MOJAVE RIVER WATERSHED GROUP

SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS GENERAL PERMIT

Waste Discharge Identification Number
6B336SM40301

FISCAL YEAR 2007-08 ANNUAL REPORT

SUBMITTED TO:

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD,
LAHONTAN REGION
14440 Civic Drive, Suite 200
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September 5, 2008

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APPENDICES

Acronyms

BMP	Best Management Practice
CASQA	California Stormwater Quality Association
LID	Low Impact Development
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MRWG	Mojave River Watershed Group
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SGA	S. Groner Associates, Inc.
SWMP	Stormwater Management Program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WQMP	Water Quality Management Plan

1.0 Introduction

Phase II Small MS4 General Permit

The Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit program is intended to address potentially adverse impacts to water quality by instituting the use of controls on unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Stormwater discharges from MS4s in urbanized areas are a concern because of the potential for these discharges to contain pollutants. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from concentrated human activities can settle and remain until a storm event washes them into nearby storm drains.

Common pollutants include pesticides, fertilizers, oil and grease, trash and other debris, metals, and sediment. Another concern is the possible illicit connections of sanitary sewers, which can result in high levels of fecal coliform bacteria entering the storm drain system. Stormwater runoff can pick up and transport these and other potentially harmful pollutants and discharge them untreated to waterways. Under some circumstances, these discharges can result in a loss in aesthetic value and contaminate local drinking water supplies.

Uncontrolled runoff from construction sites is a water quality concern because of the effects that sedimentation can have on local water bodies, particularly small streams. Numerous studies have shown that the amount of sediment transported by stormwater runoff from construction sites with no controls is significantly greater than from sites with controls. In addition to sediment, pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids can be present at construction sites and have the potential to be transported by stormwater runoff. During storms, construction sites can be the source of sediment-laden runoff, which can overwhelm a small stream channel's capacity, resulting in streambed scour and streambank erosion.

Mojave River Watershed Group General Permit Coverage and Annual Report

In accordance with the State Water Resources Control Board (SWRCB) Water Quality Order No. 2003-0005-DWQ and National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, the Town of Apple Valley, Cities of Hesperia and Victorville, and County of San Bernardino, collectively referred to as the Mojave River Watershed Group (MRWG) agencies, submitted a Notice of Intent (NOI) and Stormwater Management Program (SWMP) to the Lahontan Regional Water Quality Control Board (RWQCB) in August 2003 requesting coverage under the Phase II Small MS4 General Permit. The RWQCB accepted the SWMP and issued coverage under the Phase II permit to the MRWG Permittees in February 2005.

The MRWG SWMP consists of a comprehensive plan to develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable (MEP) to protect water quality. The SWMP includes the following six Minimum Control Measures (MCMs):

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping for Municipal Operations

Each MCM consists of various implementation measures and Best Management Practices (BMPs) to prevent or reduce adverse affects on stormwater runoff and receiving water bodies. In addition, each MCM has several measureable goals to demonstrate compliance and effective implementation of the stormwater management program.

This Annual Report covers the period from July 1, 2007 through June 30, 2008, which represents the fourth year of the program. The Annual Report is an evaluation of the MRWG's stormwater program and provides a status of the Fourth Year Measureable Goals for each of the MCMs. It also includes an assessment of the effectiveness of the selected BMPs. The majority of the Fourth Year Measurable Goals involved program implementation, training, and effectiveness assessments of policies, procedures, and legal authority. The fifth year of the MRWG program will involve evaluating the overall effectiveness of the SWMP and making necessary adjustments to achieve the goals of the MCMs.

