Chapter 6: POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

BMP #PC-1: On City Owned Property, No New City Development Projects Shall Be Permitted Within 30 feet of a Wetland Without An Approved Project-specific Habitat Management Pan and a Site-specific Water Quality Management Plan

Measurable Goals:
Formalize and implement strategy

Year 4 Summary: This strategy was formalized by incorporating it into the mandatory storm water BMPs/ Design Standards for Development and Remodeling Projects when this BMP brochure was revised in June 2010. The BMP brochure is posted on the City website at:

http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=29519.

Effectiveness: goal met
Proposed Modifications: none – BMP completed
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.

BMP #PC-2: Revise Mandatory Storm Water BMPs/Design Standards Brochure

Scheduled for Year 2

Measurable Goals:
1. Revision to require more effective BMPs to treat parking lot runoff
2. Revision to clarify that all development projects per General Permit Attachment 4 will be subject to structural or treatment control BMP requirements
3. A process for project applicants to follow to identify structural or treatment control BMPs that will effective in removing a development project's pollutants of concern

Year 4 Summary: The BMP brochure was revised in June 2010. It is posted on the City website at: http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=29519. A paper copy is available upon request.

Effectiveness: goal met early in Year 1
Proposed Modifications: Replace with implementation of recently adopted RWQCB PCRs and E.12 source control measure requirements.

Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k.

BMP #PC-3: Derive Municipality-Specific Criteria for Controlling Hydromodification in New and Redevelopment Projects Using Water Board-Approved Methodology Developed through the Joint Effort.

Scheduled for Joint Effort Q8

Measurable Goals:
Hydromodification Control Criteria

Year 4 Summary: This year, as in Permit Year 3, the City continued to participate in the RWQCB Joint Effort to Develop Hydromodification Control Standards (JE). The RWQCB adopted the Post-Construction Requirements (PCRs) for Development Projects in the Central Coast Region on July 12, 2013 (Resolution No. 2013-0032), which requires municipalities in the Central Coast Region to update municipal standards to be able to implement the PCRs to all applicable projects by March 6, 2014. The City will abide by the implementation schedule and requirements included in the resolution.

During the course of the JE process, the quarters/schedule were adjusted by the RWQCB. The City will abide by the schedule in the recently approved Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (Resolution No. 2013-0032).

Effectiveness: NA/timetable revised
Proposed Modifications: Completed – Regional PCRs have been adopted and will be implemented in the City by March 2014
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k

BMP #PC-4: Select Applicability Thresholds for Applying Hydromodification Control Criteria to New and Redevelopment Projects. Applicability Thresholds Will Be Consistent with Long-Term Watershed Protection.

Scheduled for Joint Effort Q8

Measurable Goals:
Applicability Thresholds

Year 4 Summary: Same as BMP #PC-3 above

Effectiveness: NA/timetable revised
Proposed Modifications: Completed – Regional PCRs have been adopted and will be implemented in the City by March 2014

Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k

BMP #PC-5: Develop and Enact a Strategy for Implementing LID and Hydromodification Control for New and Redevelopment Projects.

Scheduled for Joint Effort Q2-Q9

Measurable Goals:
Implementation Strategy for LID and Hydromodification Control:

Guidance

1. Develop, advertise and make available LID BMP Design Guidance suitable for all stakeholders (Q4)

2. Specific guidance on how to achieve and demonstrate compliance with the hydromodification control criteria and LID requirements made available to new and redevelopment project applicants (Q8)

Education and Outreach

1. Documentation of goals, schedules, and target audiences for education and outreach the municipality will conduct in support of the following strategic objectives: enforceable mechanisms, hydromodification control criteria, applicability thresholds, LID BMP design, and compliance with LID and hydromodification control criteria (Q2)

2. Tracking Report indicating municipality's accomplishments in education and outreach supporting implementation of LID and hydromodification control for new and redevelopment projects (Q8)

Interim LID Implementation

1. Apply LID principles and features to all applicable new and redevelopment projects (Q2-Q8).
2. Tracking Report, for the period Q2 to Q8, identifying LID design principles and features incorporated into each applicable new and redevelopment project (Q9).

Year 4 Summary:

Guidance

The City has revised its mandatory BMPs for Development and Remodel projects several times since the Joint Effort commenced. This year, as reported below, the mandatory BMPs were revised in November 2012 to incorporate clearer language regarding coverage under the State's Construction Storm Water General Permit for land disturbance over 1 acre, the LIDI planting guide for bioretention, an updated LID checklist, and additional language in the maintenance agreement clarifying that civil penalties could be assessed for failure to comply.

