

ANNUAL REPORT PROGRAM EFFECTIVENESS ASSESSMENT MATRIX

CITY OF SANTA CRUZ STORM WATER PROGRAM

Due October 15, 2016

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	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
E.6 PROGRAM MANAGEMENT ELEMENT											
E.6.a Legal Authority (update or create ordinance)											
E.6.b Certification											
	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		FULL	Done in Permit Year 2.	N/A	1	N/A	Documentation	
E.6.c Enforcement Response Plan											
✓	E.6.c	NEW BMP	Develop and implement an Enforcement Response Plan.		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, revisions to Wastewater ERP procedures, and new ERP procedures associated with the City's new sewer lateral ordinance. Edits to the ERP were completed in August 2016 and the revised ERP was adopted in September 2016.	N/A	1	N/A	Documentation	
E.7 EDUCATION AND OUTREACH PROGRAM											
E.7.a Public Outreach and Education											
✓	E.7.a	NEW BMP	Select a Public Outreach & Education option		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/Coastal Conservancy: 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 partnered with the County of Santa Cruz and Surfrider Santa Cruz on a summer anti-litter campaign including bus ads and a slogan "Just Splash, Take Your Trash!" 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	

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	E.7	PE-17	Assess Community-Based Social Marketing Strategies and Incorporate Them Where Appropriate	Develop pilot CBSM project	FULL	In FY13-14, the City hired a firm to conduct a public education survey doing one-on-one interviews with residents using an IPAD. The survey questions including asking people how they received their news and information. The survey was conducted in coordination with the County and other neighboring cities. In FY14-16, the City funded a pilot plastic bag reduction project for the smaller vegetable/fruit plastic bags conducted by Save Our Shores (SOS). This project includes CBSM measures requested by the City such as pledges and photos/videos which were then posted on the SOS Facebook page. This year, the project was extended to several San Lorenzo River volunteer cleanup events where an alternative reusable produce bags was given out to volunteers who also took the pledge. Also in FY15-16, the City funded SOS to conduct surveys of people and bike riders that went by on West Cliff Drive. The surveys, conducted over 3 days at different times, consisted of questions re what people thought of the cigarette butt containers, "Bait Tanks," and "There is no Poop Fairy" signs on West Cliff. Questions included whether people thought these were effective at changing peoples' behavior. CBSM methods, such as posting on Facebook and Twitter, were also used in conjunction with other programs such as river cleanups, etc.	Medium	3	Pathogens, trash	Behavior Survey	
✓	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	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. This year, 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	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 2014. The survey was comprised of 50 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. A copy of the survey summary report is available upon request. The survey will be repeated w/in 5 years of this original survey.	N/A	2	N/A	Documentation	
	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.	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. Over 200 Pollution Prevention Tips brochures were distributed and at least 240 more Monterey Bay Begins On Your Street brochures (in English & Spanish) were given out. Additionally, Gardening with CA Native Plants & Sharp Solutions (Sharps and Meds Disposal) brochures were given out. These brochures are also available on the city website.	Low	2	Sediment, pathogens, trash	Public Awareness Survey	

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	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	FULL	Staff distributed the BMPs at all new FSF and VSFs. There were approximately 8 new FSFs and 1 new VSF during the permit year. 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	
	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	FULL	Of the 80 VSFs, 69 businesses qualified for the 2016 recognition. This equals 86% of the VSFs. Of the 275 FSFs, 208 businesses qualified for the 2016 recognition. This equals 76% of the FSFs. Recognition letters were sent to COBs on May 2, 2016. The City ran ads in 2 local newspapers during the week of May 8, 2016. An online banner ad ran on one local newspaper website from May 8-May 22, 2016.	High	3	Pathogens, trash	Inspection	
	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	FULL	The City's participation in the Monterey Bay Green Business (MBGB) program includes staff time for program coordination and business audits, and financial support for the Green Business promotional program. The promotional efforts vary slightly from year to year but typically include newspaper ads, TV ads, and web/social media advertising. In FY 2014-2015, 38 businesses became either certified or recertified (required every 3 years). There are currently 158 certified businesses in the City. An additional 60 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 refuse & recycling) and completing all the required measures. Program metrics are tracked in the Green Business DB and indicate that annually, the certified businesses in the City account for 520 gals of hazardous waste reduction, nearly 35,000 gals of grease recycled, and nearly 4.5 million gals of water saved.	High	4	Sediment, Pathogens, Trash	Inspection, load reduction estimate (metric tracking by the program)	

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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	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 following items: the revised Municipal Operations Best Management Practices" (Jan 2016); 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. The City's Environmental Programs page averaged 515 views/month, a 27% increase from the prior year. The City's Storm Water portal page averaged 107 page views/month, a 45% increase from the prior year. The City's LID Development Requirement page averaged 50 page views per month, about even with the prior year. This amounts to over 8,000 page views for the year for the 3 pages.	High	2	Sediment, Trash	Tabulation (tracking page views), public awareness survey	
	E.7.a (d)	PE-1*	Replace Worn Stencils or Apply New Stencils to Storm Drain Inlets	24 stencils replaced or newly applied annually	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 111 catch basins and posted photos of the storm drain marking project on social media resulting in over 600 engagements including photo mosaics and videos.	Medium	2	Trash	Public Awareness Survey	
	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	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 from January-June 2016 during the permit year. The TV stations were: FOX-KCBA, CBS-KION, KMUV (Spanish) and CW-NION. There were a total of 877 PSAs aired with a total of 1,9115,100 gross impressions. The ads were on the following topics: marine debris, pet waste, storm drains, and "fowl" water (ad shows urban runoff sources).	Not assessed	2	N/A	Documentation	
	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.	FULL	1) A City Council meeting, which is a public meeting, was held on November 10, 2015 which included a staff presentation on the annual storm water expenditures 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. There was an opportunity for public comment.	Not assessed	2	N/A	Documentation	

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	E.7.a (f)	PE-2*	Participate in Public Events	Participate in at least 1 Public Event annually	FULL	Staff participated in special events including: 1) <i>Earth Day Santa Cruz</i> on April 16, 2016. This annual event is jointly organized by the City, County, and NGOs. Approx. 2,500 people attended the all day event; 2) <i>Connecting the Drops</i> (community water/watershed event) on January 18, 2016; and 3) <i>State of the San Lorenzo River Symposium</i> on May 21, 2016.	Not assessed	2	N/A	Documentation	
	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.	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. Typically this outreach is done thru an Adult Ed class series. 2) Participation in Ecology Action's Prop 84 Planning Grant re countywide Low Impact Development incentivization and implementation. Through this process, staff is participating in the development of the Monterey Bay Friendly Landscape incentive program. 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 participates 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 are on water conservation or pollution prevention topics. Winning videos were shown on a local TV station, KION, during summer 2016.	Not assessed	2	N/A	Documentation	
	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.	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. OWOW fact sheets/flyers ("shelftalkers") are provided at the two local nurseries/garden retail stores in the city. Of the shelftalkers, the <i>Ants</i> , <i>Healthy Lawns</i> , and <i>Aphids</i> 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	

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	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	FULL	The City provides funding for two O'Neill Sea Odyssey (OSO) Education Program programs: 1) <i>Storm Water Runs to It Program</i> -This program includes 5 school (fourth grade) classes with a total of 130 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) <i>Ocean Protectors Program</i> -This program includes 6 school (fourth grade) classes and 1 community center children's groups (grades 4-6) with a total of 178 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 respective schools. SOS also led beach cleanups with each of the 7 classes as part of the program and, in total, the students removed at least 119 pounds of trash and 14 pounds of recyclables during these cleanups.	High	2	Trash	Survey	
	E.7.a (j)	Added BMP*	Conduct education in local schools (e.g. classroom visits, assemblies, field trips)		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. These 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. Presentations are offered on: Sea Otters; Marine Mammals; and Sea Turtles. During the permit year, a total of 36 elementary and 17 middle/high school class presentations were conducted with 682 and 331 students educated respectively. 3) Save Our Shore (OSO) conducted 21 school presentations at local middle and high schools on storm water pollution, pathways of pollution and marine debris, with a total of 460 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 <i>ZunZun</i> conducted musical assemblies at two local schools with a total of approx. 760 students educated during the 4 musical assemblies (3 assemblies at one school and 1 at the other). Another benefit of the program is indirect outreach to the parents.	High	3	Trash	Survey	
	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	FULL	The BMP brochures are revised as needed and the revisions posted immediately on the City website. All three BMPS, Vehicle Service Facilities, Food Service Facilities, and Commercial Facilities, were revised in June 2010. The City's Municipal Operations BMPs" were revised in Januaray 2016 and uploaded to the City website and in-house files. Also, the Residential Pollution Prevention Brochure: Garden, Pool and Spa was revised in June 2016 and uploaded to the City website.	N/A	1	N/A	Documentation	

