

7.0 Program Effectiveness Assessment

The following effectiveness assessment is based in part on the Municipal Stormwater Program Effectiveness Assessment Guidance, developed by the California Storm Water Quality Association (CASQA). The purpose is to confirm the desired results of the overall program and identify modifications that may be needed, thus ensuring the iterative process is used as an effective management tool throughout the permit implementation.

The following primary questions, or Outcome Levels, help to categorize and describe the desired results of the program:

Level 1 Outcome – Was the Program Element implemented in accordance with the Permit Provisions and SWMP?

Level 2 Outcome – Did the Program Element raise the target audience’s awareness of an issue?

Level 3 Outcome – Did the Program Element change a target audience’s behavior, resulting in the implementation of recommended BMPs?

Level 4 Outcome – Did the Program Element reduce the load of pollutants from the sources to the storm drain system?

Although each level has value in informing and/or supporting management decisions, not all Outcome Levels are used and the Outcome Levels are not necessarily conducted in sequence. In some cases, assessments at different levels may occur at once.

MCM 1.0 Public Education and Outreach

The Public Education and Outreach portion of the Storm Water Management Program focuses on communicating consistent messages regarding storm water quality to a broad audience through the continuation of existing programs and the development and implementation of new programs. The BMPs implemented for this minimum control measure were intended to teach the public the importance of protecting storm water quality, both for the benefit of the environment and human health.

Although its effectiveness can be difficult to measure, public education is essential to achieving behavioral changes that can protect water quality. Because the SWMP focuses on non-point source pollution, the role of the individual in preventing this pollution is key. The BMPs selected for implementation educate community members about steps they can take both at work and at home to prevent and reduce water pollution.

a) Outreach: Brochures, Website, Events, Media (BMPs 1.2, 1.3, 1.4 and 1.12)

Outreach with the public through print information, face-to-face contact, community events, website use and media campaigns increased from Year 1:

- Brochures. Over 17,000 educational materials focused on preventing storm water pollution were distributed including over 3,000 to target populations of horse owners, dog owners, creekside residents and landscape professionals and approximately 1,800 Spanish language materials. Overall outreach materials are successful at Level 2.
- Website. The Project Clean Water website provides an easily accessible method for the public to access water quality information, announcements, reports, and documents. The website experienced an exponential growth in use from Year 1. Overall the website is successful at Level 2.
- Events. Nearly 40,000 (up from 29,00 in Year 1) attendees at a wide variety of public events were exposed to the County's clean water programs, exceeding the 15% population requirement. Face-to-face contact between the public and County staff and other educators at these events increases the awareness of residents to water quality impacts. Overall outreach at events is successful at Level 2.
- Media. Media messages on preventing water pollution were circulated via various newspaper ads, radio spots, bus ads, and targeted television PSAs. Most of the media campaigns included either bilingual or Spanish language versions. The Univision campaign reached an estimated 133,300 Spanish-speaking persons County-wide. Advertising is an efficient way to reach a large and diverse population. Overall media campaigns are successful at Level 2.

b) Education: WRC, Youth, Latino (BMPs 1.5, 1.6 and 1.13)

The South Coast Watershed Resource Center (WRC) continues to be focal point for water quality education programs on the south coast. This WRC program element was modified in Year 2 to accommodate a shift in program delivery from drop-in visits to focused youth education programs. This allows a more efficient use of the facility in conjunction with hands-on programs, curriculum-based education, and use through public meetings and

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community events. Youth education programs were expanded to the community of Orcutt during Year 2, representing a new targeted population for this program.

- WRC. 2,111 people visited the WRC through the youth education and community programs. Visitation was down from Year 1 due to a change in program focus by the lease holder Community Environmental Council. Management of the WRC has since transitioned to Art From Scrap (AFS). The County is contracted with AFS to provide youth education through classroom presentations and field trips to the WRC. Overall the WRC is successful at Level 2.
- Youth Education. AFS gave classroom presentations on water quality to 729 students in South County and 439 students in North County. PCW educated 459 students through school assemblies and other youth events. Understanding water pollution fits into required curriculum topics, and school aged children are particularly receptive to the information presented. Overall youth education is successful at Level 2.
 - Results of the evaluations administered to the AFS Creek Kids series participants showed that the students' understanding of watersheds and storm water pollution was generally better after completing the series. Of particular note is the comparison of before and after responses to the true/false statement "Everyone lives in a watershed." Prior to the series, 28% of the students answered correctly in North County and 52% answered correctly in South County. After the series, 70% answered correctly in North County and 90% answered correctly in South County.
 - 14,535 K-8 students in North and South County schools attended waste reduction workshops.
- Latino Education. Agua Pura taught 848 Latino students County-wide at school science fairs, health fairs, community events and other after-school settings about watersheds and watershed health. Overall Latino outreach and education is successful at Level 2.

c) Storm Drain Marking (BMP 1.7)

Storm drain marking is nearly complete in the County permit area. The bilingual signs that say "No Dumping" raise awareness about the connection between storm drains and receiving waters and they help deter littering, dumping, and other practices that contribute to nonpoint source pollution. Storm drain marking is successful at Level 1 for implementation and Level 2 for raising awareness.

d) Hotline (BMP 1.8)

- Use of the hotline remains constant and continues to provide effective service to all members of the community in reporting water pollution. Residents who call are connected directly to the responsible agency depending on the nature of the call and the location of concern. Overall the hotline is successful at Level 3. The hotline is successful at Level 4 when calls result in field discovery and load reduction.

e) **Business Outreach: (BMPs 1.9, 1.10, and 1.11)**

The Green Gardener Program, Landscape Education and other Business Outreach helped train community members and professionals in reducing polluted runoff.