In addition, as reported in Chapter 4, the City is funding and partnering with the Resource Conservation District of Santa Cruz County (RCD) to conduct a Low Impact Development (LID) education program for residents within the City. Highlights of the program include the following:

- ♦ Distribution of the RCD home drainage guide "Slow It. Spread It. Sink It!" online on the RCD and City of Santa Cruz websites and at special events;
- ♦ One public education workshop;
- ♦ Booths and/or tabling at special events such as Earth Day Santa Cruz, Garden Fairs, etc;
- ♦ Distribution of the RCD home drainage guide "Slow It. Spread It. Sink It!" by RCD and City staff to residents upon request who heard about the brochure either by word of mouth, info cards from local nurseries, or from the RCD or City web sites;
- ♦ Distribution of the RCD home drainage guide "Slow It. Spread It. Sink It!" by RCD to development project applicants by the PW Development Plan Reviewer.

2. This year, as in Permit Year 3, the City continued to participate in the RWQCB Joint Effort to Develop Hydromod Control Standards (JE). The City will develop specific guidance to meet the recently approved RWQCB Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (Resolution approved on July 12, 2013) within the timeframe provided in the resolution.

Education and Outreach:

1. This goal was accomplished in Permit Year 2. At the end of the Joint Effort Q2, the City submitted a “LID Education and Outreach Schedule” to the RWQCB. This table was included in the Annual Reports for Permit Years 2 and 3. This table was updated with Permit Year 2 through 4 accomplishments and is provided in Section 2 below as a Tracking Report.

2. This year, as in Permit Year 3, the City continued to participate in the RWQCB Joint Effort to Develop Hydromod Control Standards (JE). During the course of the JE process, the quarters and schedule were adjusted by the RWQCB. Below is the City’s Tracking Report indicating the accomplishments in education and outreach supporting implementation of LID as required by the August 2009 RWQCB JE letter.

City of Santa Cruz
LID Education and Outreach Summary and Tracking Report

Target Audience	LID: Public Education & Outreach Efforts	Estimated Schedule	Status
Residents			
	City funds the Santa Cruz Resource Conservation District (RCD) to conduct a LID education program for residents w/in the city. A brief description of this program is provided in text below* and some of the specific work elements are included in this table.	Q1-Q9	Done & Continuing
	City website, Environmental Programs web pages, provides storm water information for residents including a section entitled "Managing Storm Water Runoff." This section includes a link to the RCD LID guidance manual "Slow it. Spread it. Sink it! A Homeowner's Guide to Greening Storm Water Runoff"	Q1-Q9	Done & Continuing
	Santa Cruz Neighbors meeting on 3/23/11, RCD gave a presentation to 28 residents on LID design. Also discussed and distributed the RCD LID guidance manual "Slow it. Spread it. Sink it!" storm water pollution prevention brochures for residents, info on the Water Dept Rain Barrel Program, and info on the GG program-class series.	Q2	Done & continuing
	Tabling at the Earth Day Santa Cruz 2011 event on April 16. Outreach and distribution of the RCD guidance manual "Slow it. Spread it. Sink it!" were conducted at both the City PW and RCD booths at the event. Tabling at the Earth Day Santa Cruz was continued in 2012 and 2013.	Q3	Done & continuing
	Tabling at the Santa Cruz Garden Fair on April 26, 2011 by RCD staff, co-funded by City, on LID methods & distribution of the RCD LID guidance manual "Slow it. Spread it. Sink it!"	Q3	Done
	City Rain Barrel Program: The City Water Department is offering Moby 65 gallon rain barrels, valued at $149, to service area residents for $50 each. Program outreach promotes water conservation, runoff pollutant control, and green gardening. During the Spring 2011 offer, approx. 196 rain barrels were distributed. Program was continued in the Fall and Spring 2012-13.	Q2-Q3 and in Permit Year 3	Done & continuing

