***	*Inspect 100% permitted industrial facilities*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*4*	*Sediment, Trash, Pathogens*								
	E.9.b	***ID-1, CF-2***	***Conduct Site Inspections for Vehicle Service Facilities***	*Conduct inspections at 100% of Vehicle Service Facilities*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*3*	*N/A*		*N/A*						
	E.9.b	***ID-1, CF-4***	***Conduct Site Inspections for Food Service Facilities***	*Conduct inspections at 100% of Food Service Facilities*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*3*	*Trash, Pathogens*								
	E.9.b	***IF-3***	***Conduct Site Visits at Industrial Facilities That Have Filed a NOI***	*Conduct site visit at 100% of additional sites not already in the City's SIU program once every 5 years*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*4*	*Sediment, Trash, Pathogens*								
E.9.c	**Field Sampling to Detect Illicit Discharges**																			
✓	E.9.c	**NEW BMP**	**During outfall inventory, sample any outfalls that are flowing or ponding more than 72 hours after the last rain event; also conduct dry weather sampling of outfalls annually identified as priority areas**		Public Works	Engineering, Environmental Compliance, Wastwater Collection/Flood Control	2	FULL	This permit year, Environmental Compliance Inspectors sampled 12 outfalls identified as flowing priority outfalls. All outfalls were analyzed for FIB (Fecal Indicator Bacteria); NTU (Turbidity); Color; Surfactants; TOC; Ammonia; Caffeine; Conductivity; Hardness; pH; Fluoride and Potassium. All indices were below action levels.	Low	5	Pathogens	Monitoring results	Done FY2016-2017-Add FIB and caffeine to dry weather outfall sampling suite to provide data re: bacteria entering City waterways from flowing outfalls, useful for TMDL investigation.		Continue				

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E.9.d	**Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions**																			
	E.9.d.	***NEW BMP***	***Develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, and procedures to implement corrective actions***		*PW*	*Environmental Compliance*	*2*			*N/A*	*1*	*N/A*	*Documentation*	*N/A*						
	E.9.d	**ID-7**	**Implement Corrective Measures and Enforcement Procedures in Accordance with the Storm Water Ordinance**	Eliminate 100% of identified illicit discharges	Public Works	Environmental Compliance	1	FULL	Environmental Compliance staff received complaints re illegal discharges/dumping. All were investigated and responded to with appropriate enforcement action.	High	4	Trash, Pathogens	Inspection			Continue				
	E.9.d (d) (e)	**ID-2**	**Conduct Spill and Illegal Discharge Response**	Respond to 100% complaints and reports of illegal discharges	Public Works	Environmental Compliance, Wastewater Collection/Flood Control	2	FULL	Below are the three Environmental Compliance Inspector's spill and illegal discharge response summaries for the permit year: *Inspector #1* - 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. *Inspector #2*- 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 card hanger warning. *Inspector #3*- 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.9.d (ii)	***CF-6***	***Complaints or Staff Observations of Illegal Discharges by Mobile Washers***	*Follow-up on 100% of complaints or reports of illegal discharges*	*Public Works*	*Environmental Compliance*	*2*			*Not assessed*	*3*	*N/A*	*Documentation*	*N/A*						
E.9.e	**Spill Response Plan**						2													
✓	E.9.e	**NEW BMP**	**Develop and implement a spill response plan**		Public Works	Environmental Compliance, Engineering	1	FULL	Completed in Year 1	N/A	1	Pathogens	Documentation	N/A		Completed/ Continue				
E.9	***Existing BMPs Not Required By the Permit***																			
	N/A	***ID-3***	***Conduct Storm Drain Outfall Monitoring for Bacterial Indicators at Three Locations Along West Cliff Drive***	*Quarterly Monitoring*	*Public Works*	*Environmental Compliance, Wastewater Lab*	*N/A*													
	E.15	***ID-6***	***Develop and Implement A Public Storm Water Hotline Number***	*Plan for Hotline Number*	*Public Works*	*Engineering*	*N/A*													
	N/A	**MO-17**	**Dry Weather Diversion from Neary Lagoon to Wastewater Treatment Facility**	Divert lagoon water 108 days per year	Public Works	Wastewater Collection/Flood Control Mains	Year 1-5	FULL	Lagoon water was diverted to the Wastewater Treatment Facility (WWTF) on the following dates: 7/1/17 to 11/17/17 and from 5/2/18 to 6/30/18. Thus, during the permit year, the water was diverted approx. 199 days. Lagoon water is diverted to the WWTF year round until rains force the gravity outlet opening.	High	4	Pathogens	Monitoring			Continue				
	N/A	**MO-18**	**Clean Neary Lagoon Storm Drain Lines and Discharge Bacteria Laden Water to the Sanitary Sewer System**	Clean storm drain lines and discharge the water to the sewer system annually	Public Works	Wastewater Collection/Flood Control Mains	Year 1-5	FULL	In preparation for the rainy season, WWCollection staff flushed the Neary storm drain lines to the sanitary sewer system on 10/18/17-10/23/17. The flushing process discharged approximately 100,000 gallons of water to the sanitary sewer.	High	4	Pathogens	Monitoring, science-based estimate (TELR)			Continue				
	N/A	**In SWMP text, Chpt 1- Municipal Operations**	**Neary Lagoon - Dry Weather Season: Lagoon Water Sampling**	Please see Attachment 1	Public Works	Environmental Compliance, Wastewater Collection/Flood Control Mains	Year 1-5	FULL	This permit year, Environmental Compliance/Laboratory staff collected the "before" line cleaning samples on 10/17/17 just prior to the Wastewater/Storm Water Collection Division cleaning/flushing of the Neary storm drain pipelines. Staff then collected the "after" sample on 10/25/17.	N/A	6	Pathogens	Documentation	N/A		Continue				