1.1 Summary of Major Accomplishments for Fiscal Year 2005

During the first year of program implementation, February 15, 2005 through August 15, 2005, the majority of measureable goals involved program development and training. Major accomplishments included:

- Implementation of a proactive education and outreach program to increase the public's awareness of the impacts of polluted discharges from MS4s on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.
- Links were included on each Permittee's website to the County of San Bernardino's stormwater website at www.sbcounty.gov/stormwater.
- Public education and outreach materials developed for landscaping, used oil, and household hazardous waste included bill inserts, brochures, fact sheets, tip cards, posters, and press releases.
- Creation and installation of public displays at Permittee public facilities.
- Development of an education program entitled "High Desert Storm Water Phase II Awareness Impact Project" targeting elementary school children, teacher training, and automotive fluids disposal for high school students.
- Participation in multiple watershed wide meetings and litter clean-up events.
- Evaluation of existing codes and ordinances to ensure proper legal authority to prohibit illicit discharges.
- Development of a storm drain map detailing "level of threat" zones for identifying historical spill locations and prioritizing high risk areas for future illicit discharge detection and elimination.
- Review of existing construction site stormwater runoff BMPs and provided construction related stormwater pollution prevention training to contractors, developers, inspectors, engineers, and consultants.
- Establishment of ordinances to conserve the use of water in a manner that also prevents non-stormwater discharges.

- Municipal staff training on pollution prevention techniques and the implementation of good housekeeping measures.

1.2 Summary of Major Accomplishments for Fiscal Year 2005-06

Measureable goals for the second year of implementation, August 16, 2005 through June 30, 2006, focused on the development and implementation of the MCMs. Major accomplishments included:

- Purchase and use of MS4 Permit Manager software from CBI Systems to track and manage permit data and Permittee compliance efforts.
- Distribution of educational materials consisting of a fertilizer tip card and automotive BMP poster.
- Hosting the MRWG Annual Public Workshop to discuss implementation of the Mojave River Watershed stormwater program and management plan and solicit input from the public.
- Increased public involvement by networking with other groups such as the Mojave Water District, Alliance for Water Awareness and Conservation, Mojave Resource Conservation District, and Flood Control District which share common concerns over stormwater quality.
- Permittee sponsored workshop on construction BMP installation, selection, and maintenance, and construction site inspection protocols for stormwater pollution prevention.
- Training of plan reviewers and planners on low impact development (LID) strategies and post-construction BMP designs for stormwater management on new developments and significant redevelopments.
- Training of Public Works supervisors and field staff on the implementation of good housekeeping practices and stormwater BMP control measures.

1.3 Summary of Major Accomplishments for Fiscal Year 2006-07

From July 1, 2006 through June 30, 2007, the MRWG implemented the third year measureable goals for each of the MCMs. Major accomplishments included:

- Distribution of brochures and other public education and outreach materials related to pet, equestrian, and pool maintenance activities.
- Permittees developed a website, www.mojaveriver.org, which targets residents, small business owners, and city and county representatives to access information related to stormwater pollution.
- Formed partnerships with local home improvement stores (Home Depot and Lowe's) to provide outreach materials to "do-it-yourselfers".
- Training of business store managers and employees on stormwater pollution, its effects on the environment, and measures to prevention pollution.
- Permittees partnered with major pet store chains such as PETCO and PETSMART, as well as smaller independent pet stores, veterinarian clinics, kennels and pet grooming facilities to provide outreach to pet owners.

- Continued implementation of the "High Desert Stormwater Phase II Awareness Impact Program."
- Conducted interactive slideshow presentations in classroom and assembly settings by the Malibu Foundation for Environmental Education to connect students with their surroundings, teach them about the storm drain system and how litter in the Mojave River area impacts drinking water and the local environment, in addition to the impacts litter has on all rivers.
- Published various media releases focusing on Household Hazardous Waste, stormwater pollution prevention, and recycling.
- Hosted environmental outreach booths at numerous events throughout the watershed.
- Permittees participated in multiple watershed wide meetings.
- Many existing activities conducted by the MRWG were utilized to establish a formal storm drain maintenance and inspection program to address illicit discharge detection and elimination.
- Annual training of Public Works supervisors and field staff on the implementation of good housekeeping practices and stormwater BMP control measures.