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✓	E.7.a (k)	NEW BMP		Develop and convey messages specific to reducing discharges from organized car washes, mobile cleaning/pressure washing operations	FULL	Again this permit year, storm water messages regarding car wash fundraising events and mobile/pressure washing activities were incorporated in letters that were sent to City schools and local mobile/pressure washers. The letter to local schools re car wash fundraising events was sent on April 7, 2016. The letter to local mobile/pressure washers was sent April 20, 2016.	Not assessed	2	N/A	Documentation	
✓	E.7.a (l)	NEW BMP		Conduct stormwater-friendly education to organized car wash participants	FULL	Again this permit year, in April 2016, 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	
✓	E.7.a (m)	NEW BMP		Develop and convey messages specific to mobile cleaning and pressure wash businesses	FULL	During the permit year, a letter was sent out to local mobile/pressure washers on April 20, 2016. The letter was a reminder stating that wastewater from outside cleaning could not be discharged to the street, storm drain system, or City landscaping & tree wells. Also, this permit year, the City partnered with other local agencies and co-funded Environmental Innovations (EI) to develop a new website for Monterey Bay area mobile washers. The website is: http://mbaymobilecleaners.org . City staff worked with EI to develop BMPs for the website and to compile a mailing list of mobile washers (approx. 105 businesses). The website also includes a training video and a pledge. EI sent a notice out to area mobile washers announcing the new website.	Not assessed	2	N/A	Documentation	

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E.7.b. Staff and Site Operator Training											
E.7.b.1 Illicit Discharge Detection and Elimination Training											
	E.7.b.1	MO-20	Develop A Storm Water BMP Training Piece	Training brochure, PowerPoint presentation, or other effective method	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. Since May 2012, the presentation is used by many of the crew supervisors when conducting annual storm water training for their staff and updates are made as needed. This year, the presentation was updated with information on "hot spot" areas or areas where illegal discharges had occurred within the city. A copy of the presentation is available upon request.	NA	1	Pathogens, sediment, trash	Documentation	
	E.7.b.1	MO-21	Train and Educate Appropriate Field Crews	1. Train 100% of appropriate staff biennially-City TOTAL	FULL	Multiple City field crews and other staff were trained on pollution prevention and good housekeeping measures through out the year by each division. Most divisions used the PowerPoint training presentation developed by SW staff based on the City BMPs for Municipal Operations. The training presentation currently includes information re illicit discharges and was updated with "hot spot" areas this permit year. Average pre-training test score for all crews was 78% and average post-training test score was 86%, this was an improvement over the prior year that had average pre-training test of 72% and average post-training test of 76%.	High	2	Pathogens, trash	Pre- and post- training survey	
				2. Train new staff within 6 months of the beginning of employment-all depts.	FULL	New PW Parking and Parks field crew staff are trained by each Supervisor upon hiring and at staff safety/tailgate meetings. All new Water Dept. staff trained by each Supervisor using BMPs, SOPs, & training videos.	High	2	Pathogens, trash	Pre- and post- training survey	
✓	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		FULL	Specific illicit discharge slides were added to the field crew training presentation, as well as an illicit discharge training question on the pre- and post-training test. A new powerpoint presentation was also created for illicit discharge identification for fire and police department crews.	N/A	2	N/A	Documentation	
✓	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		FULL	Storm water staff created a contact postcard for illicit discharge reporting phone numbers and distributed copies of the post-card to all departments for placement in field vehicles. It was also provided to admin staff that receive department phone calls from the public.	N/A	1	Pathogens, trash	Documentation	

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✓	E.7.b.1 (g)	NEW BMP	Focused education on identified illicit discharges and associated illicit discharge locations		FULL	Slides on identified illicit discharges in various areas of the City were included in the field crew, fire, and police training presentations. Average pre-training test score for all crews was 78% and average post-training test score was 86%, this was an improvement over the prior year that had average pre-training test of 72% and average post-training test of 76%. Average Fire Dept post-training test score was 100%.	High	2	Pathogens, trash	Pre- and post- training survey	
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	FULL	The PW Storm Water Program Analyst in charge of construction and post-construction plan reviews, erosion control and post-construction inspections, training of Planning and Building staff, and coordination with Building Department is QSD certified.	Not assessed	2	Sediment	Documentation	
	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	FULL	The City's PW Storm Water Program Analyst conducted training with all the building inspectors and the Green Building plan reviewer on 3/22/16. Pre-training test results: 62%, post-training test results: 88%	High	2	Sediment	Pre- and post- training survey	
				2. Train new Inspectors and Plan Reviewers within 6 months of the beginning of employment-Planning	FULL	There were two new building inspectors and one new plan reviewer that were hired in Jan-Mar 2016 and trained at the annual Storm Water training on 3/22/16.	High	2	Sediment	Pre- and post- training survey	
				3. Additional training on new or changed BMPs as needed	FULL	One PW storm water analyst and 2 planners attended a workshop on post-construction and LID design on 5/10/2016 in Watsonville. Two PW storm water analysts attended construction BMP workshops for contractors held in Santa Cruz and Watsonville in September 2015.	Not assessed	2	Sediment	Pre- and post- training survey	
✓	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	FULL	The City's PW Storm Water Program analyst in charge of construction and post-construction plan reviews, commercial project erosion control and post-construction inspections, training of Planning and Building staff, and coordination with Building Department is QSD certified.	Not assessed	2	Sediment	Documentation	
✓	E.7.b.2.a (c)	NEW BMP	Third-party plan reviewers must have QSD training		N/A	N/A - The City conducts erosion control plan reviews	Not assessed	2	Sediment	Documentation	
✓	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		FULL	Municipalities of the Monterey Bay region partnered to distribute information and provide 3 training events on erosion control BMPs for contractors in September 2015. The training locations were in Santa Cruz, Watsonville and Carmel. The training flyer was sent to contractors via email and by posting on municipal facebook pages and websites. 26 people attended the Santa Cruz workshop and 32 attended the Watsonville workshop.	Not assessed	2	Sediment	Documentation	

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	E.7.b.2.b	CON-8	Distribute Construction BMP Brochure	1. Available At the Planning Department counter	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 copy of the Construction BMPs is attached to the wet weather letters emailed out in October by the Building Dept to all open construction sites in the City.	Not assessed	2	Sediment	Documentation	
	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.	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 numerical Post-Construction requirements (multi-family and commercial projects with >5,000SF of new or replaced impervious area) are reviewed by the Public Works Storm Water Program analyst for compliance with the Construction, Post-construction, and SWPPP requirements (as applicable). Finally, Building and PW staff 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	
	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	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	

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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	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. The City's Environmental Programs page averaged 515 views/month, a 27% increase from the prior year. The City's Storm Water portal page averaged 107 page views/month, a 45% increase from the prior year. The City's LID Development Requirement page averaged 50 page views per month, about even with the prior year. This amounts to over 8,000 page views for the year for the 3 pages.	Medium	2	Sediment, Pathogens, Trash	Documentation, Tabulation (page hits), public awareness survey	
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	FULL	Multiple City field crews and other staff were trained on pollution prevention and good housekeeping measures through out the year by each division. Most divisions used the PowerPoint training presentation developed by SW staff based on the City BMPs for Municipal Operations. The training presentation currently includes information re illicit discharges and was updated with "hot spot" areas this permit year. Average pre-training test score for all crews was 78% and average post-training test score was 86%, this was an improvement over the prior year that had average pre-training test of 72% and average post-training test of 76%.	High	2	Sediment, Trash	Pre- and post- training survey	
				2. Train new staff within 6 months of the beginning of employment-all depts.	FULL	New PW Parking and Parks field crew staff are trained by each Supervisor upon hiring and at staff safety/tailgate meetings. All new Water Dept. staff trained by each Supervisor using BMPs, SOPs, & training videos.	High	2	Sediment, Trash	Pre- and post- training survey	
✓	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		FULL	Average pre-training test score for all crews was 78% and average post-training test score was 86%, this was an improvement over the prior year that had average pre-training test of 72% and average post-training test of 76%.	N/A	N/A	N/A	Documentation	
	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	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	
✓	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.		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)	