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	N/A	**In SWMP text, Chpt 1- Municipal Operations**	**Neary Lagoon - Wet Weather Season: Receiving Water Monitoring**	Please see Attachment 1	Public Works	Environmental Compliance, Wastewater Collection/Flood Control Mains	Year 1-5	FULL	In Feb. 2015, our Guidance Document was approved by the RWQCB. This approval included replacement of the requirement to sample receiving wate "before" and "after" the first pumping discharge (from the Neary Lagoon Pump Station to Cowell Beach) of the wet season with a requirement to post signage on Cowell Beach during the first pumping discharge of the wet signage. Signage included posting a notice near the concrete stairs leading to Cowell Beach and placing signage near the storm water flow from the Neary Beach Outlet Vault to Cowell Beach/Monterey Bay. PW and Parks Wharf staff both ensured that signage was placed near the stairs and on the beach as required, and actually kept the signage posted for longer than the required 48 hours due to the continued winter rains and the resulting flows on the beach from Neary Lagoon. This permit year, the first day of the wet season that the Neary pumps were operated was January 8, 2018 (note: pumps only operated once this permit year).	N/A	6	Pathogens	Documentation	N/A		Modified -see 1.c.				
E.10	**CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM**																			
E.10.a	**Construction Site Inventory**						1													
✓	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**		PW, Planning	Engineering, Building	1	FULL	The City of Santa Cruz 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, finaled), 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 Public Works Department - those projects are inspected by both the Building Dept and Public Works to ensure compliance with stormwater BMPs. The Public Works 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				

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E.10.b	**Construction Plan Review and Approval Procedures**						1													
✓	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, Building	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. 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	2	Sediment	Documentation	N/A		Continue				
				Require rationale for BMPs used	PW, Planning	Engineering, Building	1	FULL	All projects that trigger a grading or building permit must abide by the mandatory BMPs for Construction Projects published by Public Works. The BMPs require that grading or construction activities be implemented in accordance with an approved erosion control plan. Erosion control plans shall include at a minimum: 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 list of other required permits associated with grading. The BMPs also list minimum requirements for erosion and sediment control. This guidance ensures that appropriate BMPs are used to control erosion and sediment. Additionally, for projects disturbing over 5,000 cy of soil, the City requires the submittal of an engineering soils report and engineering geology report. The soils engineering report shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, and design criteria for corrective measures, when necessary, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes. Recommendations included in the soils engineering report and/or the engineering geology report shall be incorporated in the grading plans or specifications.	Not assessed	3	Sediment	Documentation	N/A		Continue				
				Require that erosion/sed control plan list applicable permits associated w/ grading activity (CGP, 401, 404, 1600 agreement)	PW, Planning	Engineering, Building	1	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory BMPs for Construction Projects 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, Building	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. 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, Building	1	FULL	Typically, projects that are required to create a SWPPP first submit an erosion control plan for plan review purposes and then develop a SWPPP i preparing an application for coverage under the State CGP. Once the NOI is obtained and the project approved, Public Works coordinates with the QSP/QSD to go over the SWPPP, erosion control measures, and inspections.	N/A	1	Sediment	Documentation	N/A		Continue				

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E.10.c	**Construction Site Inspection and Enforcement**						2													
✓	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 Enforecement 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 andl 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				
				2. Inspect 100% of high priority sites prior to forecasted rain events	Planning	Building	1	FULL	All sites were inspected multiple times by Building Inspectors during the rainy season including prior to forecasted rain events. Medium-sized commercial sites and large sites received additional inspections by PW Storm Water Staff prior to, during and/or after 1 or more storms to ensure BMPs were functioning properly. Also, 27 active construction sites (one site rec'd 2 letter per diffferent phases/areas) during Fall 2017 were sent letters via email regarding site wet weather preparedness and Winter Grading Rules and a link to the City's mandatory Construction BMPs was included. Wet Weather Preparedness Letters were sent to both the property owner and general contractor. There were 3 sites > 1 acre that were active during the rainy season and periodically monitored by PW staff. The fourth site >1 acre, a hotel, was finaled during August 2017 prior to the rainy season. The 3 open sites were inspected 1x or more prior to the rainy season or a forecasted rain event, and during the rainy season by either PW staff or a third-party QSP/QSD consultant as follows: 1) a care facility inspected at least 4x; 2) a business parking lot inspected 4x; and 3) a phased development inspected at least 11x times. Each of the sites was found to have inadequate or failing BMPs (e.g. broken perimeter wattles) or needed better construction entrance/exit sweeping. Each immediatly corrected the issue upon notification by PW staff. Results indicate that regular inspections are critical to maintain a site's compliance with erosion control requirements and that compliance rates vary regardless of project size. Contractor and sub-contractor experience and awareness of water quality issues are important re a site's compliance.	Medium	4	Sediment	Inspection (# sites w/ wet weather BMPs fully in place at 1st visit, # sites receiving warning or NOV), photo doc			Continue				

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				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/faillures 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	***Existing BMPs Not Required By the Permit***																			
		CON-3	***Implement Corrective Measures and Enforcement Procedures in Accordance with the Grading Ordinance As Needed***	*1. Respond to 100% of complaints 2. Implement corrective actions, as appropriate, for 100% of sites where a violation is detected*	*Planning*	*Building*	*N/A*													
		CON-4	***Implement Corrective Measures and Enforcement Procedures in Accordance with Title 4 As Needed***	*Implement corrective actions, as appropriate, for 100% of sites where a violation is detected and referred to Code Enforcement for follow-up*	*Planning*	*Code Enforcement*	*N/A*													
		CON-5	***Respond to Complaints and Implement Corrective Measures and Enforcement Procedures in Accordance with the Storm Water Ordinance As Needed***	*1. Respond to 100% of complaints 2.Implement corrective actions, as appropriate, for 100% of sites where a violation is detected*	*Public Works, Building*	*Environmental Compliance*	*N/A*													
	E.10.c.	**CON-6**	**Report Violations of the Construction General Permit to the RWQCB**	Report violations identified by the City during building and public works inspections	Planning	Building	Year 1-5	FULL	Staff did not encounter violations of State Construction Permit beyond those identified by PW staff.	N/A	1	No	Documentation	N/A		Continue				
					Public Works	Engineering	Year 1-5	FULL	Wet weather site inspections by Public Works Staff or third party QSP consultant revealed 3 sites, per the CGP, that had a BMP inadequacy or failure. These sites were verbally notified to correct asap and all improved/corrected their BMPs upon receiving notice. These issues included tracking of sand or sediment at the construction entrance/exit, broken perimeter wattles, a sand pile w/o proper coverage & berming. PW Staff conducted follow-up inspections to confirm BMP corrections and site compliance.	N/A	1	No	Documentation	N/A		Continue				