1.4 Summary of Major Accomplishments for Fiscal Year 2007-08

This Unified Annual Report will detail the successful completion of all Fiscal Year 2007-08 Measureable Goals and demonstrate Permittee compliance with the Phase II Small MS4 General Permit. Major accomplishments between July 1, 2007 and June 30, 2008, included:

- Distribution of pesticide, paint, and fertilizer outreach materials to "do-it-yourselfers" through partnerships with local businesses.
- Pollution prevention presentations at local elementary schools resulting in two (2) schools independently organizing litter clean up events and reducing pollutant loads to the storm drain system.
- Forty-nine Mojave River Watershed residents signed letters committing to pick up after their pets.
- Participation in multiple watershed wide meetings to obtain community input and involvement.
- Limited number of illicit discharges identified as a result of post-construction BMPs infiltrating urban and stormwater runoff onsite.
- Pollutant load reduction of 355 tons as a result of household hazardous waste collected.
- Establishment of effective relationships with builders to quickly resolve deficient construction site BMPs and avoid enforcement actions.
- Completion of comprehensive stormwater training programs for illicit discharge detection and elimination, construction site stormwater runoff controls, post-construction stormwater management in new development and redevelopment, and municipal operations.

2.0 Background

The Mojave River Watershed encompasses approximately 4,500 square miles and is located entirely within San Bernardino County. The total population in the Mojave River Watershed was approximately 295,000 people in 1997 with much of the existing population concentrated in the Victor Valley, which is located north of the San Bernardino Mountains and borders the edge of the Mojave Desert. The Victor Valley includes the communities of Adelanto, Apple Valley, Hesperia, Lucerne Valley, Oak Hills, Phelan, Victorville, and Wrightwood. Additional urban growth is expected throughout the watershed. The population for the entire watershed is projected to reach nearly one-half million people by the year 2015.

The primary geographic and hydrologic feature of the watershed is the Mojave River. The headwaters of the Mojave River are in the San Bernardino Mountains, which annually receives greater than 40 inches of precipitation at its highest elevations. Much of the winter precipitation in the San Bernardino Mountains falls in the form of snow that provides spring recharge to the Mojave River system. Historically, the annual recharge from the headwaters is approximately 75,000 acre-feet. The Mojave River channel, through both surface and subsurface flow, transects the watershed a linear distance of approximately 120 miles to its terminus at Silver Dry Lake near the Community of Baker. Aside from intense storm events, the Mojave River channel is typically dry downstream of the Mojave Forks Dam except in select locations where groundwater is forced to the surface by geologic structures.

The Mojave River Watershed is divided into five sub-basins based on hydrologic features. The USGS Report 95-4189 identified these sub-basins as:

1. Headwaters – Tributaries above the Mojave Forks Dam;
2. Upper Basin - Mojave Forks Dam to the Lower Narrows at Victorville;
3. Middle Basin - Lower Narrows to the Waterman Fault at Barstow;
4. Lower Basin - Waterman Fault to Afton Canyon; and
5. Tailwater - Afton Canyon to Silver Lake.

The sub-basins include an aquifer system consisting of two interconnected aquifers – floodplain aquifer and regional aquifer. The floodplain aquifer is composed of sand and gravel, which is as much as 250 feet thick, and generally follows the surface expression of the Mojave River. The regional aquifer, which is composed of sand, silt and clay, generally underlies and surrounds the floodplain aquifer.

3.0 Effectiveness Assessment of Fiscal Year 2007-08

Program Effectiveness Assessment Strategy

The SWMP is comprised of six (6) program elements known as MCMs, each with specific control measures to reduce pollutants in urban and stormwater discharges. These MCMs are being implemented on a jurisdictional and watershed wide basis and each MCM is iterative and incorporates phases of assessment to determine whether programmatic outcomes are being achieved. This assessment phase is formalized as the Annual Report. The strategy for the Annual Report is based on the selection and annual evaluation of implementation assessment measures.