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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		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	
✓	E.8. (b)	NEW BMP	Consider development of a Citizen Advisory Group consisting of balanced representation of stakeholders		FULL	The City already has an appointed citizen oversight committee for storm water program expenditures.	N/A	1	N/A	Documentation	
✓	E.8. (c)	NEW BMP	Create opportunities for citizens to participate in the implementation of BMPs through sponsoring activities - monitoring		FULL	The City currently contributes co-sponsors or contributes funding for multiple activities for citizens to participate in including volunteer cleanups and water quality monitoring events. As described in other sections of this report, these activities include: 1) Annual Coastal Cleanup Day: The event is run by Save Our Shores in Santa Cruz and includes many beach and river levee cleanup sites. 2) July 4 & 5th Outreach and Beach cleanups: This event is run by Save Our Shores and includes outreach & ed on July 4th and beach cleanups on July 5th at 4 local beaches. 3) Adopt-A-Levee Program: The program is a partnership between the City and Save Our Shores, and is funded by the City. SOS organizes 4-5 community groups to adopt and clean their section of the San Lorenzo River levee a minimum of 3x/year per group. 4) Community River Cleanups: The program is a partnership between the City and Save Our Shores, and is funded by the City. SOS organizes volunteers to clean a predetermined section of the San Lorenzo River levee typically one event per season. Advertising is done to recruit volunteers & educate the public. 5) Snapshot Day: This countywide program is organized by Coastal Watershed Council and the City contributes funding support towards efforts w/in the city. Multiple waterbodies are sampled by volunteers in this annual family friendly event which occurs each spring. Additionally, the City involved citizen monitoring groups in sampling for microbial source tracking in San Lorenzo River for 6 months in 2014 and in 2016.	Not assessed	3	N/A	Documentation	
	E.8. (c)	PP-3, PE-13 /ID-5*	Sponsorship of First Flush	Sponsorship of one volunteer monitoring effort in the City	FULL	This permit year, 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 support for the SLRA and joined as a partner organization. In addition, the City provided funding support 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 7, 2016. The event included 18 water bodies/sampling sites within the City with 24 volunteers participating at these sites. In total for SC County, 45 sites were monitored by 60 volunteers.	Not assessed	3	N/A	Documentation	

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	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	FULL	This permit year, the City provided funding support for Annual Coastal Cleanup Day, which was held on Sept. 17, 2016. The state-wide event is organized and run locally by Save Our Shores. The event included 10 cleanup sites w/in the City including at beaches, along the river levee, and near Carbonera Creek. In the City, there were 377 volunteers who removed a total of 572 pounds of trash and 274 pounds of recycling.	High	4	Trash	Direct load measurement, tabulation (participation numbers), participant survey	
	E.8. (c)	Added BMP*	Sponsor volunteer monitoring efforts (e.g. Snapshot Day)	Sponsorship of one volunteer monitoring effort in the City	FULL	1) This permit year, the City provided funding support 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 7, 2016. The event included 18 water bodies/sampling sites within the City with 24 volunteers participating at these sites. In total for SC County, 45 sites were monitored by 60 volunteers. 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	
	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)		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 commits to doing 3 or more cleanups per year. This year, there were 6 AAL groups with a combined total of 170 volunteers who removed 900 pounds of trash 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 136 volunteers who removed 740 pounds of trash and 148 pounds of recycling. 3) July 4 & 5th Pollution Prevention Outreach and Star Spangled Beach Cleanup-this is a countywide program developed and run by Save Our Shores (SOS). Typically, this program includes 4 beaches in the City. SOS tracks the number of trash bags distributed on July 4th, and the amount of trash and recycling collected on July 5th, and the number 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	
	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)	FULL	The City co-sponsored the annual Earth Day Santa Cruz event on April 16, 2016. 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	FULL	Staff created lists of interested parties' email addresses and contact info during the SWMP approval process. New interested parties are added to list 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	

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		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	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 year, the Environmental Programs page averaged 515 views/month, a 27% increase from the prior year. The Storm Water portal page averaged 107 page views/month, a 45% increase from the prior year. The City's LID Development Requirement page averaged 50 page views per month, about even with the prior year. This amounts to over 8,000 page views for the year for the 3 pages. FY15-16 updates to environmental pages included: new "friendly" URLs for the stormwater pages (www.cityofsantacruz.com/stormwater and www.cityofsantacruz.com/bmps). Other updates this year included uploading of the revised Municipal Operations BMPs and the revised Residential Pollution Prevention Brochure: Garden, Pool and Spa. Also, the Spills and Illegal Dumping phone numbers were updated to include 911 for emergencies and during non-business hours.	Medium	2	Sediment, Pathogens, Trash	Documentation, Tabulation (page hits)	
✓	E.8. (e)	NEW BMP	Actively engage in the IRWMP or other watershed-level planning effort		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. This year, a subset of the IRWM group worked on preparing a countywide Storm Water Resource Plan as required by the current round of Prop 1 grant funding.	N/A	1	No	Documentation	
E.9	ILLCIT DISCHARGE DETECTION AND ELIMINATION										
E.9.a	Outfall Mapping										
✓	E.9.a	NEW BMP	Create and maintain an up-to-date and accurate outfall map		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 illicit 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
E.9.b	Illicit Discharge Source/Facility Inventory										
✓	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		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

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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	FULL	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. 8 facilities were identified with matching SIC codes; - Staff conducted aerial photo review and inspections to identify which ones had outdoor operations that might be exposed to storm water and cause a potential for storm water impact. - 6 businesses were visited, mostly all in the manufacturing sector. Results of the inspections indicated that nearly all the businesses had their operations conducted entirely indoors and did not have a potential to impact storm water. There were 3 businesses with outdoor activities. The City provided this information to the Regional Board and has followed up with the 3 facilities to have them move their operations indoors. Two of those businesses have moved their operations indoors. The City is in the process of doing followup inspections at the third business and may refer it to the RWQCB in Oct 2016 for coverage under the new State IGP.	N/A	1	N/A	Documentation	N/A
✓	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		FULL	Environmental Compliance inspectors were dispatched to collect samples at the 17 outfalls identified as flowing priority area outfalls. 7 of the outfalls were dry or inaccessible; 1 outfall had an illicit discharge investigation and remediation already underway, related to improper materials and waste management at an industrial facility. Several upgrades have been made at the facility as a result of the investigation. These outfalls will continue to be monitored. The remaining 9 outfall locations were sampled and analyzed for ammonia, color, conductivity, detergents-surfactants, fluoride, hardness, pH, potassium, and turbidity. All the sampling results were well below action levels.	Low	5	Pathogens	Monitoring results	Add FIB and caffeine to the dry weather outfall sampling suite to provide data re: bacteria entering City waterways from flowing outfalls, which would be useful for TMDL investigation.
E.9.d	Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions										
	E.9.d	ID-7	Implement Corrective Measures and Enforcement Procedures in Accordance with the Storm Water Ordinance	Eliminate 100% of identified illicit discharges	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	
	E.9.d (d) (e)	ID-2	Conduct Spill and Illegal Discharge Response	Respond to 100% complaints and reports of illegal discharges	FULL	Environmental Compliance inspectors responded to 54 SSOs, 14 restaurant storm water complaints, 1 hotel complaint, 5 construction sites and 7 general inquiries and complaints. All issues were resolved.	High	4	Trash, Pathogens	Inspection	

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E.9.e	Spill Response Plan										
✓	E.9.e	NEW BMP	Develop and implement a spill response plan		FULL	Completed in Year 1	N/A	1	Pathogens	Documentation	N/A
E.9	Existing BMPs Not Required By the Permit										
	N/A	MO-17	Dry Weather Diversion from Neary Lagoon to Wastewater Treatment Facility	Divert lagoon water 108 days per year	FULL	Lagoon water was diverted to the Wastewater Treatment Facility (WWTF) on the following dates: 6/30/15 to 1/05/16 and from 3/30/16 to 6 /30/16. Thus, during the permit year, the water was diverted approx. 310 days. Lagoon water is diverted to the WWTF year round until rains force the gravity outlet opening.	High	4	Pathogens	Monitoring	
	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	FULL	In preparation for the rainy season, WW Mains staff flushed the Neary storm drain lines to the sanitary sewer system on 9/28/15. The flushing process discharged approximately 100,000 gallons of water to the sanitary sewer.	High	4	Pathogens	Monitoring, science-based estimate (TELR)	
	N/A	In SWMP text, Chpt 1- Municipal Operations	Neary Lagoon - Dry Weather Season: Lagoon Water Sampling	Please see Attachment 1	FULL	This permit year, Env. Compliance/Lab staff collected "Dry Weather" samples before the Neary Lagoon storm drain lines were cleaned on Sept. 28, 2014 and after on Oct. 5, 2015. The Neary storm drain line flushing was conducted Sept. 28-October 1, 2015.	N/A	6	Pathogens	Documentation	N/A
	N/A	In SWMP text, Chpt 1- Municipal Operations	Neary Lagoon - Wet Weather Season: Receiving Water Monitoring	Please see Attachment 1	FULL	In Feb. 2015, our Guidance Document was approved by the RWQCB. This approval included replacement of the requirement to sample receiving water "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 in late December & early January, 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 December 21, 2015.	N/A	6	Pathogens	Documentation	N/A