Target Audience	LID: Public Education & Outreach Efforts	Estimated Schedule	Status
	Related work: City website, Environmental Programs web pages, includes information for residents re "Ocean Friendly Landscaping" classes which are co-sponsored by the City.	Posted on web- Q2 Classes held-Q3 and in Permit Year 3-Spring	Done
Architects, Developers, Building Contractors, Design Consultants, etc:			
	City Mandatory BMPs for Development and Remodeling Projects distributed to development permit applicants	Q1-Q9	Continuing
	Potential: Article in Builder's Exchange newsletter, Downtown Association newsletter/email, or other trade organization. (Article written by City of Watsonville & Soquel Water District staff, courtesy of/printed in *The Sentinel* newspaper; article revised and submitted to Builder's Exchange by MRSWMP staff)	Q3-Q5	Done
	Green Gardener and CLCA Workshop sponsored by the City Santa Cruz was conducted on May 28, 2013. Speaker Darla Inglis presented LID concepts and BMPs for storm water management.	Q7	Done
All: Residents & Architects, Developers, Building Contractors, Design Consultants, etc:			
	City Mandatory BMPs for Development and Remodeling Projects posted on City website	Q1-Q9	Done & Continuing
	City Mandatory BMPs for Development and Remodeling Projects available at Planning Dept. public counter	Q1-Q9	Done & Continuing
	City co-funds Ecology Action and the Santa Cruz Adult School to conduct a Green Gardener education program for landscapers and residents. This spring, a series of "Ocean Friendly Landscaping" classes are being held re landscaping skills that conserve water and reduce runoff pollutants such as: ecological landscape design, rainwater and gray water harvesting, proper installation of irrigation systems, less toxic pesticide control, etc.	Q3 and Permit Year 3-Spring	Done & Continuing in various formats
	Article/informational piece on LID published in the local newspaper, *The Sentinel.* The article was	Q3	Done

Target Audience	LID: Public Education & Outreach Efforts	Estimated Schedule	Status
	published on April 30, 2011.		
	LID BMP Design Guidance piece	Q4	Done
	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 – this item was modified: the City will develop specific guidance to meet the recently approved RWQCB Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast Region (Resolution approved on July 12, 2013) within the timeframe provided in the resolution.	Q8*	Modified per adopted PCRs (due March 2014)
City Council and/or Public Works Commission			
	On March 18, 2013, the pending Central Coast PCRs were noted during a storm water program presentation to the Public Works Commission. The City anticipates providing a full presentation of the PCRs at the November 2013 Public Works Commission meeting and December 2013 City Council Meeting.	Q7-Q8*	Done & Continuing

** Schedule dependent upon the Joint Effort and RWQCB approved Post-Construction development requirements. The RWQCB adopted Post-Construction Requirements on July 12, 2013 (Resolution R3-2013-0032) that require implementation by municipalities by March 6, 2014.*

In addition, during Permit Year 4, the City revised the mandatory "Storm Water BMPs for Development and Remodel Projects" in November 2012 in order to incorporate clearer language regarding coverage under the State's Construction Storm Water General Permit for land disturbance over 1 acre, include the LIDI planting guide for bioretention, update the LID checklist, and add additional language in the maintenance agreement clarifying that civil penalties could be assessed for failure to comply. Thus, currently all new development and qualifying remodel sites must consider LID and implement LID standards according to the project's "tier" level.

Interim LID Implementation

Measurable Goals:

1. Apply LID principles and features to all applicable new and redevelopment projects (Q2-Q8).

2. Tracking Report, for the period Q2 to Q8, identifying LID design principles and features incorporated into each applicable new and redevelopment project (Q9).

1. As reported in the previous Annual Report, the City has been applying LID principles to all applicable new and redevelopment projects as required since Q2 and even to specific projects prior to the start of Q2. In June 2010, the City revised the mandatory "Storm Water BMPs for Development and Remodel Projects" and the revisions included the addition of a LID section. The BMPs are mandatory for all applicable projects per the Storm Water General Permit Attachment 4, plus all commercial and industrial developments and remodels equal to or greater than 1 acre. In addition, the revised BMPs require all development and remodeling projects to comply with the specified Low Impact Development requirements. This applies to all projects including residential (including single and duplex dwellings), commercial, and industrial projects. Thus, the City asks even small (less than ½ acre) residential projects to consider LID although these may request an exemption if LID is not feasible at the site.

During Permit Year 3, the City revised the mandatory "Storm Water BMPs for Development and Remodel Projects" on September 2011 in order to incorporate mandatory LID standards per the Joint Effort and a LID checklist into the BMP brochure. Thus, currently all new development and qualifying remodel sites must implement LID standards according to the project's "tier" level. The mandatory BMP brochure was revised and republished in March 2012 to make minor clarifications to the LID checklist.