- Green Gardener Program. The number of gardeners certified through the Green Gardener Program remains stable. Overall the Green Gardener Program is successful at Level 3 for changing behavior and at Level 4 for reduction in fertilizer and pesticide use.
 - The Green Gardener self-assessments and surveys are an effective way of tracking behavioral changes and provide insight into a landscape professional's level of knowledge and use of green gardening practices. This year's self-assessments show improvements in the use of mulch and in water conservation and show the need for additional education on the topics of irrigation, plant choice and placement and integrated pest management.
- Landscape Education. Landscape education expanded its reach this year to over 15,000 community and business members through community events, participating Our Water Our World nurseries and composting workshops. Overall landscape education is successful at Level 2.
- Business Outreach. Over 2,900 business owners and operators were reached through several targeted workshops, business trade shows, and direct contact during business inspections and field discoveries. Face-to-face interactions between the public and County staff is an effective way to increase the awareness of business owners and operators to water quality impacts. Business outreach is successful at Level 4 for load reduction when responding to complaints or discoveries in the field or as part of a business inspection.
 - PCW has been a part of the planning of the Green Business Program in order to ensure that meeting storm water pollution prevention requirements is a criterion for green business certification.

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Table 7.1 Effectiveness Assessment Summary for Public Education and Outreach

Outreach Program Activities	Effectiveness Assessment Outcome Levels			
	Level 1	Level 2	Level 3	Level 4
	Implement Program	Increase Awareness	Behavior Change	Load Reduction
Outreach	Y1 Ongoing; website expanded & updated Y2 Ongoing	Y1 Ongoing; website expanded & updated Y2 Ongoing		
Education	Y1, Y2 Ongoing	Y1, Y2 Ongoing		
Storm Drain Marking	Y 1 Installation in North & South Co. Y2 Installation complete for S Co.	Y 1 Installation in North & South Co. Y2 Installation complete for S Co.		
Hotline	Y1 Hotline expanded Y2 Hotline maintained	Y1 Hotline expanded Y2 Hotline maintained	Y1 Hotline expanded Y2 Hotline maintained	Y1, Y2 Hotline calls leading to field discoveries
Business Outreach	Y1, Y2 Landscape and Business Outreach ongoing	Y1, Y2 Landscape and Business Outreach ongoing	Y1, Y2 Green Gardener Program	Y1 Complaints & Discoveries Y2 Complaints & Discoveries; Bus. Inspection Program Y1, Y2 Green Gardener fertilizer & pesticide reduction

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report

Y2 – Reporting/assessment with the FY 2007-2008 Annual Report

MCM 2.0 Public Participation and Involvement

The Public Participation and Involvement Minimum Control Measure is intended to foster active community support for the Storm Water Management Program and give direction to its implementation. Participation by the public ensures that the program reflects community values and priorities and thus has the highest potential for success.

a) Steering Committee, Public Meetings and Forum (BMPs 2.1 and 2.2)

- Stakeholders Committee. Project Clean Water Stakeholders regularly provide comments and suggestions that are utilized to improve the effectiveness of County’s Storm Water Management Program and BMPs. The most active Stakeholders are from local non-profits and local government agencies. In the last year Stakeholders have commented on the Business Inspection Program and the Construction Program evaluation. Stakeholder meetings are successful at Levels 1 and 2.
- Community Forum. The Community Forum during Creek Week “Marine Debris – Creeks to the Sea” attracted over 80 community members, an increase over last years attendance. The Creek Week forum topics have focused on current water pollution issues and continue to be a successful way of reaching other community members. Overall community forums are successful at Level 2.

b) Coordination Among Agencies (BMP 2.3)

- Continuation of regular intergovernmental meetings is appropriate for coordinating among the different storm water management programs in the County. Local population perspectives and pollution sources vary across the County, and obtaining input from various agencies is useful in understanding these local differences. The intergovernmental meetings are efficient venues for planning joint pollution reduction efforts. Attendance is steady and is regularly represented by most of the Phase II agencies. Overall coordination among agencies is successful at Level 2 for raising awareness.

Ongoing cooperative efforts include:

- PCW staff regularly attends CASQA meetings, serves as co-chair on the CASQA Phase II subcommittee, acts as the primary contact for the Phase II partners and shares CASQA updates with the other committee members.
- Active communication during the Phase II enrollment cycle and updates concerning SWMP reviews and approval.
- Regional Board TMDL development continued in the County with several planning meetings attended by Phase II partners.
- Regular collaboration with the cities of Santa Barbara, Goleta, and Santa Maria on media, outreach and events.
- The county-wide Green Business Program involves nearly all of the Phase II entities as program partners.

c) Volunteer Water Quality Sampling and Clean-ups (BMPs 2.4 and 2.5)

Community Clean-ups and Volunteer Water Quality Sampling attract residents who are typically enthusiastic about making a tangible difference in improving water quality and offer opportunities for involvement in the County's SWMP activities.