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E.10 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM											
E.10.a Construction Site Inventory											
✓	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		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, finalized), and whether LID is required. The results are mapped using GIS to identify projects located within TMDL watersheds. Commercial/multifamily projects that create or replace over 5,000 sf of impervious surface are considered higher potential threat and are further tracked in an excel spreadsheet maintained by the 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
E.10.b Construction Plan Review and Approval Procedures											
✓	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.	FULL	In the City, all projects that increase the square footage or volume 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, as published by the City Public Works Department. The ordinance revision was approved by City Council on July 22, 2014 and published August 22, 2014. Additionally, Public Works revised its mandatory BMPS for Construction Projects to incorporate minimum requirements for the preparation of Erosion Control Plans. The revised mandatory construction BMPs were 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

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				Require rationale for BMPs used	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory construction BMPs 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
				Require that erosion/sed control plan list applicable permits associated w/ grading activity (CGP, 401, 404, 1600 agreement)	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory construction BMPs published by Public Works and updated in June 2014. The BMPs include guidance on information that shall be included in erosion control plans. At a minimum, erosion control plans must include: site topography, nearby watercourses, proposed grading contours, location of utilities, location of proposed erosion control measures, location of proposed sediment control measures, location of construction waste control measures, stockpile and equipment staging areas, total area of disturbance, and a list of other required permits associated with grading such as State Construction General Permit, U.S. Army Corps of Engineers 404 permit, State Water Board 401 Water Quality Certification, California Department of Fish and Wildlife 1600 Agreement, as applicable.	N/A	1	N/A	Documentation	N/A
				Document review using a checklist	FULL	The Public Works Department uses 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. 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
				SWPPP may substitute for erosion control plan where a SWPPP is developed	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

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E.10.c Construction Site Inspection and Enforcement											
✓	E.10.c	NEW BMP	Use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary		FULL	The Building Department conducts BMP inspections at residential and commercial sites per CalGreen requirements. Inspections are conducted at active construction sites prior to forecasted major rain events and at 50% or more sites after rain events. Additionally, the Public Works Department provides additional oversight for medium-sized commercial projects and large projects. The PW Environmental Projects Analyst conducts a pre-construction meeting with the contractor on erosion control BMPs, as well as periodic inspections before, after, and/or during rain events to identify problem sites and BMP deficiencies. Additional inspections are conducted at sites with erosion control issues. The PW Environmental Projects Analyst also conducts a final inspection at the completion of construction projects to ensure that all disturbed areas have been stabilized. Only one medium/large site had fully implemented BMPs at 1st visit. 2 medium/large sites remained in full compliance after the 1st visit. Several sites received verbal warnings and 2 sites received written notices of violation. Results indicate that regular inspections are critical to maintain site compliance with erosion control BMP requirements.	Medium	3	Sediment	Inspection (# sites fully implementing BMPs at 1st visit, 2nd visit, 3rd visit, addtl visits, observation of sediment leaving site)	
	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.)	FULL	In total, there were 110 permits including 105 residential sites and 5 commercial projects that were subject to erosion control requirements. There were 8 medium-sized residential multi-family and commercial sites (>5,000 SF new/replaced impervious), & 3 large sites (> 1 acre) that triggered special grading/erosion control inspections and were inspected by Public Works. Sites are inspected multiple times particularly if they are medium to large sites, or adjacent to sensitive waterbodies. Only 1 medium/large site subject to PW inspections fully implemented BMPs at 1st visit and throughout the project. 2 medium/large sites remained in full compliance throughout the project after the 1st visit. 2 sites received written notices of violation. 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)	

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				2. Inspect 100% of high priority sites prior to forecasted rain events	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 the Public Works Environmental Projects Analyst prior to, during and/or after 1 or more storms to identify problem sites and ensure BMPs were functioning properly. Also, the 67 sites that had active construction were notified by emailed letter in September 2015. Letters were re: site preparedness and Winter Grading Rules prior to the onset of the rainy season and included the City's mandatory Construction BMPs. Letters are sent by the Building Division to both the property owner and general contractor. There were 3 sites over 1 acre that were active during the rainy season and were periodically monitored by PW: 1) a care facility inspected 6 times during the wet season, 2) a hotel inspected 9 times during the wet season, and 3) a recreation area for a private business inspected 4 times during the wet season). 2 of the sites had inadequate BMPs or BMP failures that were rectified as a result of inspection. Results indicate that regular inspections are critical to maintain site compliance with erosion control BMP requirements. Results also indicate that rates of compliance were variable across projects, regardless of project size, and anecdotal information indicates that contractor experience and attitude about local water resources was significant in determining compliance with erosion control BMPs.	Medium	4	Sediment	Inspection (# sites w/ wet weather BMPs fully in place at 1st visit, # sites receiving warning or NOV), photo doc	
				3. After major rain events, 50% or more of "open" sites will be inspected	FULL	All open sites were inspected by Building inspectors after major rain events. Additionally, the PW Environmental Projects Analyst conducted inspections during and/or after major rain events at large sites and/or sites with BMP implementation failures. BMP failures were identified at 2 high priority sites and 1 medium size site. BMP failures were rectified as a result of inspection.	Medium	4	Sediment	Inspection (# sites w/ indication of BMP failure)	
E.10	Existing BMPs Not Required By the Permit										
	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	FULL	Staff did not encounter violations of State Construction Permit beyond those identified by PW staff.	N/A	1	No	Documentation	N/A
					FULL	Wet weather site inspections by Public Works staff revealed 1 site with CGP had a BMP failure that caused the release of sediment to the storm drain. Additionally, notification by a City field crew person identified a 2nd CGP site with BMP failure during a rain event that caused sediment release to the gutter. These 2 sites were issued Warning Letters and/or verbal warnings and were ordered to improve their BMP implementation. The City confirmed that BMP issues were addressed at both sites in follow-up inspections.	N/A	1	No	Documentation	N/A

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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		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 that didn't already have a separate NPDES permit 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.	N/A	1	No	Documentation	N/A
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		FULL	Completed in Permit Year 2	N/A	1	No	Documentation	N/A
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		FULL	Environmental Compliance inspectors conducted comprehensive inspections 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 due to housekeeping and materials management issues. Immediate measures were taken as a result of the inspection, including removing some staged 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. The City will also develop a SWPPP for this facility.	High	3	Sediment, Trash	Inspection (BMP installation)	
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)		N/A	Year 4 requirement	N/A	4	Sediment, Trash	Documentation	N/A
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		N/A	Year 5 requirement	N/A	3	Pathogens	Inspection (BMP installation)	N/A

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E.11.f Storm Drain System Assessment and Prioritization											
✓	E.11.f	NEW BMP	Develop procedures to prioritize storm drain system maintenance		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
	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.	FULL	90% of the catch basins in Downtown, Beach Flats, and lower Ocean Street were inspected after large storm events & re-cleaned if needed. Catch basins in these areas are inspected and cleaned as necessary during rain events. Priority and response is placed on any report from the public for non-functioning or plugged drains.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
	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.	Partial	90% of the catch basins in Downtown, Beach Flats, and lower Ocean Street were inspected after large storm events & re-cleaned if needed. Catch basins in these areas are inspected and cleaned as necessary during rain events. Priority and response is placed on any report from the public for non-functioning or plugged drains. The Downtown and Ocean Street areas flow, via the City storm drain system, to the San Lorenzo River. Thus, due to the focus on higher priority areas, approximately 20% of the catch basins in outlying areas were inspected and then cleaned if necessary.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
	E.11.f	MO-5	Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed	1. Annual inspection	FULL	Branciforte Channel is inspected weekly throughout the year. This includes all drainage ditches and adjacent toe ditches that feed the channel. Extensive effort is placed on weed abatement and trash removal of surrounding toe ditches. Extensive weed abatement and toe ditch cleaning was conducted in May 2016.	Not assessed	4	Trash	Load measurement	
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		FULL	PW WWMains 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 (TELRL)	
	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	FULL	90% of catch basins and inlets were cleaned in downtown, B. Flats, and lower Ocean areas in Fall 2015. Almost all drainage from these areas goes to the San Lorenzo River pump stations. A total of 9 cubic yards of debris was collected from both catch basins and storm drain lines. Wastewater Mains Division staff made extensive efforts to accomplish this.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	