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E.11	**POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM**																			
E.11.a	**Inventory of Permittee-Owned & Operated Facilities**																			
✓	E.11.a	**NEW BMP**	**Develop and maintain an inventory of City-owned or operated facilities that are a threat to WQ**		PW, Parks & Rec, Facilities, Econ Devt, Water, IT		2	FULL	Based on existing BMPs implemented and City properties' potential to have a release to the storm drain or a creek, the City developed an inventory and map of City-owned facilities that have a potential to impact storm water. Nine City properties were identified: the Municipal Corporation Yard, the Municipal Wharf, Harvey West Park including the Parks maintenance yard Pogonip Open Space, DeLaveaga Park and Golf Course, Arana Gulch Open Space, the Santa Cruz Water Department's Water Treatment Facility, San Lorenzo Pump Station, and Bay Street Reservoir. All 9 sites were inspected during the permit year, and housekeeping, potential to impact storm water, and on-site BMPs were evaluated.	N/A	1	No	Documentation	N/A		Continue				
E.11.b	**Map of Permittee-Owned or Operated Facilities**																			
✓	E.11.b	**NEW BMP**	**Submit a map of the area within the permit boundary and identify where City-owned/operated facilities are located**		PW, IT		2	FULL	Completed in Permit Year 2	N/A	1	No	Documentation	N/A		Completed				
E.11.c	**Facility Assessment**																			
✓	E.11.c	**NEW BMP**	**For all inventoried facilities, conduct comprehensive inspection / assessment of pollutant discharge potential and identification of pollutant hotspots**		Public Works	Engineering, Environmental Compliance	3	FULL	Environmental Compliance inspectors conducted comprehensive inspection using the CWP Site Reconnaissance checklist at the 9 City properties identified during the property inventory completed in Year 2. Based on the inspection results, one City property, the Municipal Corporation Yard, was identified as a pollutant hotspot during Permit Year 4 due to housekeeping and materials management issues. Immediate measures were taken as a result of the inspection, including removing materials that did not have covers, pre-rain BMP implementation, installation of a top-hat filter in a primary catch basin of the yard, and developing engineering design to improve the materials bays. In Permit Year 4, the City hired a consultant to develop a SWPPP for the Corporation Yard. The consultant also conducted and will continue to conduct staff training, and evaluation and implementation of additional BMPs at this facility. The other 8 of the City facilities mentioned above were inspected and evaluated again this year but none were determined to be a pollutant hot spot.	High	3	Sediment, Trash	Inspection (BMP installation)			Continue				
E.11.d	**Stormwater Pollution Prevention Plans**																			
✓	E.11.d	**NEW BMP**	**Develop and implement SWPPPs for pollutant hotspots (OK if already have Spill Prevention Plan)**		PW, Parks & Rec, Facilities, Water		4	FULL	In Permit Year 4, a SWPPP was developed, by a consultant, for the Corporation Yard. The consultant also conducted and continues to conduct staff training, and evaluation and implementation of additional BMPs at thi facility. The other 8 of the 9 City facilities mentioned above were inspected and evaluated again this year but none of these were determined to be a pollutant hot spot.	N/A	4	Sediment, Trash	Documentation	N/A		Continue				

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E.11.e	**Inspections, Visual Monitoring and Remedial Action**																			
✓	E.11.e	**NEW BMP**	**Conduct regular inspections of City-owned/operated facilities: quarterly visual hotspot inspections, annual comprehensive hotspot inspection, quarterly visual observation of hotspot SW discharges, non-hotspot inspection once per permit term**		PW, Parks & Rec, Facilities, Water		5	FULL	The Municipal Corporation Yard, was identified as a pollutant hotspot during permit year 4. The City continued implementation of the SWPPP for the Corporation Yard in permit year 5. (a) Quarterly visual hotspot inspections conducted by City staff were conducted at the Corporation Yard on the following dates: 11/31/17, 1/8/18, 4/16/18, 6/5/18. (b) The annual comprehensive inspection for the Corpororation Yard was conducted by City staff on 2/23/18. (c) Quarterly hotspot visual observations of storm water and non-storm water discharges were conducted by City staff at the Corporation Yard on the following dates: 11/31/17, 1/8/18, 4/16/18, 6/5/18. (d) Environmental Compliance Inspectors and City staff conducted non-hotspot inspections at the 8 other City properties identified during the property inventory completed in Year 2. The 8 other City facilities mentioned above were inspected and evaluated Febuary through April of this year and none were determined to be a pollutant hot spot.	N/A	3	Pathogens	Inspection (BMP installation)	N/A		Continue				
E.11.f	**Storm Drain System Assessment and Prioritization**																			
✓	E.11.f	**NEW BMP**	**Develop procedures to prioritize storm drain system maintenance**		Public Works	Engineering, WW 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. 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	N/A		Continue				
	E.11.f	**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	WW Collection/ Flood Control		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.							Continue				
	E.11.f	**MO-4**	**Inspection, Cleaning, and Repair of City Catch Basins and Inlets**	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	WW 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. The City also has an ongoing catch basin replacement program which addresses non-functional catch basins.							Continue				
	E.11.f	**MO-4**	**Inspection, Cleaning, and Repair of City Catch Basins and Inlets**	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	WW 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 (TELR)	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 stormx, 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 storms, flooding incidents, complaints, and staffing levels.	Next permit year
	E.11.f	**MO-4**	**Inspection, Cleaning, and Repair of City Catch Basins and Inlets**	4. Inspect 50% of the catch basins in the outlying areas of the City annually and clean as needed.	Public Works	WW 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 (TELR)	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.11.f	**MO-5**	**Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed**	1. Annual inspection	Public Works	WW Collection/ Flood Control		FULL	Branciforte Channel is inspected weekly throughout the year. This includes all drainage ditches and adjacent toe ditches that feed the channel. Extensiv effort is placed on weed abatement and trash removal of surrounding toe ditches. Extensive weed abatement and toe ditch cleaning was conducted in July 2018.	Not assessed	4	Trash	Load measurement			Continue				