- Community Clean-ups. Community Clean-ups resulted in a decrease in pollutant loadings to the creeks and ocean. Volunteers removed large amounts of trash from the creeks and beaches. Clean-ups were scheduled during community events and with volunteer groups as needed or requested throughout the year. Community clean-ups are successful at all levels.
 - The County continues to serve as the local coordinator for California Coastal Cleanup Day in Santa Barbara County. This year 556 volunteers picked up approximately 2,600 pounds of trash and recyclables at 17 beaches county-wide. PCW staff acted as a “beach captain.”
 - County Public Works provides funding to support the Isla Vista Parks and Recreation Department's Adopt-A-Block volunteer program, organizing weekly and monthly clean-ups in Isla Vista and at local beaches. Over 20 UCSB campus groups consistently participate. In Year 2, 1,113 volunteers picked up a total of 123 tons of trash.
- Volunteer Water Quality Sampling. Volunteer sampling is appropriate for fostering involvement of South County communities and communities in the Santa Ynez Valley. It is a less applicable method for reaching community members in North County where runoff is directed into detention basins and most channels contain flow for a very limited number of months out of the year. In South County, storm water runoff is directed into neighborhood creeks where the effects can be monitored. PCW identifies volunteering water quality data as qualitative and is primarily used as an educational tool to inform and engage the public in the current health of local creeks. Using simple kits, monitoring can help capture the effects of nutrient loading on dissolved oxygen levels. Overall volunteer water quality sampling is successful at Level 2.
 - There were twice as many volunteer sampling events in Year 2 from Year 1 and over twice as many participants.
- Other non-volunteer water quality monitoring efforts by the County in Year 2 included the collection and analysis of bioassessment data from south coast Santa Barbara County streams and the Public Health Department's weekly water sampling and reporting of bacteria levels at 20 County-wide beaches.

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Table 7.2 Effectiveness Assessment Summary for Public Participation and Involvement

BMP	Effectiveness Assessment Outcome Levels			
	Level 1 Implement Program	Level 2 Increase Awareness	Level 3 Behavior Change	Level 4 Load Reduction
2.1 Steering Committee	Y1 North Co. Stakeholders Mtg. established Y2 Ongoing meetings & interaction	Y1 North Co. Stakeholders Mtg. established Y2 Ongoing meetings & interaction		
2.2 Public Meetings and Forums	Y1, Y2 Ongoing	Y1, Y2 Ongoing		
2.3 Coordination Among Agencies	Y 1, Y2 Ongoing meetings & cooperative efforts	Y1, Y2 Ongoing		
2.4 Volunteer Water Quality Sampling	Y1, Y2 Ongoing in connection with events or clean-ups	Y1, Y2 Ongoing in connection with events or clean-ups		
2.5 Community Clean-ups	Y1, Y2 Ongoing creek & beach clean-ups	Y1, Y2 Ongoing creek & beach clean-ups	Y1, Y2 Ongoing creek & beach clean-ups	Y1, Y2 Ongoing creek & beach clean-ups

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report

Y2 – Reporting/assessment with the FY 2007-2008 Annual Report

MCM 3.0 Illicit Discharge Detection & Elimination

The following is an assessment regarding the effectiveness of the first two years of implementation of MCM 3.0 Illicit Discharge Detection and Elimination Program as outlined in the SWMP.

The County has effectively implemented the IDDE program through ongoing program elements such as creek walks, complaint and discovery response and follow up, development of a storm drain facility map, developing and distributing targeted educational materials to polluters or potential polluters, and distributing mutt mitts to areas of pet waste concern and new elements implements in Year 2 including storm water ordinance and the business inspection program.

a) Storm Sewer Mapping (BMP 3.1)

- Storm Drain Facility Map – Drainage facility maps expedite location of illicit discharges and are a requirement of the General Permit. This is a permit requirement and as such, is successful at Level 1. Additionally, where staff and public are able utilize the data for investigating sources of discharges, this BMP is successful at Level 2.

b) Storm Water Ordinance (BMP 3.2)

- Storm Water Ordinance – The ordinance has been effective by assuring county staff the authority to conduct inspections where there appears to be an illicit discharge present. The full effectiveness has not been realized since staff has not had to seek any civil or criminal penalties under Chapter 29 of the County code, although it enables Public Works staff to make site visits at businesses as authorized under 29-50. This BMP is successful at Level 3 where communication occurs and follow-up visits confirm correction occurred; it is successful at Level 4 where abatement includes cleanup of material from the storm drain system.

c) Education & Outreach (BMP 3.3)

- Targeted Educational Materials and Training Workshops – The targeted educational materials are a very effective communication tool because they serve as a good guideline for discussing the illicit discharge concerns with the responsible party. They suggest alternatives to polluting. Once provided, the brochures can be re-distributed by the recipient to other appropriate people. This measurable goal is successful at Level 2.
- Mutt Mitts – This program effectively changed the target audience’s behavior as well as reducing the load of pollutants resulting from pet waste. The County distributed over 339,000 Mutt Mitts this permit year. This measure was successful at Level 4.
- Waste Collection & Recycling Programs. Knowledge and awareness for the target audience was increased through Resource Recovery’s recycling programs. This measure was successful at Level 2 and 3.
- Recycling and Hazardous Waste Collection Programs The County hazardous waste collection programs have resulted in recycling of thousands of pounds and thousands of gallons of hazardous waste which may have otherwise been disposed into the storm drains (Refer to Table 3-1 in chapter 3). By preventing opportunity for these wastes to be dumped or otherwise mismanaged, these measures are effective at protecting the storm drains by removing wastes at a Level 4.

d) Spill & Complaint Response; Field Investigation & Abatement (BMPs 3.4 and 3.6)

- Complaint and Discovery Response. The complaint and discovery response program is very effective in that the response time is very short and the issues are address quickly as possible. Due to timely response illicit discharged are dealt with very effectively. Staff has face to face communication when possible with responsible party. Staff gives them targeted educational materials related to the discharge in question. Follow up inspections and/or meetings occur to ensure abatement has been completed if applicable. This BMP is successful at Levels 3 and 4 where follow-up results in elimination of discharge.
- Creek Walks. Creek walks allow staff to discover sources of pollution that would otherwise not be reported. Clean ups were performed in 6 locations as a result of creek walks. In addition, two different public involvement creek clean ups were scheduled to address the high amount of trash seen during some creek walks. This BMP is successful at Level 1, with outcome success at Levels 3 and 4.
- Septic System Pumper Report and Conversions. This program follows plumbing code. Through the voluntary pumpers reports, EHS is able to require those owners of seriously failing septic systems located within 200' of a sanitary trunk line to connect to the sanitary system. Implementing plumbing code requirements is successful at Level 1 while eliminating potential discharges to the storm drain system is successful at Level 4.