As mentioned above, during Permit Year 4, the City revised the mandatory BMP brochure in November 2012 in order to incorporate clearer language regarding coverage under the State's Construction Storm Water General Permit for land disturbance over 1 acre, add the LIDI planting guide for bioretention, update the LID checklist, and add additional language in the maintenance agreement clarifying that civil penalties could be assessed for failure to comply. The BMP brochure is posted on the City website at:
http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=29519.

The City is continuing to contract with an outside consultant to assist in the review of larger development project plans, specifically related to LID, as needed. Additionally, the City has also filled a half-time position for an Environmental Projects Analyst to help develop LID guidance and review development project plans specifically related to LID, and inspect the construction of LID facilities.

2. During Permit Year 3, PW Staff worked with the City's IT Department to make changes to the City's parcel site tracking database (TRAKiT) so that the water quality, LID, and Maintenance Agreements requirements could be tracked for new development and redevelopments projects.

The TRAKiT Tracking Report indicates that, during the permit year, there were a total of 27 project applications for development or remodel sites. The TRAKiT Report also indicates the current status of each project at the end of Year 4 (e.g. Building Permit under review, issued, or construction "finaled"), which types of LID measures were planned/implemented by each project, and whether a maintenance agreement was required.

There were three project applications for which construction was "finaled" during the permit year, 17 project applications for which Building Permits were issued, 2 applications with plans approved, and 4 project applications that are still under review. One applicant withdrew their application. Most projects elected to disconnect their downspouts, a number of projects also elected to use permeable pavements and bioswales, as well as direct runoff to from impervious areas towards pervious landscape areas. A summary of the number of sites where specific types of LID were planned and/or implemented is provided below:

Disconnect Roof Runoff	Permeable Pavement	Bio-Retention Facilities	Retention/ Detention	Runoff directed to pervious surface	Bio-Swale	Infiltration Trench
24 sites	11 sites	3 sites	1 site	8 sites	11 sites	1 site

A copy of the overall Trakit Report for the permit year will be furnished upon request. The City will submit a Tracking Report identifying LID design principles and features incorporated into each applicable new and redevelopment project in accordance with the recently approved RWQCB Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (adopted on July 12, 2013).

During the Permit Year 4, the most significant development project application received and evaluated by the City was a 1.8-acre residential subdivision project located on De Laveaga Park Road. This large project, which did not begin construction until July 2013, underwent extensive review by City staff and a portion of the plans were sent to the City's consultant, Mr. Dan Cloak, for initial feedback on the proposed LID measures. This development project incorporates a number of LID measures, including protection of riparian areas, bio-swales, and pervious pavement.

Effectiveness: All goals met & timetable revised
Proposed Modifications: Interim LID implementation to be replaced by implementation of newly adopted PCRs.
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k

BMP #PC-6: Review and Evaluate the City's General Plan and Other Watershed Protection Planning Efforts (i.e. land use policies, plans, ordinances, development review procedures, etc). In Conjunction, Develop Where Feasible Quantifiable Measures That Indicate How the City's Watershed Protection Efforts Related to Storm Water Management Achieve Desired Watershed Conditions.

Scheduled for Year 4-5

<u>Measurable Goals:</u>

1. Determination if long-term watershed management and protection efforts are addressed and, if not, identification of sections needing revisions. (Year 4-5)
2. Quantifiable Measures (Year 4-5)

Year 4 Summary:
1. The City submitted a Watershed Protection Assessment report to the RWQCB in June 2013. The assessment covered the General Plan 2030, the City-wide Creeks and Wetlands Management Plan, the Municipal Code, and the Post-Construction Requirements. Minor gaps to LID implementation were identified in the municipal code associated with street and parking lot standards. These gaps will be addressed in ordinance revisions the City is anticipating to complete by early 2014.

2. The City identified several quantifiable measures of watershed protection efforts as part of the Watershed Protection Assessment, including:

- Area of open space land accessible to the public,
- Number of compact mixed-use development projects approved in downtown and along primary transportation corridors,
- Miles of pedestrian and bicycle improvements implemented,
- Number of new development projects incorporating LID site design/structural measures,
- Area of parking lots incorporating LID, and
- Area of restored/improved riparian habitats.

These quantifiable measures will be included in the program effectiveness assessment strategy that the City will develop by FY15.