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E.11.g	**Maintenance of Storm Drain System**																			
✓	E.11.g	**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	WW Collection/ Flood Control	3	FULL	PW WW Collection/Flood Control Division prioritizes efforts to maintain and clean storm drains/catch basins in areas with direct impact to the ocean or the San Lorenzo River. Maintenance of the San Lorenzo River pump stations is also considered a high priority. The Division's CMMS database provides an on-going maintenance schedule, provides notices when maintenance is due, and tracks completed maintenance & repairs. Staff also reviews the areas which needed attention during the previous year and adds these areas to the priority list.	High	4	Sediment, Trash	Land use load estimation (TELR)			Continue				
	E.11.g	**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	WW 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 (TELR)			Continue				
	E.11.g	**MO-4**		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	WW 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.	Not assessed	4	Sediment, Trash	Documentation			Continue				
	E.11.g	**MO-5**	**Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed**	1. Annual inspection	Public Works	WW Collection/ Flood Control	N/A	FULL	Branciforte Channel is inspected weekly throughout the year. This includes all drainage ditches and adjacent toe ditches that feed the channel. Extensiv effort is placed on weed abatement and trash removal of surrounding toe ditches. Extensive weed abatement and toe ditch cleaning was conducted in July 2018.							Continue				
	E.11.g	**MO-5**		2. Removal of 100% of large trash and debris items	Public Works	WW Collection/ Flood Control	N/A	FULL	Branciforte Channel is inspected weekly. Any large debris are removed promptly. Only minor trash and debris was reported by staff. Increased patrol by PD and Parks Rangers has helped in this effort. Crews installed new large trash receptacles, both last year and this permit year, along the channel which has also helped to minimze trash entering the channel.	Not assessed	4	Trash	Direct trash load measurement			Continue				
	E.11.g	**PE-1**	**Replace Worn Stencils or Apply New Stencils to Storm Drain Inlets**		Public Works	Engineering, Streets	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			Continue				
	E.11.g	**MO-6**	**Clean Pump Stations Along the San Lorenzo River**	Clean twice per year (Spring and Fall) Additional cleanings, if needed, during wet season after large storm events	Public Works	WW 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 (TELR)			Continue				
	E.11.g	**MO-7**	**CDS Unit Maintenance**	1. Clean twice per year in Fall and Spring	Public Works	WW Collection/ Flood Control	N/A	FULL	The Capitola Road CDS unit was inspected and cleaned on 9/20/17 and 7/16/18. Staff finds that additional cleanings other than spring and fall of this CDS unit are not needed. Staff continues to focus time/hours on higher priority BMPs which have a greater impact on water quality such as SLR pump stations cleaning and efforts in the higher density areas of the city. A CDS units are in the CMMS maintenance system database for 90 day inspection and cleaning if necessary. As detailed above, a total of 1.5 CY o trash and debris were removed this year from both CDS units, with the vast majority of this amount coming from the Capitola Road CDS unit.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELR)			Continue				
	E.11.g	**MO-7**		2. Inspect and clean, if necessary, monthly during rainy season	Public Works	WW Collection/ Flood Control	N/A	FULL	The Capitola Road CDS unit was inspected and cleaned on 9/20/17 and 7/16/18. Staff finds that additional cleanings other than spring and fall of this CDS unit are not needed. Staff continues to focus time/hours on higher priority BMPs which have a greater impact on water quality such as SLR pump stations cleaning and efforts in the higher density areas of the city. A CDS units are in the CMMS maintenance system database for 90 day inspection and cleaning if necessary. As detailed above, a total of 1.5 CY o trash and debris were removed this year from both CDS units, with the vast majority of this amount coming from the Capitola Road CDS unit.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELR)			Continue				

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E.11.h	**Permittee Operations and Maintenance Activities**																			
✓	E.11.h	**NEW BMP**	**Develop a program to assess O&M activities and develop applicable BMPs, including: road/parking lot maintenance, bridge maintenance, ROW maintenance, water system flushing and repairs, etc.**		PW-Traffic, PW-Eng, Water, Parks,		3	FULL	The City first developed BMPs for Municipal Operations in 2003. The Municipal Operation BMPs are updated as needed to include new or revise information. The BMPs were updated in January 2016 to include minor revisions re bridge maintenance operations. Also, BMPs in the City's Special Events Permit template were revised per GP Section E.11.h. Additionally, the City initiated a quarterly O&M assessment program for it road maintenance, median maintenance, and graffiti removal operations. Storm Water staff send quarterly reminders to maintenance crew managers or supervisors who are responsible for the quarterly assessment using a BMP checklist.	N/A	1	No	Documentation			Continue					
✓	E.11.h	**NEW BMP**	**Evaluate municipal operations BMPs quarterly**		PW-Traffic, PW-Eng, Water, Parks,		3	FULL	The City's quarterly O&M assessment program was initiated in June 2016 and is conducted quarterly. PW Streets, ED Graffiti and Parks staff complete quarterly O&M assessments.	Not assessed	3	No	Documentation			Continue				
	E.11.h	***MO-19***	***Revise Municipal Operations BMPs If Necessary and Republish Brochure***	*Distribute revised BMPs to applicable City Department Supervisors*	*Public Works*	*Engineering*				*N/A*	*1*	*No*	*Documentation*							
✓	E.11.i	**NEW BMP**	**Develop and implement WQ and habitat enhancement features in the design of all new and rehabilitated flood mgmt projects**		Public Works	Engineering	3	FULL	The City developed a 4-step procedure to incorporate water quality and habitat enhancement features in flood management projects. These steps include: 1) identification of new and rehabilitated flood management projects, 2) determination of existing regulatory requirements associated with these projects that would require the incorporation of water quality and/or habitat enhancement features, 3) determination of any additional requirements to meet Section E.11.i, and 4) incorporation of features in the design of those projects. Annually, Storm Water Program staff reviews the City's proposed Capital Improvement Project (CIP) List to identify new flood management projects. Any potential flood management projects identified will be logged in a flood management project table and reviewed with the City Engineer and/or assigned project managers to determine what regulatory requirements those projects are subject to and what habitat/water quality features are proposed. Storm Water Program staff works with the project manager to include standard language in the project RFP and/or bid documentation to ensure that water quality and habitat enhancement features are included in the project. No projects were constructed in FY17-18.	N/A	1	No	Documentation			Continue					