Commercial / Industrial / Business Inspections (BMP 3.5)

- Hazardous Materials Generators Inspections. This program has several components that make it effective. The hazardous materials generators permit requirements consist of employee training that covers appropriate handling, storage, and disposal and reporting of hazardous materials and wastes including plans for the containment of spills and the procedures to be followed in the event of a spill. Also regular site visit inspections are conducted. Directly reaching these businesses with trained Fire Dept staff looking for improperly stored material or maintenance practices is successful at Level 3.
- Environmental Health Services Food Facility Inspections. This program is very effective in that it gives the inspectors the authority to close a facility down they are not in compliance. For this permit year 86% of all facilities were inspected with 12 liquid waste violations occurred and all 12 were abated. Similarly, direct inspections at businesses by trained health inspectors looking for improperly stored material or maintenance practices is successful at Level 3 and in those cases where practices are modified and pollutants are removed from areas of storm water runoff, successful at Level 4.
- Project Clean Water Business Inspection Program. The Business Inspection Program has been very effective in several ways. First it enables staff to get direct attention from potentially polluting businesses. Staff speaks with owners and managers directly about possible illicit discharges and informs them that there can be serious consequences if discharges are not abated in a reasonable amount of time. This program allows staff to take a close look at businesses to identify any possible illicit discharges they may need to be addressed. Inspectors provide and discuss targeted educational pamphlets. Lastly just by getting staff in the field, it gives staff the opportunity to spot other illicit discharges from neighboring businesses that may not be a targeted business or illicit discharges

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elsewhere in the community. Three businesses required corrections and all three made the corrections within the time specified by staff within one week. This program is successful at Level 1 for implementation and Level 3 for follow-up with businesses.

- Recurrent Discharges Elimination Program Development. A program to eliminate recurrent discharges from business inspected that had violations was effectively developed. Utilizing the authority under the County's Storm Water Ordinance's escalating severity of consequences of enforcement actions, scheduled follow-up inspections, and good record keep the County will be able to effectively eliminate recurrent discharges. During Year 2, this measure was effective at Level 1 at program development.

Table 7.3 Effectiveness Assessment Summary for Illicit Discharge Detection and Elimination Program

BMP	Effectiveness Assessment Outcome Levels			
	Level 1	Level 2	Level 3	Level 4
	Implement Program	Increase Awareness	Behavior Change	Load Reduction
3.1 Storm Sewer Mapping	Y1, Y2 Map and Updates	Y1, Y2 Map and Updates		
3.2 Storm Water Ordinance			Y2 Approve Code Revisions	Y2 Where cleanup results
3.3 Education & Outreach		Y1 Y2 Brochures and workshops Y1, Y2 Waste collection & Recycling	Y1, Y2 Waste collection & Recycling	Y1, Y2 Mutt Mitts Y1, Y2 Waste Collection & Recycling
3.4 Spill Complaint and Response			Y1, Y2 Complaint and Discovery Investigations	Y1, Y2 Complaint and Discovery with cleanup
3.5 Commercial/Industrial Facility Inspections	Y1, Y2 Implementation of all inspection programs consistent w/ state laws	Y1, Y2 Haz Mat Inspections Y1, Y2 Food Service Inspections Y2, PCW Business Inspections	Y1, Y2 Haz Mat Inspections Y1, Y2 Food Service Inspections Y2, PCW Business Inspections	Y1, Y2 Where inspections results in correction and cleanup
3.6 Field Investigations and Abatement	Y1, Y2 Creek Walks	Y1, Y2 Where direct communication occurs	Y1, Y2 Where follow-up confirms cleanup	Y1, Y2 Eliminate discharges thru cleanup

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report

Y2 – Reporting/assessment with the FY 2007-2008 Annual Report

MCM 4.0 Construction Site Storm Water Runoff Control

The Construction Site Storm Water Runoff Control minimum control measure is implemented and enforced under authority of the County Planning & Development Department, through County code, policy, and practice.

a) **Grading Code and Land Use Permitting (BMPs 4.1, 4.2, 4.3, 4.4, 4.5, and 4.6)**

Chapter 14 of County Code was updated prior to SWMP implementation and evaluated during Year 2.