Effectiveness: goals met
Proposed Modifications: Item completed, to be incorporated in Program Effectiveness Assessment.
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12

BMP #PC-7: 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

<u>Measurable Goals:</u>
Inspect 100% of development sites greater than or equal to one acre (same as BMP #CON-2)

Year 4 Summary: There were four sites greater than or equal to one acre which were inspected by PW staff as follows:

1) Isbel Drive: Residential, condos and homes, development. This site was inspected multiple times by PW staff on 2/19/13, 3/5/13, 4/10/2013, 7/8/13, and 7/26/13.

2) Shaffer Road: Commercial development for storage units. This site was inspected multiple times on 8/1/12, 8/20/12, 2/19/13.

3) Mission Street: Commercial development for a medical facility. Construction for this site commenced in June 2013. The site was inspected on 7/31/13.

4) Delaware Avenue: Commercial development had been inactive since 2010 (as reported in previous annual reports); construction resumed in spring 2013. The site was inspected on 8/28/2013.

The Santa Cruz Metropolitan Authority also has a construction site over 1 acre in size at 1200 River Street but the site has not been inspected because the City's Post-Construction requirements are not binding for State projects. 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 Industrial General Permit WDID No. 3 44I012085 and Construction General Permit WDID No. 3 44C365560.

Effectiveness: goal met
Proposed Modifications: none
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12

BMP #PC-8: Implement Program to Ensure Long-term BMP Inspection and Maintenance. Spot Inspections Will Be Conducted

In order to ensure that all applicable development projects submit a signed Maintenance Agreement, the City is instituting a policy that return of the signed maintenance agreement is a condition of approval for the project's building permit. The condition of approval will be placed on the project by the Department of Public Works. The Building Permit will not be issued until the signed maintenance agreement is received by the Public Works and the condition removed from the project's permit application (by Public Works).

Measurable Goals:
1. Develop an electronic database or spreadsheet to better track & assess sites over time (Year 1)
2. Enforce the proof of annual BMP inspection and maintenance requirement at 100% of sites (Year 1-5)
3. Implement a spot inspection program at 10% of sites annually (Year 2-5)

Year 4 Summary:
1. During Permit Year 1, City staff created an Excel spreadsheet to track and assess sites that must submit proof of annual storm water BMP inspection and maintenance. In Permit Years 2 through 4, Staff continued to use this spreadsheet and updated it as necessary.

2. The City requires that a BMP Maintenance Agreement be signed by the property owner/developer for all applicable projects per the City's mandatory BMPs for Development and Remodeling Projects. The maintenance agreements are recorded into the City's permitting database (TRAKiT). Currently, the City has 26 signed maintenance agreements.

Because in Permit Year 1 the City did not receive proof of BMP maintenance from any sites by Dec. 1st as required, the City developed and sent a reminder letter to the responsible parties during the Fall in Permit Year 2. Storm water staff continued to send reminder letters out in the Fall of Permit Year 4.

A Reminder Letter was sent to 18 built sites on October 5, 2012. Eight 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 2012. Of the 18 sites sent letters, eight sites required email or phone follow-up by storm water staff from Nov 2012 through Mar 2013, including three sites that required multiple follow-up contacts. Eventually all sites came into compliance and submitted maintenance logs.

Rates of maintenance log submittal due to the Fall reminder letter and the personal contact by storm water staff were high; all but three sites that were sent a reminder letter were in compliance by December 2012. The last three sites came into compliance by March 2013. Again this year, staff spent 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 may be unfamiliar with the requirements. During the permit year, staff also made a significant effort to obtain email addresses from the Maintenance Agreements' responsible parties in order to facilitate contact with them.

3. During the permit year, five sites (greater than 10%) were inspected during wet weather on 11/30/12 and 2/19/13. Three of these sites were found to have their BMPs maintained and in good working condition; one site was notified regarding not bypassing landscape areas with drainage pipe and one site was notified regarding erosion of unvegetated slope leading into a bio-swale. Both issues were promptly corrected by their respective property management.

Effectiveness: All goals met.
Proposed Modifications: none
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k

BMP #PC-9: Implement Corrective Measures and Enforcement Procedures As Needed in Accordance with the City Municipal Code

Measurable Goals:
Implement corrective actions, as appropriate, for 100% of sites where a violation is detected

Year 4 Summary: There were no Post-construction related violations during the permit year.

Please see Chapter 5 for construction-related enforcement activities by the City.

Effectiveness: goal met
Proposed Modifications: none

Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.k

BMP #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.