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✓	E.11.j	**NEW BMP**	**Implement a landscape design and maintenance program to reduce amount of water, pesticides, herbicides, and fertilizers used during permittee operations**		Parks & Rec, Water		2	FULL	The City has an integrated pest management (IPM) policy (since 1998) governing the use of pesticides and herbicides at parks, the municipal golf course, and other landscaped areas. The IPM policy requires City departments to consider non-pesticide alternatives first when purchasing products to control pests and plant diseases. Eliminating pesticide use near watercourses and riparian areas is a priority. The policy's goal is also to eliminate the use of Toxicity Category I and II pesticides. Fertilizers are applied only as needed and the minimum amount necessary for the job is used. As part of the IPM policy, City departments that conduct pest management are required to conduct staff training, maintain an IPM Implementation Plan and ensure that contractors abide by the policy. The Municipal Golf Course uses an evaporation-based irrigation scheduler with rain and moisture sensors. In FY15, the Water Dept. conducted a water evaporation evaluation for all City parks, which established water allocations as part of the City's drought response. In addition, the Parks & Recreation Dept. combines biological, mechanical, cultural, physical and chemical control strategies to minimize economic, health and environmental risks. Parks & Recreation selects plants that are tolerant to insects & pathogens, promote planting diversity & avoid monocrops in landscapes, and use mulching and site specific irrigation for weed suppression.	Not assessed	4	No	Documentation			Continue				
E.11	***Existing BMPs Not Required By the Permit***																			
	E.11	***MO-9***	***Clean Sanitary Sewer Main Lines***	*1. Clean all sanitary sewer main lines every 18 months* *2. A follow-up inspection will be done of 100% of the lines where a problem is discovered during cleaning process*	*Public Works*	*Engineering, WW mains*	*N/A*			*N/A*	*1*	*Pathogens*	*Documentation*							
	E.11	***MO-12***	***Repair and Rehabilitation of Minor Storm Drain Lines***	*Target=Bacteria & Sediments Repair or rehabilitate an average of 100 feet of pipeline per year over the 5 year permit period*	*Public Works*	*Engineering*	*N/A*		In 2017-18, PW repaired or replaced storm drain lines as follows: 1) Replaced 600 feet of 24-inch pipeline at Market Street; 2) Replaced 200 feet of 30-inch pipeline on Curtis Street; 3) Replaced 300 feet of 36-inch pipe on Glenview Drive; 5) Constructed 40 feet pipe on Vista Bella Drive; 6) Constructed 40 feet of pipe on Taylor Street; 7) Constructed 25 feet of pipe on Owen Street.	*Not assessed*	*4*	*No*	*Documentation*							
	E.11	**MO-15**	**Conduct Cleaning at Main and Cowell Beaches**	1. Daily maintenance cleaning	Parks & Rec	Wharf, Parks	Year 1-5	FULL	Main Beach and Cowell Beach Cleaning tasks: 1) Hand pick loose trash. 2) Mechanically sift sand for fine debris. 3) Empty and sort trash, recycle and cigarette butt containers. 4) Storm debris collecting, sorting, hauling and disposal/recycle. 5) Kelp management. 6) Maintain, sanitize and stock Cowell Beach restrooms. 7) Maintain and repair beach vehicle and pedestrian access ramps. 8) Sweep Cowell Beach parking lot & beach area walkways. 9) Schedule, supervise and provide equipment for organized volunteer beach cleanups by NGOs.	Not assessed	4	Trash	Direct load measurement			Continue				
		MO-15		2. Spring cleaning as needed to remove trash following winter storms	Parks & Rec	Wharf, Parks	Year 1-5	FULL	This past winter was relatively mild requiring less storm debris clean-up than the previous winter. Late summer weather extended well into fall 2017 resulting in higher than average trash volumes in September, October and November which boosted loose trash totals 17% higher than last year. Totals for reporting periods = 1,853 yards of loose trash and 62.2 yards of recycling. The relatively mild ocean conditions throughout the reporting period also resulted in significantly less deposits of kelp on the beach with less than 2 tons removed.	High	4	Trash	Direct trash load measurement			Continue				

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	E.11	***MO-22***	***City-wide Watershed Issues Team Meetings to Discuss Watershed Issues Re TMDLS and Other Related Topics***	*Meet semi-annually or more as needed*	*Public Works, Planning, Water, Parks & Rec, City Manager*	*WW Lab & Env. Compliance*	*N/A*													
	E.11	**MO-2**	**Take Measures to Control Litter**	Maintain litter and recycling receptacles in the downtown on a daily basis	Public Works	Parking Maintenance, Refuse	Year 1-5	FULL	There are 25 refuse/recycling containers on Pacific Ave, Front St. and Cedar St. (downtown). Refuse & recycling are collected from these containers 1x/day on Mon-Sat in the mornings by Sanitation/Refuse Collection, and 1x/day on Mon-Sun in the evenings and 1x/day on Sundays mornings by Parking Maintenance. Sanitation collected approx. 36 tons for the year (each container weights @ 10 lbs). Also, there are 13 solar compactors that are collected 3x/week for approx. 34 tons collected during the year. Parking Maint. also collects refuse from an additonal 70 downtown refuse containers, which are emptied on a daily basis. Parking Maint. collected approx. 66.06 tons of material collected this year by the trash compactor truck.	High	4	Trash	Direct trash load measurement			Continue				
				Maintain litter and recycling receptacles in the Wharf, Cowell Beach, and part of Main Beach (from Wharf to near Cocoanut Grove (Westlake ramp)) a minimum average of 5 days/week	Parks & Rec	Wharf, Parks	Year 1-5	FULL	Wharf staff maintained a total of 62 (32-gallon) trash containers, 56 of which are recycle combination containers, which averaged 4.5 cu. ft. of trash and 1 cu. ft. of recycle per day each. Maintenance of containers in the Wharf Public Area yielded approximately 3,500 loose yards of trash and 700 yards of loose recycling.	High	4	Trash	Direct trash load measurement			Continue				
				Maintain litter and recycling receptacles in 35 City parks a minimum average of 5 days/week	Parks & Rec	Wharf, Parks	Year 1-5	FULL	The trash receptacles in the 35 City Parks are maintained/emptied daily.	Not assessed	4	Trash	Direct trash load measurement			Continue				
				Receptacles in other areas emptied as needed	*Parks & Rec*	*Parks*	*N/A*			*Not assessed*	*4*	*Trash*	*Direct trash load measurement*							
	E.11, E.15	**MO-1**	**Sweep City Streets By Mechanical Sweepers**	Sweep primary streets in downtown & main beach areas once to twice per week	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 pe 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 (TELR)			Continue				
				Sweep primary streets in other commercial areas 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 pe 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 (TELR)			Continue				