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	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	FULL	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	
	E.11.g	MO-5	Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed	2. Removal of 100% of large trash and debris items	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 minimize trash entering the channel.	Not assessed	4	Trash	Direct trash load measurement	
	E.11.g	PE-1	Replace Worn Stencils or Apply New Stencils to Storm Drain Inlets		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 111 catch basins and posted photos of the storm drain marking project on social media resulting in over 600 engagements including photo mosaics and videos.	Medium	2	Trash	Public Awareness Survey	
	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	FULL	Fall cleaning was completed by 11/30/15. Spring cleaning was completed on 5/27/16. Pump Station 1B (Beach Flats) was cleaned four times during the wet weather season. Each station is inspected daily during wet weather and any floating trash is removed. Of the two seasonal cleaning events, spring cleaning of the pump stations is the most important due to debris from winter runoff/storms.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
	E.11.g	MO-7	CDS Unit Maintenance	1. Clean twice per year in Fall and Spring	FULL	The Capitola Road CDS unit's Fall 2015 and Spring 2016 cleaning were performed on: 11/12/15, 5/3/16. Cleaning of the Capitola Road Extension CDS unit requires extensive traffic control. Also, during spring, it has constant water flow in it since a creek runs thru it. The Laurel Ext. CDS unit is a very small unit that is cleaned during spring and fall months. Additional cleanings occur during wet weather as needed. A total of 1.5 CY of trash and debris were removed this year from both units, with the vast majority of collected trash/debris coming from the Capitola Road CDS unit.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
	E.11.g	MO-7		2. Inspect and clean, if necessary, monthly during rainy season	FULL	The Capitola Road CDS unit was inspected and cleaned on 11/12/15 and 5/3/16. 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. All 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 of 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 (TELRL)	

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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.		FULL	The City first developed BMPs for municipal operations in 2003. The municipal operation BMPs are updated as needed to include new or revised 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 its road maintenance, median maintenance, and graffiti removal operations. Storm water program staff send quarterly reminders to maintenance crew managers who are responsible for the quarterly assessment using a BMP checklist.	N/A	1	No	Documentation	
✓	E.11.h	NEW BMP	Evaluate municipal operations BMPs quarterly		FULL	The City's quarterly O&M assessment program was initiated in June 2016 and is conducted quarterly. Due to a lack of graffiti program manager, the first graffiti O&M assessment had to be postponed to October 2016.	Not assessed	3	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		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 will review the City's proposed Capital Improvement Project (CIP) List to identify new flood management projects. Potential flood management projects that are identified during this process 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. As needed, Storm Water Program staff will work 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.	N/A	1	No	Documentation	

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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		FULL	<p>The City has had 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.</p> <p>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.</p> <p>The municipal golf course uses an evaporation-based irrigation scheduler with rain and moisture sensors. Additionally, in FY2014-15, the Water Department conducted a water evaporation evaluation for all City parks, which has been used to establish water allocations for all parks as part of the City's drought response.</p>	Not assessed	4	No	Documentation	
E.11 Existing BMPs Not Required By the Permit											
	E.11	MO-15	Conduct Cleaning at Main and Cowell Beaches	1. Daily maintenance cleaning	FULL	<p>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 Beach and Cowell restrooms. 7) Maintain and repair beach vehicle and pedestrian access ramps. 8) Sweep Cowell parking lot & beach area walkways. 9) Schedule, supervise and provide equipment for organized volunteer beach cleanups by NGOs.</p>	Not assessed	4	Trash	Direct load measurement	
		MO-15		2. Spring cleaning as needed to remove trash following winter storms	FULL	<p>Despite heavy weather over the El Nino winter, beach debris volume was fairly moderate and the annual cleanup was not done during a specific week but over the course of the spring months as has been the case the last two years. The City continues to follow up on the Source Investigation Study (SIP) at Cowell Beach and, as agreed in the Beach Management Plan (CDP # 3-11-027), the City- removed kelp from the beach above the high tide mark between Memorial Day and Labor Day weekends. This year (7/14 - 7/15), approx. 16 tons of kelp, 1516 loose yards of trash, and 52.25 loose yards of recyclables were removed from the beach.</p>	High	4	Trash	Direct trash load measurement	

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	E.11	MO-2	Take Measures to Control Litter	Maintain litter and recycling receptacles in the downtown on a daily basis	FULL	There are 23 refuse/recycling containers on Pacific Ave (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 11 solar compactors that are collected 3x/week for approx. 34 tons collected during the year. Parking Maint. also collects refuse from an additional 70 downtown refuse containers, which are emptied on a daily basis. Parking Maint. collected approx. 67.5 tons of material collected this year.	High	4	Trash	Direct trash load measurement	
				Maintain litter and recycling receptacles in the Wharf, Cowell Beach, and part of Main Beach (from Wharf to near Coconut Grove (Westlake ramp)) a minimum average of 5 days/week	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 3,772 loose yards of trash and 757 yards of loose recycling.	High	4	Trash	Direct trash load measurement	
				Maintain litter and recycling receptacles in 35 City parks a minimum average of 5 days/week	FULL	The trash receptacles in the 35 City Parks are maintained/emptied daily.	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	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
				Sweep primary streets in other commercial areas twice per month	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	

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				Sweep 75% of residential streets once per month	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
	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	FULL	PW staff cleans 25 municipal parking lots 2x or 6x per week w/a mechanical sweeper. This includes four parking garages with 14 levels total. This permit year, over 468 yards of debris were collected.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
	E.11	MO-5	Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed	1. Annual inspection	FULL	Branciforte Channel is inspected weekly throughout the year. This includes all drainage ditches and adjacent toe ditches that feed the channel. Extensive effort is placed on weed abatement and trash removal of surrounding toe ditches. Extensive weed abatement and toe ditch cleaning was conducted in May 2016.	Not assessed	5	Trash	Direct load measurement	
		MO-5		2. Removal of 100% of large trash and debris items	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 minimize trash entering the channel.	Not assessed	5	Trash	Direct load measurement	
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		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	

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✓	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	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 interior floor drains.	Not assessed	3	No	Documentation	
E.12.j Planning and Development Review Process											
	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.	FULL	The City began enforcing the new Post-Construction Requirements on March 6, 2014. This year, there were 14 projects subject to the PCRs' Tier 1 requirements and 1 subject to Tier 2 requirements that were finalized for occupancy. Additionally there are 3 projects subject to Tier 2 that are currently under construction, 3 projects subject to Tier 2 under review, and 2 projects subject to Tier 4 under review.	N/A	3	No	Documentation	
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	FULL	The City began enforcing the new Post-Construction Requirements on March 6, 2014. This year, there were 14 projects subject to the PCRs' Tier 1 requirements and 1 subject to Tier 2 requirements that were finalized for occupancy. All projects were inspected by the PW Senior Env'tal Projects Analyst and met the PCRs. Additionally there are 3 projects subject to Tier 2 that are currently under construction, 3 projects subject to Tier 2 under review, and 2 projects subject to Tier 4 under review. All projects subject to the PCRs are being reviewed by the PW Senior Env'tal Projects Analyst 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.	High	5	Sediment, Pathogens, Trash	Land-use-load estimation (RAM/TELR)	

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New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	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
	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	FULL	The City maintains a spreadsheet to track LID projects requiring maintenance agreements, track annual LID maintenance log submittals, property ownership and contacts, and site inspections. The spreadsheet was modified to specify which PCR Tier projects are subject to. The spreadsheet also identifies structural control measures incorporated into each project. The City is currently collaborating with other municipalities of the Central Coast Region, the Regional Board, and the Central Coast LIDI to evaluate the feasibility of and develop a BMP tracking tool that could be used to support BMP tracking and assess BMP operation over time.	N/A	1	Sediment, Pathogens, Trash	Documentation	
				2. Enforce the proof of annual BMP inspection and maintenance requirement at 100% of sites	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). Currently, the City has 51 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 32 built sites on September 14, 2015. This time around the City requested voluntary photo documentation to be sent with the maintenance logs and 15 sites provided photos with the logs. 19 sites were not sent a letter because these projects were either under construction, had not yet started construction, or were just completed in the fall of 2015. All 32 sites completed and returned their logs by January 2016. Again this year, staff spent significant time educating the appropriate people at a number of the sites as the managers, contacts, or the facilities staff change with time and the new personnel is unfamiliar with the requirements.	High	5	Sediment, Pathogens, Trash	Documentation, Land-use-load estimation (RAM/TELRL)	
				3. Implement a spot inspection program at 10% of sites annually	FULL	During the permit year, 14 sites (> 10%) were inspected before and during wet weather. 5 sites required some maintenance of onsite BMPs for optimal operation and were contacted by the PW Environmental Projects Analyst. BMP maintenance was addressed by property owners in response to inspection results. All other sites were found to have their BMPs in good working condition.	Medium	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELRL)	
	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	FULL	There were no Post-Construction related violations during the permit year.	Not assessed	3	Sediment, Pathogens, Trash	Documentation, tabulation (# follow-up emails, #NOVs)	