- Grading Code / Land Use Permitting Evaluation. Procedures and effectiveness for implementing this control measure were evaluated during Year 2 and recommendations made public (see Appendix 4A). Developing this analysis and presenting to the public is successful at Levels 1, and 2 during Year 2, and ultimately Levels 3 and 4 (in years to come).
- Recommendations Implemented. Training building inspectors was added during Year 2, as recommended from evaluation. Targeted education to staff with frequent site visits to construction projects is effective at outcome Level 2.
- Erosion Sediment Control Plans. Ongoing review and approval of Erosion and Sediment Control Plans provide site-specific evaluation; 4,486 permits were submitted and reviewed. The review of plans via Grading Permit process is successful at multiple levels. It is effective at outcome Level 1 in accordance with the General Permit requirements; successful at Level 2 where submittals require awareness of potential pollutant discharges from grading sites; successful at Level 3 where plans are used to correct or modify contractor behavior to prevent pollutant discharges; and, Level 4 where practices are used and maintained to prevent pollutants from being discharged into the County MS4.
- Inspections. All grading permitted sites are inspected regularly at various intervals based upon the phase of construction and the time of year. All sites greater than 1.0 ac in disturbance are inspected, at a minimum, twice per month in the rainy season exclusively for potential storm water impacts. A total of 3,131 inspections were performed at construction sites in Yr 2; a total of 423 inspections were performed at sites greater than 1.0 acre in disturbance. The inspection of construction sites operating under a Grading Permit is successful at multiple levels. It is effective at outcome Level 1 in accordance with the General Permit requirements; successful at Level 2 where inspections result in a communication between inspector and contractor, whether written or verbal, increasing awareness of potential pollutant discharges; successful at Level 3 where inspections result in correction or modification of contractor behavior; and, Level 4 where inspections result in proper use, maintenance, or abatement of improper practices, thus preventing pollutants from being discharged into the County MS4.
- Enforcement. No Stop Work Orders were issued in Year 2. All corrections were accomplished through verbal warnings or written correction notices. Avoiding Stop Work is a strong incentive for contractors to make immediate and responsive corrections to avoid punitive action, and immediately effective at a Level 3 for changing behavior.
- Complaints Submitted by Public. Building and Safety staff respond to all legitimate complaints and make a site visit within 48 hours. Regarding “review and act on all

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information submitted by public to B&S Division”, it is difficult to assess the effectiveness of these procedures because we do not separately track violation cases that relate to water quality, vs. information that might relate to a zoning violation such as size of structure, for example. However, the approach for complaint response is consistent regardless of the complaint details. Furthermore, all records of violations (nature of violation, follow-up measures) are retained within a case file. Planning & Development Permit Compliance staff always notify Building & Safety Grading Inspectors in cases where corrective measures were required for clean water BMPs. Responding to complaints is effective at an outcome Level 3.

- Improvements in Permit Tracking. All data associated with permit processing is tracked through a countywide software called Accela. During Year 2, revisions were developed that will lead to a new field allowing the planner to identify whether the project is a category from General Permit Attachment 4(B). As part of ongoing effort updating Accela, staff will include tracking for violations/complaints with a unique qualifier in the Accela database, such as “erosion/sediment controls not in place” or “non-stormwater discharge control measures not in place”. This will improve identification and tracking of these cases throughout the permit process, including construction inspections and completion. Work toward these changes is effective at Level 1, and will ultimately produce a change in the way planners record and track projects at an outcome of Level 3.

b) Training (BMP 4.6)

- Grading (B&S). All grading inspectors attended training offered by RWQCB during Year 2; effective at outcome Level 2.
- Compliance (D-Rev). All planners and compliance inspectors received training during Year 2. During Year 1, staff were handed out a quiz that was filled out, and then discussed during the course of the presentation. The advantage to this approach was opportunity to correct misinformation and provide an open discussion. However, there was no way to assess the effectiveness of the training in this fashion. During Year 2, another approach was implemented. The quiz was provided during the presentation but was not discussed. Most staff were unable to fill out the quiz during the presentation, and submitted later. This resulted in a low response; only half the participants completed the survey in spite of two reminder emails. However, results could be tabulated and areas of misunderstanding and misinformation could be assessed. Therefore, each method was somewhat effective for different reasons, but neither was completely effective. A combination of two approaches will be used in Year 3. Ongoing training of planners and compliance inspectors under this program is effective at an outcome Level 2.

a) Construction Workshops / Website (BMP 4.7)

- Evaluation Workshops. Two public workshops were held during Year 2 to present the evaluation outcome and provide an overview of the countywide construction program. There was limited attendance at both the Santa Maria and Santa Barbara workshops. This could be due to lack of concern on part of construction contractors because they are familiar with County erosion/sediment control requirements or lack of concern on part of stakeholders. Advertising to the construction community was focused on the two contractors associations (Santa Maria Valley Contractor Assn and the Santa Barbara

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Contractors Assn). (See additional discussion on the evaluation workshops above under BMP 4.2 in Section 4.0). Making these presentations to the public is effective at an outcome Level 2.

- Website. The construction link on the Project Clean Water website was substantially updated in January 2007, with minor updates in Year 2. The County's Building & Safety website also provides information on the permit including grading permit submittal requirements, fees, and application/permit status. During Year 2, links to appropriate BMPs for submitting an Erosion and Sediment Control Plan or Stormwater Pollution Prevention Plan was added. Together, these two website provide guidance on the requirements for obtaining Grading Permits, where to find appropriate County-adopted BMP manuals, and what is required to comply with the local clean water requirements. Having this resource available and maintained on a web page provides an effective outreach opportunity for education the public, planners, and regulatory staff, effective at an outcome Level 2.

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Table 7.4 Effectiveness Assessment Summary for Construction Site Storm Water Runoff Control

BMP	Effectiveness Assessment Outcome Levels			
	Level 1	Level 2	Level 3	Level 4
	Implement Program	Increase Awareness	Behavior Change	Load Reduction
4.1 Grading Ordinance Revisions	(Completed prior to SWMP)	(Completed prior to SWMP)	(Completed prior to SWMP)	
4.2 Evaluate Grading Ordinance	Y2 Conduct Evaluation	Y2 Conduct Evaluation, review results with staff and public		
4.3 Erosion & Sediment Control; Control of Wastes	Y1, Y2 Ongoing implementation permit procedures Y1, Y2 Complaints forwarded to inspectors	Y1, Y2 Ongoing application of BMPs at construction sites thru proper plan submittals	Y1, Y2, Inspections and Correction Notice Y1, Y2 Complaint response Y1, Y2 Where verbal warnings or correction notices issued	Y1, Y2 Where BMPs used at construction sites prevent / eliminate discharges Y1, Y2 Where inspectors identify & prevent / eliminate discharges
4.4 Review of Plans, etc	Y1, Y2 Ongoing thru permit procedures	Y1, Y2 Ongoing application of BMPs at construction sites thru proper plan submittals	Y2 Revisions to Accela & overall permit tracking	
4.5 Discretionary Projects - Land Use Permits	Y1, Y2 Ongoing thru permit procedures		Y1, Y2, Inspections and Correction Notice Y1, Y2 Complaint response	
4.6 Evaluate Land Use Permit Program Efficacy	Y2 Conduct Evaluation	Y2 Conduct Evaluation, review results with staff and public		
4.7 Staff Training		Y1 Grading Inspectors Y2 Grading plus dev-rev and compliance inspectors		
4.8 Construction Workshops		Y2 Two workshops Y2 Website improvements		