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				Sweep 75% of residential streets once 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 pe month. Residential streets are swept twice per month or more frequently upon request or based on necessity. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELR)			Continue				
				Sweep streets upon special request	*Public Works*	*Refuse*	*N/A*													
	E.11, E.15	**MO-3**	**Sweep Public Parking Lots and Parking Garages Regularly**	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. This year the total collected amount of debris was significantly reduced which was likely due to the efforts of the Downtown Streets Team which cleans/picks up litter in many of the garages (in addition to the mechanical sweeping).	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELR)			Continue				
	E.11	**MO-5**	**Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed**	1. Annual inspection	Public Works	WW Collection/ Flood Control	N/A	FULL	Branciforte Channel is inspected weekly throughout the year. This includes all drainage ditches and adjacent toe ditches that feed the channel. Extensiv effort is placed on weed abatement and trash removal of surrounding toe ditches. Extensive weed abatement and toe ditch cleaning was conducted in July 2017 and July 2018.	Not assessed	5	Trash	Direct load measurement			Continue				
		MO-5		2. Removal of 100% of large trash and debris items	Public Works	WW Collection/ Flood Control	N/A	FULL	Branciforte Channel is inspected weekly. Any large debris is removed promptly. Only minor trash and debris was reported by staff. Increased patrol by PD and Parks Rangers has helped in this effort. Crews installed new large trash receptacles, both last year and this permit year, along the channel which has also helped to minimze trash entering the channel.	Not assessed	5	Trash	Direct load measurement			Continue				
E.12	**POST CONSTRUCTION STORMWATER MANAGEMENT PROGRAM**																			
E.12.a	**Post-Construction Measures**																			
✓	E.12.a	**NEW BMP**	**Regulate development** to comply with the following sections, E.12.b through E.12.l		Public Works, Planning	Engineering	2	FULL	The RWQCB adopted Post-Construction Requirements (PCRs) for Development Projects in the Central Coast Region on July 12, 2013 (Resolution No. 2013-0032). The adopted Resolution directed municipalities in the Central Coast Region to update their development review standards and protocols to be able to implement the PCRs on all applicable projects by March 6, 2014. The City has been enforcing the PCR requirements on all new project applications since March 6, 2014.	N/A	1	No	Documentation			Continue				
	E.12.b		*Site Design Measures*	*see E.12.k*																
	E.12.c		*Regulated Projects*	*see E.12.k*																
✓	E.12.d.	**NEW BMP**	**Source Control Measures -** Regulated Projects shall implement source control measures	E.12.d Source Control Measures included in mandatory development BMPs	Public Works	Engineering	2	FULL	The City's pre-existing Storm Water Management Program included mandatory source control BMPs for the following facilities and their associated activities: food service facilities, industrial facilities, retail and commercial businesses, vehicle service facilities, construction work, development and remodeling projects, and BMPs for residential properties including garden, pool & spa maintenance, home maintenance, painting and repair, and vehicle repair and washing. In February 2014, the City revised its mandatory BMPs for Development and Redevelopment Projects and incorporated minor edits to source control measures, including new requirements for pools, spas, and other water features (based on the CASQA Stormwater Quality Handbook), and guidance on design of interio floor drains.	Not assessed	3	No	Documentation			Continue				
	E.12.e		*LID Standards - all Regulated Projects shall implement LID standards to treat storm water and provide baseline hydromod mgmt to meet numeric sizing criteria under E.12.e(ii)c*	*see E.12.k*																
	E.12.f		*Hydromodification Management*	*see E.12.k*																
	E.12.g		*Enforceable Mechanisms*	*see E.12.k*																
	E.12.h		*Operation and Maintenance of Post-Construction Stormwater Management Measures*	*see E.12.k*																
	E.12.i		*Post-Construction BMP Condition Assessment*	*see E.12.k*																

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E.12.j	**Planning and Development Review Process**						2													
	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*	*Public Works, Planning*	*Engineering*				*N/A*	*1*	*No*	*Documentation*							
				2. 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*			*N/A*	*1*	*No*	*Documentation*							
	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.***	3. 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 (7) commercial projects subject to the PCRs that were finaled for occupancy. (1) Tier 1 project, (3) Tier 2 projects and (1) Tier 4 project. (2) Tier 4 finaled projects design permits were approved prior to the PCRs. This year, in total, there were (19) commercial projects with building permi applications, with (12) of them subject to the PCRs and (7) projects whose design permit was approved prior to the PCRs. Of the (12) PCR regulated projects, (2) were Tier 1, (6) were Tier 2 and 4 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 (46) residential building permit applications that triggered LID requirements review. (33) residential projects were below the PCR trigger and (3) residential projects triggered Tier 1 and (6) projects triggered Tier 2. All the projects that triggered Tier 1 and Tier 2 requirements were multi-family residential development projects. This year, there were (2) Tier 1 projects and (2) Tier 2 projects subject to the PCRs that received certificates of occupancy (“finaled”).	N/A	3	No	Documentation			Continue					

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E.12.k	**Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes**																			
✓	E.12.k	**NEW BMP**	**Post Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes**	Implement the RWQCB's Post-Construction Requirements for all new regulated development and redevelopment projects	Public Works	Engineering	1	FULL	The City began enforcing the new Post-Construction Requirements on March 6, 2014. All projects subject to the PCRs were reviewed by QSD staff to ensure compliance with the PCRs. Training of other planning and plan review staff on the PCRs helps ensure that applicants are aware of the requirements early. All projects were inspected by the PW Storm Water staff and met the PCRs. This year, there was a total of 65 projects either under review (4), issued (35), or finaled (26) that implemented storm water BMPs & LID. There were 19 commercial projects with building permit applications, with 12 of them subject to the PCRs and 7 projects whose design permit was approved prior to the PCRs. Of the 12 PCR regulated projects, 2 were Tier 1, 6 were Tier and 4 were Tier 4. This year, there were 46 residential building permit applications that triggered LID requirements review. Thirty-three (33) residential projects were below the PCR trigger and 3 residential projects triggered Tier 1 and 6 projects that triggered Tier 2. This year, there were two (2) Tier 1 projects and two (2) Tier 2 projects subject to the PCRs that received certificates of occupancy ("finaled").	High	5	Sediment, Pathogens, Trash	Land-use-load estimation (RAM/TELR)			Continue				
	E.12.k	***PC-2***	***Revise Mandatory Storm Water BMPs/ Design Standards***	*1. Revision to require more effective BMPs to treat parking lot runoff*	*Public Works*	*Engineering*	*N/A*													
				2. Revision to clarify that all development projects per General Permit Attachment 4 will be subject to structural or treatment control BMP requirements	*Public Works*	*Engineering*	*N/A*													
				3. A process for project applicants to follow to identify structural or treatment control BMPs that will be effective in removing a development project's pollutants of concern.	*Public Works*	*Engineering*	*N/A*													
				4. Revise in accordance with new Hydromodification Control Standards	*Public Works*	*Engineering*	*N/A*													
	E.12.k	***PC-3***	***Derive Municipality-Specific Criteria for Controlling Hydromodification in New and Redevelopment Projects Using Water Board-Approved Methodology Developed through the Joint Effort***	*Hydromodification Control Criteria*	*Public Works Planning*	*Engineering*	*N/A*													
	E.12.k	***PC-4***	***Select Applicability Thresholds for Applying Hydromodification Control Criteria to New & Redevelopment Projects. Applicability Thresholds Will Be Consistent with Long-Term Watershed Protection.***	*Applicability Thresholds*	*Public Works, Planning*	*Engineering*	*N/A*													