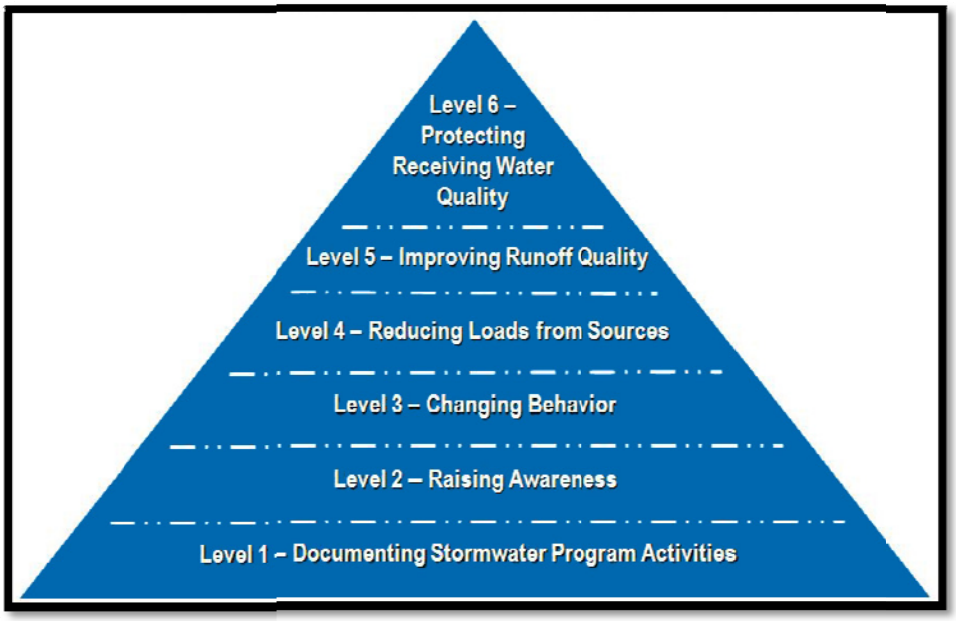


Figure 3.1 Approaches to Evaluate Stormwater Program Effectiveness (Source: CASQA, 2007)

Outcomes are the result of an activity, program element, or overall program and can be characterized in terms of six levels. Figure 3.1 shows these levels as a gradation from activity-based to water quality-based outcomes and illustrates the progression of each successive step toward the ultimate goal of environmental improvement. In general, Levels 1 to 3 can be considered *Implementation Outcomes*, Levels 5 and 6 *Water Quality Outcomes*, and Level 4 a combination of the two types. Each level has value in informing the management process and it bears emphasis that not all are necessary or possible in every instance (CASQA, 2007)[1].

Assessment Measures

Assessment measures can be categorized many different ways. In this Annual Report, two categories are recognized, one related to the short term confirmation of BMP implementation and the other to long term verification of environmental improvement. In essence, the categorization of measures reflects two basic assessment questions:

[1] California Stormwater Quality Association (CASQA), 2007. "*Municipal Stormwater Program Effectiveness Assessment Guidance.*"

- Are program elements being implemented correctly?
- Are environmental improvements being realized?

Programmatic and environmental indicators are conceived by the U.S. Environmental Protection Agency (USEPA) as having a hierarchical relationship as shown in Table 3.1. This relationship further illustrates the fact that environmental outcomes rest on, or follow from, jurisdictional program implementation. Moreover, it points to the reality that scientifically robust evidence of changing ecosystem quality will follow confirmation of program implementation and should not be expected to be evident concurrently.

Table 3.1 Hierarchy of Indicators (USEPA, 1998)

Environmental Indicators	6	Ultimate Impacts: ➢ Ecological ➢ Health ➢ Welfare
	5	Body Burden/Uptake
	4	Ambient Conditions
	3	Discharge/Emission
Programmatic Indicators	2	Actions by Regulated Community
	1	Actions by Regulators

Key attributes of assessment measures include:

- Measurability (statistically measurable on a frequent basis);
- Relevance (significant, demonstrable relation to strategy and objectives);
- Reliability (easily documented and reproducible);
- Availability (based upon data obtainable at reasonable cost);
- Scientific validity (based on sound science), and
- Replicability (capable of being regularly updated).