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report

Y2 – Reporting/assessment with the FY 2007-2008 Annual Report

MCM 5.0 Post-Construction Storm Water Management in New and Redevelopment

The Post-Construction Storm Water Management in New and Redevelopment minimum control measure is implemented under authority of the County Planning & Development Department through County code, policy, and practice. Other County departments such as Public Works, Fire, and Public Health, provide input to the permitting and development process; Public Works provides that input for implementing a portion of the General Permit Attachment 4(B) requirements.

Overall, the County's Hillside and Watershed Protection Policy (Policy #7) is clear and unambiguous in intent: "Degradation of the water quality...shall not result from development of the site."

By applying this policy through the permit procedures process, the County provides consistent review of water quality impacts and appropriate mitigation to protect water quality from storm water runoff. Effectiveness will best be measured over the 5-year implementation period as awareness from the development community increases and plan submittals improve. During Years 1 and 2, effectiveness is focused on Outcome Level 2 (raise awareness) and Outcome Level 3 (change behavior, resulting in implementation of BMPs), with the goal of the overall storm water program of Outcome Level 4 (Reduce Pollutant Load).

a) Land Use Policies and Permit Review Process (BMPs 5.1, 5.2, 5.4)

Relevant land use policies and procedures were updated prior to Year 1, as described in the Storm Water Management Program. During Years 1 and 2, the County continued to implement these updated policies and procedures. During Year 2, many of the recommendations from the Year 1 evaluation were implemented, as discussed in Section 5.0 and Appendix 5C.

- Updated Community Plans. Several community plans were updated during Year 2 that included Low Impact Development design considerations. For example, the draft Mission Canyon Residential Design Guidelines includes direction for use of permeable paving on driveways, and development of hillside areas to minimize grading and runoff from impervious surfaces. This is successful at Level 3.
- Improved Submittals. Applications are improving over time as applicants become more familiar with the County requirements and expectations. Although there is a specific application item requesting the applicant address "measures that will be incorporated into the project design to address storm water quality (e.g. protect riparian corridors, reduce runoff, reduce directly-connected impervious area, eliminate pollutant sources)", the quality of response to this application item has improved over time. This is due in part to directed outreach efforts, staff training, and direct communication to applicants during pre-application meetings and SDRC meetings. Furthermore, planners cannot deem an application "complete" until the applicant has addressed how storm water runoff will be treated (for Attachment 4(B) category project applications). Improvements in initial design and submitted applications are successful at outcome Level 2 and where submittals have improved, behaviors have changed resulting in complete submittal requirements early in the project application which is effective at Level 3.
- Improvements in Permit Tracking. All data associated with permit processing is tracked through a countywide software called Accela. During Year 2, revisions were developed

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that will lead to a new data field, wherein the planner will identify whether an application is for a General Permit Attachment 4(B) category project. This will improve identification and tracking of these cases throughout the permit process, including construction inspections and completion. This work is successful at Level 3.

- Inspections During Construction. All projects issued a discretionary permit (CUPs, DVPs, etc.) undergo regular inspections during construction to ensure compliance with permit conditions and mitigation measures. Inspections are designed to assure, 1) the project construction complies with all conditions of approval, 2) the design is consistent with final approved plans, 3) construction meets all codes and standards, and 4) the final project complies with any conditions of use or final design conditions, such as landscaping. Failure to do so could result in a Stop Work Order, which is a highly effective mechanism to assure immediate correction. Only when the project has complied with all conditions of approval, codes, standards and plans, will the Planning and Development Department issue final occupancy clearance and release the construction bonds. Linking project closure with proper installation of all elements of project design provides an effective mechanism to assure compliance. Construction inspections are successful at a Level 3 outcome and where abatement occurs, Level 4.
- Certification Upon Completion. Projects that have structural treatment control measures, required as a condition of permit issuance, must be certified by the design engineer upon completion, prior to final Occupancy Clearance. The two main reasons treatment control measures fail is because 1) they are not installed correctly and 2) they are not maintained. Requiring the licensed design engineer to certify installation is a very effective way to assure the long-term function of the BMP, because it assures legal responsibility for proper installation. This is effective at a Level 3 outcome.
- Maintenance Inspections. Project Clean Water staff inspects those projects with structural treatment control in place, or under construction. There were two maintenance inspections for installed BMPs performed during Year 2. Both were functioning and well-maintained. As stated above, the two main reasons treatment control measures fail is because 1) they are not installed correctly and 2) they are not maintained. County follow-up on maintenance activity assure the long-term function of the BMP; failure to do so would be in violation of the recorded maintenance agreement. Assuring the treatment BMP is functioning to treat pollutants from storm water runoff is successful e at an outcome Level 4.
- Scope. It is worth noting that all discretionary development and redevelopment proposed throughout the County, not just those limited to the SWMP permit area, are analyzed for consistency with policies. This provides a broader and more consistent approach to development countywide. This expanded scope is successful at an outcome Level 3.

b) Program Evaluation (BMP 5.3)

During Year 1, the County together with a consultant team developed an in-depth analysis of County policy and practices, compared the policy and practices to the minimum General Permit requirements, and identified areas of permit deficiency or opportunities to improve. This resulted in a number of effective changes at the County, detailed in Appendix 5C, including:

- Revised Flood Control standard conditions, successful at Level 3;

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- Revisions and updates to the Planner's Guide to Standard Conditions of Project Plan Approval, successful at Level 3;
- Revised draft of treatment control BMP standard conditions of approval, successful at Level 3;
- Revised draft Public Works Engineering Design Standards, successful at Level 3;
- Updated post-construction web page, successful at Level 3.