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	E.12.k	***PC-5***	***Develop and Enact A Strategy for Implementing LID and Hydromodification Control for New and Redevelopment Projects.***	*Guidance: 1. Develop, advertise and make available LID BMP Design Guidance suitable for all stakeholders*	*Public Works, Planning*	*Engineering*	*1*			*Not assessed*	*2*	*Sediment, Pathogens, Trash*	*Documentation, tabulation (page hits), public awareness survey*							
				Guidance: 2. 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*			*Not assessed*	*2*	*Sediment, Pathogens, Trash*	*Documentation*							
				Education & Outreach: 1. Documentation of goals, schedules, and target audiences for education and outreach the municipality will conduct in support of the following strategic objectives: enforceable mechanisms, hydromodification control criteria, applicability thresholds, LID BMP design, and compliance with LID and hydromodification control criteria	*Public Works, Planning*	*Engineering*														
				Education & Outreach: 2. Tracking Report indicating municipality's accomplishments in education and outreach supporting implementation of LID and hydromodification control for new and redevelopment projects (Q8)	*Public Works, Planning*	*Engineering*	*1*													
				Interim LID Implementation: 1. Apply LID principles and features to all applicable new and redevelopment projects.	*Public Works*	*Engineering*														
				2. Tracking Report, for the period Q2 to Q8, identifying LID design principles and features incorporated into each applicable new and redevelopment project.	*Public Works*	*Engineering*														

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	E.12.k	**PC-8**	**Implement Program to Ensure Long-term BMP Inspection and Maintenance. Spot Inspections Will Be Conducted**	1. Develop an electronic database or spreadsheet to better track & assess sites over time	Public Works	Engineering		FULL	The City maintains a spreadsheet to track LID projects requiring maintenance agreements, and track annual LID maintenance log submittals, property ownership and contacts, and site inspections. The spreadsheet includes which PCR Tier projects are subject to. The spreadsheet also identifies structural control measures incorporated into each project. The City collaborates with other municipalities of the Central Coast Region the Regional Board, Central Coast LIDI, and 2ndNature re a BMP tracking and assessment tool. The City is an "All-In" subscriber to the 2ndNature suite of tools, including BMP RAM, TELR, & Parcel RAM.	N/A	1	Sediment, Pathogens, Trash	Documentation			Continue					
				2. 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. Currently, the City has 74 signed maintenance agreements. I 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 Febuary 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/TELR)			Continue					
				3. 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 (> 10%). 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/TELR)			Continue					
	E.12.k	**PC-9**	**Implement Corrective Measures and Enforcement Procedures As Needed in Accordance with the Municipal Code**	Implement corrective actions, as appropriate, for 100% of sites where a violation is detected	Public Works	Engineering	Year 1-5	FULL	There were no Post-Construction related violations during the permit year.	Not assessed	3	Sediment, Pathogens, Trash	Documentation, tabulation (# follow-up emails, #NOVs)			Continue					

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E.12	**Existing BMPs Not Required By the Permit**																			
		PC-1	***On City Owned Property, No New City Development Projects Shall Be Permitted Within 30 Feet of a Wetland Without an Approved Project-specific Habitat Management Plan and a Site-specific Water Quality Management Plan.***	*Formalize and implement strategy*	*Public Works, Planning,*	*Engineering*	*N/A*													
		PC-6	***Review and Evaluate the City's General Plan and Other Watershed Protection Planning Efforts. In Conjunction, Develop Where Feasible Quantifiable Measures That Indicate How the City's Watershed Protection Efforts Related to Storm Water Management Achieve Desired Watershed Conditions.***	*1. Determination if long-term watershed management and protection efforts are addressed and, if not, identification of sections needing revisions.*	*Public Works, Planning*	*Engineering*	*N/A*													
				2. Quantifiable Measures	*Public Works, Planning*	*Engineering*	*N/A*													
		PC-11	***Distribute BMP Brochure for Development and Remodeling Projects***	*Distribute to 100% of discretionary project applicants*	*Planning/PW*	*Development Review staff*	*N/A*													
		PC-12	**Hold Educational Workshops on LID and Hydromodification Control Requirements**	1. One educational workshop after the hydromodification control criteria have been developed	Public Works, Planning	Engineering	1	FULL	Completed FY2015. Last permit year, the City also participated in the 12/15/16 "Calming the Storm" LID Project Tour led by the Resource Conservation District per a countywide Prop 84 LID grant. The City's parking lot #9 was a component of the grant project and one of the site visits in the tour. The workshop was highly successful with over 2 busloads of municipal staff, consultants and members of the public attending the all day event.	Not assessed	2	Sediment, Pathogens, Trash	Documentation, Survey			Completed				
		PC-14	***Provide Training to Appropriate Planning & Public Works Staff***	*1. Train 100% of appropriate staff every two years.*	*Public Works, Planning*	*Engineering*	*N/A*													
				2. Train new Inspectors and Plan Reviewers within 3 months of the beginning of employment.	*Planning*	*Planning*	*N/A*													
		PC-14	***Provide Training to Appropriate Planning & Public Works Staff***	3. Additional training on new or changed BMPs as needed	Public Works, Planning	Engineering	Year 1-5	FULL	PW storm water staff conducted a staff training for 10 City Planners on 6/7/18 which include a review of the PCR requirements and overview of the various LID BMP options. A PowerPoint presentation was included followed by a Q&A discussion.	Not assessed	2	Sediment, Pathogens, Trash	Documentation, Survey			Continue				
		PC-7, 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 commerical development project, which is a 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)	Inspection results indicated that inspection during construction is important to ensure projects meet the PCRs and to engage contractors so they can better understand the purpose and mode of operation of PCR BMPs and to identify potential design issues.		Continue				

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															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.13	**WATER QUALITY MONITORING**																			
✓	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	1	FULL	The City conducts a TMDL monitoring program in the San Lorenzo River, Branciforte Creek, and Carbonera Creek for pathogens and sediment. The program is a comprehensive data driven effort to identify controllable sources of bacteria and sediment in the SLR and tributaries. 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 City Environmental Laboratory scientists. Please see attached monitoring report for monitoring program details and sampling results. The City is also working with the County of Santa Cruz and the City of Scotts Valley to coordinate and implement an integrated, efficient and effective regional monitoring program at sampling sites along the San Lorenzo River and tributary creeks. The City is an active partner in the SLRA Working Group efforts led by Coastal Watershed Council (CWC). As part of this effort, the City co-funded the SLRA Water Quality Working Group bacteria monitoring study in the lower San Lorenzo River in previous permit year(s). 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 are tracked in db and on spreadsheet.	N/A	6	N/A	N/A			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				