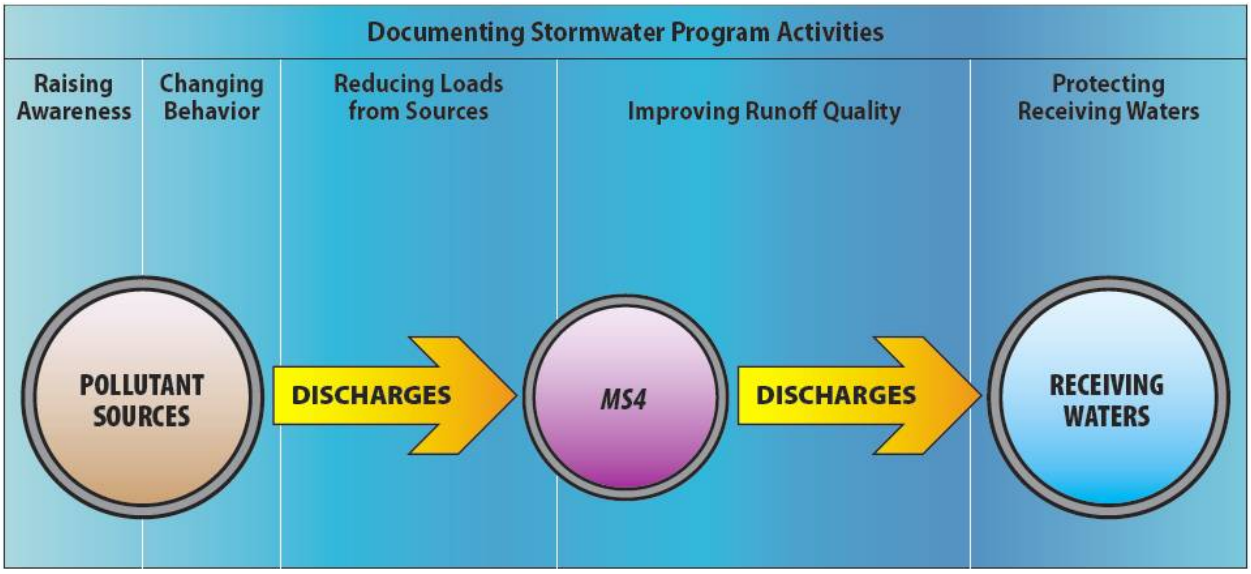


Figure 3.2 Documenting Stormwater Program Activities

Effectiveness Assessment

A program of effectiveness assessment requires the initial establishment of a set of baseline conditions. Thereafter, effectiveness can be evaluated by comparisons of successive years of indicator information against the baseline data. Where the period of evaluation is characterized by the implementation of new program requirements, determinations of program effectiveness will initially be limited to confirmation of program implementation. However, it must be recognized that direct measures of program effectiveness may not be available within the timeframe of the five-year Phase II Small MS4 General Permit. This lack of direct measure confirmation arises because:

- Baseline conditions are not readily established;
- Water quality changes in response to program implementation are likely to be very slow; and
- Establishing a link between receiving water condition and program activities is difficult at the watershed scale when programs are being implemented incrementally within the development and redevelopment cycle.

The process of stormwater program effectiveness assessment is conducted annually and focuses on program implementation. Inferences about the connection of management program elements to water quality improvements made in these assessments will predominantly be drawn from the assessment of programmatic indicators and indirect measures of progress. In addition, the outcome of the assessment may propose revisions to the SWMP. The effectiveness assessments and Outcome Levels are presented below for each of the individual MCMs.

While program effectiveness assessment is a key step in the iterative adaptive process of program implementation, it should be realized that effectiveness assessment itself is a part of the management process that is also evolving. Assessing program effectiveness is recognized as a challenge for program managers across California, and the MRWG member agencies support the effort of the California Stormwater Quality Association (CASQA) to develop guidance in this area at a statewide level. This guidance was published as the *Municipal Stormwater Program Effectiveness Assessment Guidance* (CASQA, 2007) and will be used for the purpose of assessing the MRWG's SWMP implementation efforts to comply with the Phase II Small MS4 General Permit and reduce the discharge of pollutants from the MS4 to the MEP to protect water quality.