Scheduled per the Regional Joint Effort (to develop hydromodification control criteria) in Joint Effort quarters Q2-Q9

Measurable Goals:

1. An analysis of all applicable codes, regulations, standards, and/or specifications that identifies modifications and/or additions necessary to effectively implement hydromodification controls and LID (Joint Effort Q2)

2. Approved new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement hydromodification controls and LID in new and redevelopment projects (Joint Effort Q8)

3. Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects (Joint Effort Q9)

Year 4 Summary:

1. This task was accomplished in Permit Year Two. As reported, as part of the regional Joint Effort, the City conducted a thorough GAP Analyses review of all City codes and submitted the Gap Analyses Report to the RWQCB (on April 27, 2011) as required by April 30, 2011. The Gap Analysis Report included an overview letter and two tables, one which identified all the codes reviewed and the other that detailed specific code items and potential LID impediments. The results of the City's Gap Analysis were incorporate into the Watershed Protection Assessment, which covered the General Plan 2030, the City-wide Creeks and Wetlands Management Plan, the Municipal Code, and the Post-Construction Requirements.

Minor gaps to LID implementation were identified in the Municipal Code associated with street and parking lot standards. Three of these gaps are regarding existing street/curb design standards that could prevent the use of bio-systems adjacent to the street. One gap concerns the required parking ratios for office buildings. The last identified gap concerns how surface runoff is to be directed. These gaps will be addressed in ordinance revisions the City is anticipating to complete by early 2014.

2. In Permit Year 3, PW Staff met and determined that there were no real regulatory conflicts between implementation of the new LID controls/standards and the Municipal Code, particularly as all development projects are routed through one Public Works development project plan reviewer. PW staff concurred that the 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. In addition, the new General Plan 2030 for the City was adopted in 2012 and incorporates many elements that support LID. Ordinance revisions have been initiated to support the goals of the new General Permit and to remove minor gaps in the Municipal Code associated with street and parking lot standards.

3. This year, the City continued to participate in the RWQCB Joint Effort to Develop Hydromodification Control Standards (JE). The City will abide by the recently approved RWQCB Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (Resolution adopted on July 12, 2013). During the course of the JE process, the quarters and schedule were adjusted by the RWQCB.

In addition, the City revised the mandatory "Storm Water BMPs for Development and Remodel Projects" on September 2011 in order to incorporate mandatory LID standards and a LID checklist into the BMP brochure. A copy of the revised BMPs was submitted to the RWQCB on September 29, 2011. Thus, currently all new development and qualifying remodel sites must consider and implement LID standards according to the project's "tier" level. The mandatory BMP brochure was again revised and republished in March and November 2012 to make minor modifications and clarifications. In FY2014, the City will make significant revisions to the mandatory BMPs to meet the recently approved RWQCB Post-Construction Stormwater Management Requirements for Development Projects. Additionally, the City anticipates developing standard details for bioretention to help with proper implementation of LID measures.

Effectiveness: goals met and revised schedule
Proposed Modifications: none
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.j

BMP # PC-11: Distribute BMP Brochure

The BMP brochures are distributed to all discretionary project applicants by the Public Works Plan Reviewer. The brochures have also been available at the public counters of both the Planning and Public Works Departments since 2004. In addition, the "BMPs for Development and Remodeling Projects" are posted on the City's website.

Measurable Goals:
Distribute to 100% of discretionary project applicants

Year 4 Summary: The BMPs were distributed to all discretionary project applicants by the Public Works Plan Reviewer. Generally this was done either by email, or given to the project developer during project planning meetings.

In addition, the BMP brochures are available at both the Planning and Public Works' public counters. SW staff periodically checks the stock available at the Planning public counter to ensure that there is a sufficient supply. In Permit Year 4, at least 33 copies of the BMPs for Development and Remodeling Projects brochure were given out at the Planning Department

public counter. At the Public Works public counter, copies are kept in the counter file box and are given out by various counter staff per inquiries regarding potential development projects and thus are not counted. In addition, the "BMPs for Development and Remodeling Projects" are posted on the City website at:

http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=29519.