Addressing these recommendations will continue throughout the 5-year permit term.

c) **Staff Training, Education & Outreach Efforts (BMP 5.5)**

During Yr2, training focused on primarily development review planners. Except for the Montecito Planning Commission presentation in July 2007 (see Appendix 5G), most outreach or training to decision makers and to the development / design community occurred in Yr1.

- Community / Decision Maker Training and Outreach. During Year 1, presentations were made to the County Planning Commission, the Montecito Planning Commission, the County Architectural Review Board, and the Montecito Architectural Review board. The City of Goleta's Design Review Board also requested a presentation on the Post-Construction requirements of the General Permit by County of Santa Barbara staff from Project Clean Water. Community presentations were made to the American Public Works Association, the Home Builders Association of the Central Coast, and the Project Clean Water stakeholders. Such presentations are highly effective because, in the case of planning commissions and architectural review boards, they assure consistent application of County policy by targeting those individuals who can change a project's design. In the case of outreach to the design and development community, such presentations are effective because they raise expectations for project design to a higher level. Overall the effectiveness of education and outreach is successful at Level 2.

Staff training and outreach efforts were effective by targeting those directly involved in development review.

- Staff Training: Response to Assessment Quiz. During Year 1, staff were handed out a quiz that was filled out, and then discussed during the course of the presentation. The advantage to this approach was opportunity to correct misinformation and provide an open discussion. However, there was no way to assess the effectiveness of the training in this fashion. During Year 2, another approach was implemented. The quiz was provided during the presentation but was not discussed. Most staff were unable to fill out the quiz during the presentation, and submitted later. This resulted in a low response; only half the participants completed the survey in spite of two reminder emails. However, results could be tabulated and areas of misunderstanding and misinformation could be assessed. Therefore, each method was somewhat effective for different reasons, but neither was completely effective. A combination of two approaches will be used in Year 3. Training development review staff and compliance inspectors is successful at Level 3.

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Table 7.5 Effectiveness Assessment Summary for Post-Construction Storm Water Management in New and Redevelopment

BMP	Effectiveness Assessment Outcome Levels			
	Level 1	Level 2	Level 3	Level 4
	Implement Program	Increase Awareness	Behavior Change	Load Reduction
5.1 Update Land Use Policies	Y1 Modify Policy Y2 Modify Guidance		Y2 Update Comm Plans & Development Guidance	
5.2 Implement Design Standards Per General Permit	Y1, Y2 Apply policy per standard procedures	Y1 Develop website Y2 Improve Submittal	Y2 Improvement tracking (Accela) Y1, Y2 Construction Inspections Y1, Y2 Certification Y2 Improve Submittals	Y1, Y2 Compliance inspections that result in abatement of discharges or correction per plans
5.3 Evaluate Program Efficacy	Y 1 Conduct Program Evaluation		Y2 Implement Recommendations	
5.4 Project Evaluations				Y1, Y2 BMP Maintenance Inspections
5.5 Staff Training		Y1 Decision Maker presentations Y2 Decision Maker presentations	Y2 Staff training	

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report
 Y2 – Reporting/assessment with the FY 2007-2008 Annual Report

MCM 6.0 Pollution Prevention / Good Housekeeping Practices for Municipal Operations

Following is a general assessment regarding the effectiveness of the first two years implementing of the Pollution Prevention / Good Housekeeping Practices for Municipal Operations.

a) **Audit, Protocols, Fact Sheets, Reporting (BMPs 6.1, 6.2, 6.3 and 6.4)**

The County of Santa Barbara has an extensive array of government activities, ranging from public health services and clinics, to emergency services from Fire, Sheriff, and Public Works, to horse boarding and restaurant management. Effectiveness will best be measured over time as the program develops and will focus on Outcome Level 2 (raise awareness) Outcome Level 3 (change behavior, resulting in implementation of BMPs) eventually leading to an Outcome Level 4 (Reduce Pollutant Load).

During the first two years:

- Survey Facilities. Establishing the database of facilities, assessing practices, and developing BMPs was an effective first step in the process of improving housekeeping practices of municipal operations. These measurable goals are successful at Level 1.
- Fact Sheets. The Best Management Practices Fact Sheets were developed based upon the type and nature of facilities surveyed. These measurable goals are similarly successful at Level 1.
- Audit Campuses. During Year 2, the database of facilities and BMP Fact Sheets was used to audit the largest County campuses that represented all County Departments for effective implementation of good housekeeping practices. Where deficiencies in good housekeeping practices were noted, follow-up provided immediately addressing potential discharges. This BMP was successful at Level 3.
- Tracking / Reporting. A web-based reporting system was developed in Year 2 for facility managers to track and report practices. The reporting system will be available on the County intranet for direct, individual reporting. Records will be used to assess effectiveness of education and training, and identify opportunities for improvements. As this measurable goal develops, effectiveness will be measurable as Level 3, but as of Year 2, successful at Level 1.