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<i>E.12</i> Existing BMPs Not Required By the Permit											
		PC-12	Hold Educational Workshops on LID and Hydromodification Control Requirements	1. One educational workshop after the hydromodification control criteria have been developed	FULL	Completed FY2015	Not assessed	2	Sediment, Pathogens, Trash	Documentation, Survey	
		PC-14	Provide Training to Appropriate Planning & Public Works Staff	3. Additional training on new or changed BMPs as needed	FULL	The PW stormwater and LID plan reviewer attended the EPA/State Board training on Reasonable Assurance Analysis and Green Infrastructure Planning; 2 planners and the PW stormwater plan reviewer attended the LID design workshop led by Dan Cloak in Watsonville on 5/10/16.	Not assessed	2	Sediment, Pathogens, Trash	Documentation, Survey	
		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	FULL	The PW Senior Environmental Projects Analyst reviews and inspects all projects that trigger Tier 2 of the PCRs. One Tier 2 project was inspected multiple times and got final Post-Construction BMP approval on 4/7/16. In addition a City Public Works Prop 84 grant project meeting Tier 2 was also inspected and completed August 2015. Active projects over 1 acre in FY15-16 were inspected as follows: 1) Delaware Avenue: Commercial development construction halted in Spring 2014. The site was inspected twice (LID and erosion control). 2) Jewell Street: Commercial development project that was initiated in January 2015. The site was inspected 6 times during the permit year. 3) River Street: City redevelopment project that was initiated in October 2014. Project parking lot improvements initiated in summer 2015 and inspected 4 times before final on 10/13/15. Project subject to interim LID requirements and met requirements w/ biofiltration. 4) Mission St. Extension: Hotel development project initiated in July 2014. The site was inspected 15 times before final on 4/14/16. Project subject to interim LID requirements and met the requirements with bioretention. 5) Encinal St: outdoor recreation project initiated January 2016, inspected 4 times for erosion & LID before final in April 2016. Project met PCR Tier 1 requirements. 6)The SC Metropolitan Authority has a construction site on River Street but the site was not inspected for Post-Construction Treatment Systems because the City's PCRs are not binding for Special District properties/projects with their own review authority. The City provided recommendations on the proposed plans regarding implementation of Post-Construction but is not able to enforce requirements. This project is covered under IGP WDID No. 3 44I012085 and Construction GP WDID No. 3 44C365560.	High	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELRL)	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.

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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	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 serves as a revision to the WAAPs previously submitted by the City. During the permit year, the City continued to implement its pilot monitoring program for bacteria in the San Lorenzo River, and Branciforte and Carbonera Creeks. 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. In addition, the City contributed funding to the San Lorenzo River Alliance (SLRA) Water Quality Working Group monitoring study 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). Please see attached San Lorenzo River Alliance Water Quality Working Group Fiscal Year 2015-16 Progress Report for a summary of the monitoring program. The City is studying more critically the initial findings upon which the SLRA study is based, and will be providing additional data from this work.	N/A	6	N/A	N/A	
	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	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. In addition, the City contributed funding to the San Lorenzo River Alliance (SLRA) Water Quality Working Group monitoring study 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). Please see attached <i>San Lorenzo River Alliance Water Quality Working Group Fiscal Year 2015-16 Progress Report</i> for a summary of the monitoring program. The City is studying more critically the initial findings upon which the SLRA study is based, and will be providing additional data from this work.	N/A	6	N/A	N/A	
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	FULL	PEAIP Completed in Permit Year 2. BMP Effectiveness Assessment of priority BMPs has been incorporated in this Annual Report. Additionally, the City is involved in the development of the BMP RAM assessment tool and TELR catchment modeling effort initiated by the Regional Board in 2015. City catchment and land use mapping required as a base for the model have been completed.	N/A		N/A	N/A	

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				Describe implementation of the Plan, summarize data obtained through effectiveness assessment measures, and provide an analysis of the data to improve effectiveness	FULL	The City's priority BMPs are highlighted in yellow in the combined annual report and Program Effectiveness Assessment table. The City has been collecting and tracking data on priority BMPs and this data is summarized in the BMP implementation information of each priority BMP. For each BMP the table also provides BMP effectiveness, evaluation method and any proposed modifications. Additionally, the City is involved in the development of the BMP RAM assessment tool and TELR catchment modeling effort initiated by the Regional Board in 2015 to provide geographic modeling of pollutant loads and BMP effectiveness in the City. City catchment and land use mapping required as a base for the model have been completed and submitted to the Regional Board on August 4, 2016. During July and August 2016, the City also started inventorying existing structural BMPs using BMP RAM.	N/A		N/A	N/A	
✓	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		N/A	Year 5 Requirement.	N/A		N/A	N/A	
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	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 City of Santa Cruz, the County of Santa Cruz, and the cities of Capitola, Scotts Valley, and Watsonville.	N/A	1	Sediment	N/A	
	E.15	TMDL 2	Develop Additional BMPs as Necessary in Conjunction With The TMDL For Pathogens	Target=Bacteria - Additional BMPs and measures	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 City of Santa Cruz, the County of Santa Cruz, and the cities of Capitola, Scotts Valley, and Watsonville.	N/A	1	Pathogens	N/A	
	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	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. Per 2013/2014 CCRWQCB communications, WAAP revisions are due June 30, 2015. During Permit Year 2, City staff will work with RWQCB staff to evaluate and revise both the monitoring program and the list of BMPs that will be implemented for attainment of TMDL wasteload allocations. 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, including effectiveness assessment, to the RWQCB in June 30, 2015.	N/A	1	Sediment, Pathogens	N/A	

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✓	E.15	NEW BMP	Comply with the effectiveness assessment schedule and process included in WAAP		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, including effectiveness assessment, to the RWQCB in June 30, 2015.	N/A	1	Sediment, Pathogens	N/A	
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		FULL	The City prioritizes efforts to maintain and clean storm drains/catch basins in areas with direct impact to the ocean or the San Lorenzo River. Thus, 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, Downtown, and lower Ocean Street areas. Staff also reviews the areas which needed attention during the previous year and adds these areas to the priority list.	N/A	1	Sediment, Trash, Pathogens	Documentation	
✓	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		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 tracks completed maintenance & repairs.	High	5	Sediment, Trash, Pathogens	Land-use-load estimation (TELRL)	
	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	FULL	In FY2015-16, 90% of catch basins and inlets were cleaned in Downtown, B. Flats, and lower Ocean Street areas in Fall 2015. Almost all drainage from these areas goes to the San Lorenzo River pump stations. A total of 9 cubic yards of debris was collected from both catch basins and storm drain lines during the Fall cleaning. Wastewater Mains Division staff made extensive efforts to accomplish this.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
				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	FULL	In FY2015-16, 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	
				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	FULL	In FY2015-16, 100% of clogged or non-functional storm drains and catch basins were cleaned and repaired citywide. Priority and response is placed on any report from the public for non-functioning or plugged drains.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
				4. Inspect 50% of the catch basins in the outlying areas of the City annually and clean as needed	Partial	There are at least 1,400 catch basins in the City. As mentioned above, City efforts focused on the high priority areas including the Beach, Downtown, and lower Ocean Street areas. The Downtown and Ocean Street areas flow, via the City storm drain system, to the San Lorenzo River. Thus, due to the focus on higher priority areas, approximately 20% of the catch basins in outlying areas were inspected and then cleaned if necessary.	Medium	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	

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	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	FULL	Fall cleaning was completed by 11/15/15. Spring cleaning was completed by 5/29/16. Pump Station 1B (Beach Flats) was cleaned three times during the wet weather season. Each station is inspected daily during wet weather and any floating trash is removed. Of the two seasonal cleaning events, spring cleaning of the pump stations is the most important due to debris from winter runoff/storms.	High	5	Sediment, Trash	Direct load measurement, land use load estimation (TELRL)	
	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	FULL	A total of 4,000 feet of storm drain pipe were TV'd in FY2015-2016 at various location including Prospect Heights, English Drive and Curtis Street. A total of 3,000 feet of storm drain pipe were TV'd in FY2014-2015 at various location including Pacific Avenue, Front Street and Curtis Street. A total of 200 feet of storm drain pipe were TV'd in FY2013-2014 along West Cliff. A total of 2,000 feet were TV'd in FY2012-2013. A total of 260 feet of storm drain pipe were TV'd in FY2011-2012. A total of 290 feet were TV'd in FY2010-2011. A total of 13,732 feet were TV'd in FY2009-2010.	N/A	1	Sediment, pathogens, trash	Documentation	
	E.15	MO-11	Development and Implementation of a Lateral Inspection Program	Implementation of Program starting 2016	Partial	The City's Sewer Ordinance is in the final stage of internal vetting including review by the City's legal department. A public comments period is planned to begin in January 2017 with final adoption of the ordinance by the City of Santa Cruz City Council by July 4, 2017.	N/A	4	Pathogens	Tabulation (# lateral repairs, # lateral overflows)	
	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	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 July 1, 2015 to June 30, 2016: Pump Station 1A= 67,200 gallons; Pump Station 1=252,000gallons; and Pump Station 2= 155,400 gallons. *Diversions not possible once river shoals. 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	