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E.14	**PROGRAM EFFECTIVENESS ASSESSMENT**																			
✓	E.14.a	**NEW BMP**	**Develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program**	Develop the Effectiveness Assessment and Improvement Plan	Public Works	Engineering	2	FULL	The PEAIP was completed in Permit Year 2. In addition, the City participated in the development of the BMP RAM assessment tool and TELR catchment modeling effort initiated by the RWQCB in 2015. Beginning in July 2016, the City began inventorying existing structural BMPs using BMP RAM. City catchment and land use mapping required as a base for the model were completed and submitted to the RWQCB on August 4, 2016. The City currently is an "All-In 2NForm suite" subscriber to the 2NDNature suite of tools including the BMP RAM assessment tool, TELR catchment modeling, and Parcel RAM. As required, on June 27, 2017 the City submitted Report #2 to the RWQCB indicating that BMP Inventory Option 1 was chosen and that a contract was in place with 2NDNATURE Software. Thus the mapped inventories of the centralized BMPs and the City-owned decentralized BMPs, the ranking based on storm water volume and pollutant loading estimates under unmitigated conditions are available to the RWQCB via a link provided by 2NDNature. As new projects are completed or information is obtained, the City will update the inventory per the 2NForm BMP RAM Module.	N/A		N/A	N/A			Continue				
				Describe implementation of the Plan, summarize data obtained through effectiveness assessment measures, and provide an analysis of the data to improve effectiveness	Public Works	Engineering	3	FULL	Priority BMPs are included in this combined annual report and Program Effectiveness Assessment table, and the PEAIP completed in Permit Year 2 The City tracks data on priority BMPs and this data is summarized in the BMP implementation information of each priority BMP. For each BMP, th table also provides BMP effectiveness, evaluation method and any propose modifications. In addition, the City participated in the RWQCB's efforts to develop geographic modeling of pollutant loads and BMP effectiveness. Beginning in July 2016, the City began inventorying existing structural BMPs using BMP RAM. City catchment and land use mapping required as a base for the model were completed and submitted to the RWQCB on August 4, 2016. The City currently is an "All-In 2NForm suite" subscriber to the 2ndNature suite of tools including the BMP RAM assessment tool, TELR catchment modeling, and Parcel RAM. As required, on June 27, 2017 the City submitted Report #2 to the RWQCB indicating that BMP Inventory Option 1 was chosen and the City had contracted with 2NDNATURE Software. The mapped inventories of the centralized BMPs and City-owned decentralized BMPs, the ranking based on storm water volume and pollutant loading estimates under unmitigated conditions are available to the RWQCB via a link provided by 2NDNATURE. As new projects are completed or information is obtained, the City updates the inventory per the BMP RAM Module. As required, the City is submitting Report #3 showing TELR load reductions achieved through this permit yea (per RWQCB June 13, 2016 Letter-Water Code Section 13267). The City continues to use the 2ndNature suite of tools and anticipates that over time data assessments will show improved effectiveness.	N/A		N/A	N/A			Continue				
✓	E.14.b	**NEW BMP**	**Modify BMPs and/or the program as a whole to improve compliance with permit conditions and improve program effectiveness at reducing pollutant loads, achieving the MEP standard, and protecting water quality**				5	N/A	The City, in general, reviews its Storm Water Program components and efforts in an ongoing manner to improve program effectiveness and to address permit conditions and water quality issues. Per E.14.b. and the RWQCB June 13, 2016 Letter-Water Code Section 13267s, the City reviewed and modified/is proposing modifications to program BMPs to improve program effectiveness as detailed in the required Report #4 submittal. Briefly, four BMPs or program components were selected for modifications: 1a) Increase existing outreach & educational efforts re trash reduction/litter, e.g. pilot programs (neighborhood clean-ups) and outreach messages, and 1b) Improve Public Outreach per feedback from the 2018 Storm Water Awareness and Behaviors Survey; 2) Modify the Inspection and Cleaning of City Catch Basins after storms and in outlying areas so tha staff may focus efforts on higher priority areas first and the lower priority areas done as time allows. 3) Modify the Pathogens TMDL BMP *Implementation of a Sewer Lateral Inspection Program.* Ordinance amendments were approved by City Council in July 2018 and include 3 components which will increase effectiveness at reducing pollution from leaking sewer laterals. 4) The City is an "All-In" subscriber to the 2ndNature suite of tools, including the BMP RAM assessment tool, TELR catchment modeling, and Parcel RAM. These programs provide tools to inventory, assess, and track the effectiveness of structural BMPs and LID projects. As new projects are completed or information is obtained, the City updates the inventory per the 2NForm BMP RAM Module. As the City continues to use the 2ndNature suite of tools, over time the data evaluations and assessments will provide additional information re effectiveness.	N/A		N/A	N/A			Continue				
	E.14.a	***PM-1***	***Develop an Effectiveness Assessment Strategy***	*1. Identify a process to be used to conduct effectiveness assessments and improve BMP implementation.*	*Public Works*	*Engineering*	*N/A*													

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	E.14.a			*2. Identify quantifiable BMP and program effectiveness measurements*	*Public Works*	*Engineering*	*N/A*													
	E.14.b			*3. Assessment of BMP implementation and modifications needed*	*Public Works*	*Engineering*	*N/A*													

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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 Ordinace 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 campiagns 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 (TELR)			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 (TELR)			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 (TELR)	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 (TELR)	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 (TELR)			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				
	E.15	***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)*							

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	E.15	***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**	**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 Ordinace 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: • 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**	**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 *Diversions 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**	**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 *Diversions 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**	**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 habitiats, 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 th 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 Lorenz 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: *Inspector #1* - 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. *Inspector #2* - 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. *Inspector #3* - 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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BMPs per City of Santa Cruz WAAP for Sediment																				
	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 pe 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 (TELR)			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 pe 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 (TELR)			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 pe 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 (TELR)			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 (TELR)			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, finaled), and whether LID is required. The results are mapped using GIS to identify projects located within TMDL watersheds. Commercial/multifamil 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					

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				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 shal 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 inspectionsconducted 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 Enforecement 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				

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				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/faillures 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 commerical 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*							

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															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.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 comercial projects subject to the PCRs that were finaled 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 ("finaled").	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 Febuary 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/TELR)			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 (3 10%). 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/TELR)			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				