b) **Service Contracts (BMP 6.5)**

- Fleet Vehicle Washing. New practices for complete wastewater recovery were implemented for fleet vehicle washing at County parking lots. Preventing discharges from occurring is successful at Level 4.
- Fleet Vehicle Washing: Practice Verification. Inspections to verify the effectiveness of the wastewater recovery practices resulted in minor corrections at the Santa Barbara downtown location. This immediate response prevented a discharge from occurring and eliminated a potential pollutant load to the City's storm drain system. This effort was successful at Level 4.

c) **County Practices (BMPs 6.4, 6.6, 6.7, and 6.8)**

A number of ongoing county programs and practices provide protection of storm drains and receiving waters. These include culvert inspections, flood control maintenance, Resource

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Recovery's recycling and waste collection programs, ongoing Integrated Pest Management program, storm drain maintenance, and street sweeping, all described in detail in the SWMP. Specific areas of effectiveness include:

- Flood Control. Over 33 creeks or channels were inspected by Flood Control maintenance crews in Yr2. In addition to maintaining the channels through brush and debris removal, Flood Control staff will refer water quality issues to Project Clean Water staff for follow-up. This program is successful at Level 1 for implementation; where maintenance or referral occurs, successful at Level 4 for removing a pollution source.
- Public Works Roads Division Culvert Inspections and Maintenance. Routine inspection and maintenance resulted in 6,131 culverts inspected. Similar to Flood Control routine maintenance and inspection, this program is effective at Level 1 for implementation; where maintenance or referral occurs, successful at Level 4 for removing a pollution source.
- Solid Waste Facilities. Storm Water Pollution Prevention Plans implemented and updated at all solid waste facilities, as required by the State Water Resources Control Board consistent with the NPDES Industrial General Permit No. 97-03-DWQ. Implementation of these plans is effective at Level 3 and 4 by preventing pollutant loading. Regularly updating the plans is an NPDES permit requirement, successful at Level 1.
- IPM. Annually reporting on pesticide use has resulted in increased awareness and behavior changes in County staff by implementing pest management efforts which minimize, and in some cases eliminate the use of pesticides where feasible. Implementation of this program is successful at Level 3 and successfully proven at Level 4 through overall lowering of pesticide use since adoption of the IPM.
- Street Sweeping. A total of 65,675 lb of material were removed from the street sweeping program. This is a directly-measurable pollutant load reduction, successful at Level 4.
- Storm Drain Cleanout. A total of 30,745 lbs of trash was removed from the storm drain trash interceptors (CDS units). This is a directly-measurable pollutant load reduction, successful at Level 4.
- Bioswales. Storm drain discharges entering the Turnpike and two Rhoads Ave. bioswales intercepted and eliminated discharges from nuisance flows and small storm events. Therefore there is zero discharge of pollutants about 95% of the time (i.e. non-rainy days). This is a directly-observable pollutant load reduction, successful at Level 4.

d) Staff Training (BMP 6.9)

Education and outreach opportunities to County employees increases their knowledge and awareness. This improves performance of their municipal responsibilities, and increases the reporting of illicit discharges.

- Pocket Guide. Project Clean Water developed a new pocket guide in Year 2 for county staff (Appendix 1A). A total of 124 guides were discussed and distributed during staff trainings. This new information piece is successful at Level 2.

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- Staff training. Training provided to all Environmental Health inspectors, Fire Dept hazardous material inspectors, and all Public Works field crews (Roads, Flood) – total trained, 101 individuals. This measurable goal is successful at Level 2.
- Increased Discovery. There were three discoveries forwarded to PCW staff from Flood Control following training sessions held in north and south county areas (see complaints 08-024, 08-009, and 08-006). Direct referrals from trained, informed County staff are successful at Level 4, where those complaints result in direct follow-up and abatement.

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Table 7.6 Effectiveness Assessment Summary for Pollution Prevention / Good Housekeeping Practices for Municipal Operations

BMP	Effectiveness Assessment Outcome Levels			
	Level 1	Level 2	Level 3	Level 4
	Implement Program	Increase Awareness	Behavior Change	Load Reduction
6.1 Evaluation of Santa Barbara County Facilities	Y1 Survey			
6.2 Site Specific Water Quality Protocols	Y1 Protocols drafted, to be finalized Y3			
6.3 Municipal Operations BMP Fact Sheets	Y1 Develop Fact Sheets			
6.4 BMP Fact Sheet Implementation & Reporting	Y2 Web-based Reporting		Y2 Audit campuses	
6.5 Purchasing and Contracts	Y1, Y2 Contracts		Y1 Fleet Vehicle Washing Contract	Y2 Inspect Washing Practices
6.6 Integrated Pest Management Plan			Y1, Y2 Implement IPM	
6.7 Storm Drain Maintenance	Y1, Y2, Flood Control Maintenance Y1, Y2 Culvert maintenance Y1, Y2 Implement SWPPPs		Y1, Y2 Implement IPM Y1, Y2 Implement SWPPPs	Y1, Y2 Storm drain cleaning Y1, Y2 Bioswales Y1, Y2 Flood Control maintenance or referrals Y1, Y2 Culvert cleaning maintenance or referrals Y1, Y2 Implement SWPPPs Y1, Y2 Implement IPM
6.8 Street Sweeping				Y1, Y2 Street Sweeping
6.9 Staff Training		Y2 Pocket Guide Y2 Field Staff Training		Y2 Increased referrals from County staff

Y1 – Reporting/assessment with the FY 2006-2007 Annual Report
 Y2 – Reporting/assessment with the FY 2007-2008 Annual Report