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	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	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, 2015 to June 30, 2016: Pump Station 1B=163,800 gallons and Pump Station 3=1,000 gallons. *Diversion not possible once river shoals. The diversion work (re equipment & piping) was completed at Pump Station # 1B by January 2008 and at Pump Station # 3 on May 27, 2008. Summer diversion stations are tested by City Environmental Compliance Div. and must meet WWTF requirements prior to discharge into sanitary sewer. All summer diversion pumps are run until 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	
	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	FULL	The Illegal Campsite Cleanup Program is ongoing and conducted daily. The City devotes considerable effort and staff time on this in order to protect waterways, riparian habitats, open spaces, and preserves. The general cleanup locations are: 1) San Lorenzo River from the Tate Street intake to the river mouth. Cleanup occurs along the river levee, banks, and slopes; 2) Branciforte and Arana Creeks; and 3) Open spaces including Pogonip, Neary Lagoon, DeLaveaga Park, Arana Gulch, and Moore Creek Preserve. This permit year, there were a total of 370 illegal campsite contacts with the majority of them resulting in some level of cleanup by City staff. Of the 370, approximately 160 campsites were near or adjacent to the San Lorenzo River. In addition, staff conducts additional "major" cleanups at specific areas throughout the year as needed.	Not assessed	4	Pathogens, trash	Direct trash load measurement	
	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	FULL	Environmental Compliance inspectors responded to 54 SSOs, 14 restaurant storm water complaints, 1 hotel complaint, 5 construction sites and 7 general inquiries and complaints. All issues were resolved.	High	4	Trash, Pathogens	Inspection	
	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	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 111 catch basins and posted photos of the storm drain marking project on social media resulting in over 600 engagements including photo mosaics and videos.	Medium	2	Trash	Public Awareness Survey	

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	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)	FULL	This year, the City continued funding or contributed support for river and beach volunteer cleanup programs as follows: 1) <u>San Lorenzo River Adopt-A-Levee Program</u> -this is a volunteer group river levee cleanup program funded by the City and implemented by Save Our Shores. Each adopting group commits to doing 3 or more cleanups per year. This year, there were 6 AAL groups with a combined total of 170 volunteers who removed 900 pounds of trash from the SLR levee. 2) <u>San Lorenzo River Community Volunteer River cleanups</u> -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 136 volunteers who removed 740 pounds of trash and 148 pounds of recycling. 3) <u>July 4 & 5th Pollution Prevention Outreach and Star Spangled Beach Cleanups</u> -this is an annual countywide event run by Save Our Shores (SOS). On July 4th, SOS does "towel to towel" litter outreach on the beaches and hands out trash bags to beachgoers. On July 5th, SOS conducts volunteer cleanups at these beaches. This year, the event included 3 beaches in the City. On July 4th 2015, outreach was done at Cowell, Main and Seabright Beaches with a total of 2,700 people reached and 1,511 trash bags handed out. On July 5th, 37 cleanup volunteers at these three beaches collected a total of 626 lbs. of trash and 189 lbs. of recycling. 4) <u>Annual Coastal Cleanup Day</u> -The City also provides funding support for this statewide event (see above). In the City, the event includes cleanup sites along the San Lorenzo River.	High	4	Pathogens, trash	Direct trash load measurement	
	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	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. In addition, the City contributed funding to the San Lorenzo River Alliance (SLRA) Water Quality Working Group monitoring study 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). Please see attached <i>San Lorenzo River Alliance Water Quality Working Group Fiscal Year 2015-16 Progress Report</i> for a summary of the monitoring program. The City is studying more critically the initial findings upon which the SLRA study is based, and will be providing additional data from this work.	N/A	6	N/A	N/A	

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✓	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	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 serves as a revision to the WAAPs previously submitted by the City. During the permit year, the City continued to implement its pilot monitoring program for bacteria in the San Lorenzo River, and Branciforte and Carbonera Creeks. 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. In addition, the City contributed funding to the San Lorenzo River Alliance (SLRA) Water Quality Working Group monitoring study 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). Please see attached San Lorenzo River Alliance Water Quality Working Group Fiscal Year 2015-16 Progress Report for a summary of the monitoring program. The City is studying more critically the initial findings upon which the SLRA study is based, and will be providing additional data from this work.	N/A	6	N/A	N/A	
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	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
				2. Sweep primary streets in other commercial areas weekly to twice per month	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
				3. Sweep 75% of residential streets once to twice per month	FULL	All sweeping requirements (#1-4) to meet our minimum goals equal 773 curb miles per month. In July 2015 through June 2016, there was a total of 26,062 curb miles swept (or an average of 2,172 curb miles swept per month). Total tonnage collected was 875 tons or an average of 73 tons per month. There are 40 curb miles of commercial streets including downtown, Soquel Ave, Mission & Beach area. This commercial area is our first priority and the minimum goal is to sweep twice each week or 320 miles per month. This year we exceeded our goal.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	

ANNUAL REPORT PROGRAM EFFECTIVENESS ASSESSMENT MATRIX

CITY OF SANTA CRUZ STORM WATER PROGRAM

Due October 15, 2016

New BMP (✓)	Permit Section	New or Existing BMP #	BMPs	MEASURABLE GOALS	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
	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	FULL	PW staff cleans 25 municipal parking lots 2x or 6x per week w/a mechanical sweeper. This includes four parking garages with 14 levels total. This permit year, over 468 yards of debris were collected.	High	5	Sediment, trash	Direct load measurement, land use load estimation (TELRL)	
✓	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		FULL	The City inventories all new discretionary approval applications and ministerial permits via its TRAKiT online database. TRAKiT keeps record of the permit type, location, application status, inspections, and LID requirements. All new permit applications that trigger a grading or building permit are subject to stormwater runoff control requirements. TRAKiT is queried to develop a report of all new permit applications subject to stormwater runoff control and the results are categorized by project type (commercial or residential), status (applied, approved, permit issued, finalized), and whether LID is required. The results are mapped using GIS to identify projects located within TMDL watersheds. Commercial/multifamily projects that create or replace over 5,000 sf of impervious surface are considered higher potential threat and are further tracked in an excel spreadsheet maintained by the PW Department - those projects are inspected by both Building and PW to ensure compliance with stormwater 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
✓	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.	FULL	In the City, all projects that increase the square footage or volume 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, as published by the City Public Works Department. The ordinance revision was approved by City Council on July 22, 2014 and published August 22, 2014. Additionally, Public Works revised its mandatory BMPS for Construction Projects to incorporate minimum requirements for the preparation of Erosion Control Plans. The revised mandatory construction BMPs were 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

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				Require rationale for BMPs used	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory construction BMPs 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
				Require that erosion/sed control plan list applicable permits associated w/ grading activity (CGP, 401, 404, 1600 agreement)	FULL	All proposed projects that trigger a grading or building permit must abide by the mandatory construction BMPs published by Public Works and updated in June 2014. The BMPs include guidance on information that shall be included in erosion control plans. At a minimum, erosion control plans must include: site topography, nearby watercourses, proposed grading contours, location of utilities, location of proposed erosion control measures, location of proposed sediment control measures, location of construction waste control measures, stockpile and equipment staging areas, total area of disturbance, and a list of other required permits associated with grading such as State Construction General Permit, U.S. Army Corps of Engineers 404 permit, State Water Board 401 Water Quality Certification, California Department of Fish and Wildlife 1600 Agreement, as applicable.	N/A	1	N/A	Documentation	N/A
				Document review using a checklist	FULL	The Public Works Department uses 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. 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