Effectiveness: goal met
Proposed Modifications: BMP maintained as a standard practice, stop reporting.
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12

BMP # PC-12: Hold Educational Workshop on LID and Hydromodification Control Requirements

Scheduled for approximately Joint Effort Q8

Measurable Goals:
One educational workshop after the hydromodification control criteria have been developed (Approx. Joint Effort Q8)

Year 4 Summary: This year, the City co-sponsored 2 workshops and held 1 presentation to prepare City residents, contractors, and City employees to implement the Post-Construction requirements. The events are as follows: 1) A workshop for City residents was held on May 30, 2013 by the Resource Conservation District (RCD) to educate residents about watershed protection and LID; 2) A workshop was organized by Ecology Action for Green Gardener and CLCA contractors on Low Impact Development. The event was held on May 28, 2013 and Dr. Inglis from the LIDI Center was the guest speaker; 3) A presentation for City staff on the proposed new PCR requirements was held on June 13, 2013 with staff from the Planning, Building, Economic Development, Public Works, Parks, and Water Departments. The City will hold one or more additional educational workshops in 2013-2014 per the July 12, 2013 approved Post-Construction Requirements.

Effectiveness: goal met-schedule adjusted by RWQCB
Proposed Modifications: none
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12

BMP PC #13: Develop and Implement an Education Program Addressing the Restoration and Protection of Riparian and Wetland Areas

Scheduled for Years 4 & 5

Measurable Goals:
1. Complete development of program plan
2. Implementation of educational measures, i.e. hold workshops, distribute brochures

Year 4 Summary: This year, Staff discussed with multiple local non-profits the potential opportunities to add new programs or modify existing ones to promote stewardship and the restoration and protection of riparian and wetland areas. The City also began outreach efforts to address the restoration and protection of riparian and wetland areas as follows:

1) The City co-funded the Resource Conservation District (RCD) to host a workshop for residents in the Arana Gulch watershed on May 30, 2013. The workshop was entitled "Harbor to the Hills-Living in an Urban Watershed" and it covered watershed issues, how to maintain a riparian friendly yard, and LID. There were 42 people pre-registered and 34 attended the event. Various handouts were available to accompany the speaker topics. Outreach was conducted via email lists, “postering” at local business, and a postcard mailer was sent to 4,312 residents.

2) This year, the Coastal Watershed Council's Snapshot Day training event for volunteers, per the City's request, included a piece on watershed stewardship and how to maintain your home and yard in order to protect riparian and wetland areas.

3) This permit year, the City also approved funds in FY 2013-2014 for restoration efforts in Pilkington Creek by creek-side resident volunteers. This work will likely include a creek cleanup and restoration with native plants, and possibly also an educational component with the SC Natural History Museum.

Effectiveness: goal met
Proposed Modifications: Please see attached City of Santa Cruz Guidance Document
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.7.

BMP # PC-14: Provide Training to Appropriate Planning & Public Works Staff

Measurable Goals:
1. Train 100% of appropriate staff every two years.
2. Train new Inspectors and Plan Reviewers within 3 months of the beginning of employment.
3. Additional training on new or changed BMPs as needed

Year 4 Summary:
1. In Permit Year 3, staff was trained as follows: PW, PL, Building, and Economic Development staff members were trained by a hired consultant on the proposed regional Post-Construction Requirements (PCRs) on 6/13/13. Two PW SW staff, four PW Engineering staff, four Planners, one Green Building Specialist, and one Economic Development staff person were trained at class. Three additional Planning staff and several engineers from the Water Department were unavailable and given the training class PowerPoint presentation instead.

2. During the permit year, there was one new Building Inspector hired; he was trained in the field shortly after hiring. There was also one new permanent Plan Reviewer hired, this staff person received the City’s storm water BMPs to review within 3 months of hiring and was involved in the training on the new PCRs on June 13, 2013.

3. There were additional training events on BMP or storm water topics during the permit year as follows:

1) 5 PW and 1 PL staff attended an APWA/AEP/APA workshop in Watsonville on Post-Construction requirements on 8/7/12; Dr. Darla Inglis and others were guest speakers.
2) 4 PW, 1 Water, 1 Parks, and 2 PL staff attended a CWP webcast on engineered soils "Get the Dirt on Stormwater" for bio-retention and bio-treatment on 9/19/12;
3) 4 PW staff attended a LIDI workshop in Salinas on bioretention design on 9/27/12.

Effectiveness: goal met
Proposed Modifications: see – Guidance Document (dedicated PW staff will be conducting post-construction review and inspections for construction projects and will receive on-going education through involvement in CASQA, JERT, etc.)
Planned FY2013-14 activities: Please see attached City of Santa Cruz Guidance Document. This BMP falls under Element No. E.12.