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				SWPPP may substitute for erosion control plan where a SWPPP is developed	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
✓	E.10.c	NEW BMP	Use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary.		FULL	The Building Department conducts BMP inspections at residential and commercial sites per CalGreen requirements. Inspections are conducted at active construction sites prior to forecasted major rain events and at 50% or more sites after rain events. Additionally, the Public Works Department provides additional oversight for medium-sized commercial projects and large projects. The Public Works Environmental Projects Analyst conducts a pre-construction meeting with the contractor on erosion control BMPs, as well as periodic inspections before, after, and/or during rain events to identify problem sites and BMP deficiencies. Additional inspections are conducted at sites with erosion control issues. The Public Works Environmental Projects Analyst also conducts a final inspection at the completion of construction projects to ensure that all disturbed areas have been stabilized. Only one medium/large site fully implemented BMPs at 1st visit. 2 medium/large sites remained in full compliance after the 1st visit. Several sites received verbal warnings and 2 sites received written notices of violation. Results indicate that regular inspections are critical to maintain site compliance with erosion control BMP requirements.	Medium	3	Sediment	Inspection (# sites fully implementing BMPs at 1st visit, 2nd visit, 3rd visit, addtl visits, observation of sediment leaving site)	
	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.)	FULL	In total, there were 110 permits including 105 residential sites and 5 commercial projects that were subject to erosion control requirements. There were 8 medium-sized residential multi-family and commercial sites (>5,000 SF new/replaced impervious), & 3 large sites (> 1 acre) that triggered special grading/erosion control inspections and were inspected by Public Works. Sites are inspected multiple times particularly if they are medium to large sites, or adjacent to sensitive waterbodies. Only 1 medium/large site subject to PW inspections fully implemented BMPs at 1st visit and throughout the project. 2 medium/large sites remained in full compliance throughout the project after the 1st visit. 2 sites received written notices of violation. Results indicate that regular inspections are critical to maintain site compliance with erosion control BMP requirements.	Medium	3	Sediment	Inspection (# sites fully implementing BMPs at 1st visit, 2nd visit, 3rd visit, addtl visits)	

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				2. Inspect 100% of high priority sites prior to forecasted rain events	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 the Public Works Environmental Projects Analyst prior to, during and/or after 1 or more storms to identify problem sites and ensure BMPs were functioning properly. Also, the 67 sites that had active construction were notified by emailed letter in September 2015. Letters were re: site preparedness and Winter Grading Rules prior to the onset of the rainy season and included the City's mandatory Construction BMPs. Letters are sent by the Building Division to both the property owner and general contractor. There were 3 sites over 1 acre that were active during the rainy season and were periodically monitored by PW: 1) a care facility inspected 6 times during the wet season, 2) a hotel inspected 9 times during the wet season, and 3) a recreation area for a private business inspected 4 times during the wet season). 2 of the sites had inadequate BMPs or BMP failures that were rectified as a result of inspection. Results indicate that regular inspections are critical to maintain site compliance with erosion control BMP requirements. Results also indicate that rates of compliance were variable across projects, regardless of project size, and anecdotal information indicates that contractor experience and attitude about local water resources was significant in determining compliance with erosion control BMPs.	Medium	4	Sediment	Inspection (# sites w/ wet weather BMPs fully in place at 1st visit, # sites receiving warning or NOV), photo doc	
				3. After major rain events, 50% or more of "open" sites will be inspected	FULL	All open sites were inspected by Building inspectors after major rain events. Additionally, the Public Works Environmental Projects Analyst conducted inspections during and/or after major rain events at large sites and/or sites with BMP implementation failures. BMP failures were identified at 2 high priority sites and 1 medium size site. BMP failures were rectified as a result of inspection.	Medium	4	Sediment	Inspection (# sites w/ indication of BMP failure)	

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	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	FULL	<p>The PW Senior Environmental Projects Analyst reviews and inspects all projects that trigger Tier 2 of the PCRs. One Tier 2 project was inspected multiple times and got final Post-Construction BMP approval on 4/7/16. In addition a City Public Works Prop 84 grant project meeting Tier 2 was also inspected and completed August 2015. Active projects over 1 acre in FY15-16 were inspected as follows:</p> <p>1) Delaware Avenue: Commercial development construction halted in Spring 2014. The site was inspected twice (LID and erosion control).</p> <p>2) Jewell Street: Commercial development project that was initiated in January 2015. The site was inspected 6 times during the permit year.</p> <p>3) River Street: City redevelopment project that was initiated in October 2014. Project parking lot improvements initiated in summer 2015 and inspected 4 times before final on 10/13/15. Project subject to interim LID requirements and met requirements w/ biofiltration.</p> <p>4) Mission St. Extension: Hotel development project initiated in July 2014. The site was inspected 15 times before final on 4/14/16. Project subject to interim LID requirements and met the requirements with bioretention.</p> <p>5) Encinal St: outdoor recreation project initiated January 2016, inspected 4 times for erosion & LID before final in April 2016. Project met PCR Tier 1 requirements.</p> <p>6)The SC Metropolitan Authority has a construction site on River Street but the site was not inspected for Post-Construction Treatment Systems because the City's PCRs are not binding for Special District properties/projects with their own review authority. The City provided recommendations on the proposed plans regarding implementation of Post-Construction but is not able to enforce requirements. This project is covered under IGP WDID No. 3 44I012085 and Construction GP WDID No. 3 44C365560.</p>	High	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELRL)	
	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	FULL	Completed in Permit Year 1	Not assessed	2	Sediment, Pathogens, Trash	Documentation, tabulation (page hits), public awareness survey	
	E.12.j	PC-10	<i>Develop and/or Modify Enforceable Mechanisms That Will Effectively Implement Hydromodification Controls and LID. Enforceable Mechanisms May Include Municipal Codes, Regulations, Standards, and Specifications.</i>	Approved new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement hydromodification controls and LID in new and redevelopment projects	FULL	There were no significant gaps. Staff is working on minor revisions to the parking ordinance to help facilitate LID implementation. This should be completed in early 2016. 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 are routed through one Public Works development project plan reviewer that ensures that proposed projects meet the revised mandatory BMPs.	N/A	1	No	Documentation	

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	E.12.j	PC-10	<i>Develop and/or Modify Enforceable Mechanisms That Will Effectively Implement Hydromodification Controls and LID. Enforceable Mechanisms May Include Municipal Codes, Regulations, Standards, and Specifications.</i>	Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects.	FULL	The City began enforcing the new Post-Construction Requirements on March 6, 2014. Since March 2014, there have been 8 residential projects subject to Tier 1 of the PCRs and 1 project subject to Tier 2 that received their building permit during the fiscal year and are in construction. Additionally, 2 projects were subject to Tier 4 of the PCRs and are currently under review by the Building Department. Finally, there are 9 projects subject to the PCRs that are currently in the Plan Review process.	N/A	3	No	Documentation	
	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	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). Currently, the City has 51 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 32 built sites on September 14, 2015. This time around the City requested voluntary photo documentation to be sent with the maintenance logs and 15 sites provided photos with the logs. 19 sites were not sent a letter because these projects were either under construction, had not yet started construction, or were just completed in the fall of 2015. All 32 sites completed and returned their logs by January 2016. Again this year, staff spent significant time educating the appropriate people at a number of the sites as the managers, contacts, or the facilities staff change with time and the new personnel is unfamiliar with the requirements.	High	5	Sediment, Pathogens, Trash	Documentation, Land-use-load estimation (RAM/TELRL)	
				Implement a spot inspection program at 10% of sites annually	FULL	During the permit year, 14 sites (> 10%) were inspected before and during wet weather. 5 sites required some maintenance of onsite BMPs for optimal operation and were contacted by the PW Environmental Projects Analyst. BMP maintenance was addressed by property owners in response to inspection results. All other sites were found to have their BMPs in good working condition.	Medim	5	Sediment, Pathogens, Trash	Inspection, Land-use-load estimation (RAM/TELRL)	
✓	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	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 serves as a revision to the WAAPs previously submitted by the City. During the permit year, the City continued to implement its pilot monitoring program for bacteria and sediment in the San Lorenzo River, and Branciforte and Carbonera Creeks. 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. The City also conducted dry weather outfall monitoring again this permit year, which included sampling and analyses for turbidity at flowing Branciforte Creek outfalls. SLR outfalls were not sampled as they were either under water or fitted with tideflex valves.	N/A	6	N/A	N/A	

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E.16			ANNUAL REPORTING PROGRAM								
✓	E.16.a	NEW BMP	Use SMARTS to report and certify		FULL	The Annual Report will be entered into SMARTS by October 15th annually	N/A	1	N/A	N/A	N/A
	E.16.b		Complete and retain annual reports and make available to RWQCB during working hours		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
✓	E.16.c	NEW BMP	Submit detailed written or oral report to RWQCB if directed.		FULL	The City will submit reports to the RWQCB as directed	N/A	1	N/A	N/A	N/A
✓	E.16.d	NEW BMP	May coordinate reporting if regional programs		N/A	N/A	N/A	1	N/A	N/A	N/A