3.1 MCM 1 – Public Education and Outreach

The Phase II Small MS4 General Permit requires the implementation of a public education program to distribute educational materials to the community and conduct outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.

The MRWG SWMP outlined a plan to meet the requirements of this MCM with education and outreach programs for three diverse groups: students, homeowners, and business people. The objectives of the Public Education and Outreach Program are to:

- Reduce the amount of stormwater pollution in the Mojave River Watershed;
- Change the mind-set of a large and diverse population while educating target audiences about solutions to stormwater pollution;
- Improve general understanding of urban and stormwater runoff pollution prevention methods;
- Create synergy by using an overarching campaign approach, "look" and tone, and by unifying multiple pollution prevention efforts;
- Impact more than one audience at a time with a single campaign;
- Build bridges and forge partnerships that integrate city and jurisdictional programs; and
- Document whether the education outreach effort resulted in behavior change that reduced pollution.

A synopsis detailing the status of implementation for each of the Public Education and Outreach Program Fourth Year Measureable Goals is provided below in Table 3.2.

Table 3.2 MCM 1 – Public Education and Outreach Program: Fourth Year Measurable Goals								
BMP	**Description**	**Status**						
		Implemented	**Not Applicable**	**Modified**	**Effective**	**Unknown**	**Not Effective**
1	Evaluate effectiveness of the Public Education and Outreach Program, refocus program as required, annually. ➢ Submit articles and ads to local media outlets ➢ Establish/maintain environmental outreach booths at local and regional events	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		
2	Homeowner Education and Outreach: Distribute the second set of brochures to all homeowners and mount web pages.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		
3	Homeowner Education and Outreach: Evaluate the effectiveness of the Homeowner Education and Outreach Program based on the findings of the other Minimum Control Measures. Focus the program in the areas that promise the greatest opportunity to improve stormwater quality.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		
4	Business Outreach: Evaluate the effectiveness of the Business Outreach Program based on the findings of the other Minimum Control Measures. Refocus the program in the areas that promise the greatest opportunity to improve storm water quality.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.1.1 Implementation Status of Measureable Goals

The MRWG successfully accomplished the fourth year goals of MCM 1, Public Education and Outreach. Program accomplishments included publishing articles in appropriate publications for the targeted audience, participating in local and regional events to disseminate outreach materials, distributing educational brochures and other handouts at high traffic locations for the targeted consumer, and developing a watershed specific website to provide residents, businesses, and City and County representatives with additional educational materials and references.

Educational Articles Targeted to School Children, Parents, and Teachers

The MRWG through the use of a consultant, S. Groner Associates, Inc. (SGA), was able to form partnerships with local elementary schools to submit articles on stormwater pollution and proper household hazardous waste disposal for inclusion in school newsletters which went out to teachers and parents. In Spring and Summer 2008, the MRWG coordinated with five (5) schools to place these stormwater pollution prevention articles in their newsletters.

Environmental Outreach Booths at Local and Regional Events

In order to reach the target audience of "do-it-yourselfers", the MRWG participated in two (2) community events where the prime audience would be present. The two events included the 10th Annual Victor Valley Garden Party on April 5, 2008 and the 24th Annual High Desert Home and Garden Show from April 11-13, 2008. Both events were held at the San Bernardino County Fairgrounds in Victorville. The MRWG booths displayed pictures of litter caught in storm drains and conveyed proper trash and household hazardous waste disposal messages. Materials such as tip cards, tear sheets, and pens made from recycled materials were distributed as an effort to educate homeowners on stormwater pollution and ways to prevent it. City and County staff were able to hand out public education materials and speak one-on-one with event attendees regarding stormwater pollution prevention.

Combined Homeowner and Business Outreach Program and Material Distribution

To yield the highest pollution reduction, the Public Education and Outreach Program executed a comprehensive set of outreach activities to target homeowners and local businesses. This included forming partnerships with garden centers/nurseries, paint stores, hardware stores, home improvement stores, and pet facilities in order to place outreach materials at the finger tips of consumers.

The campaign focused on "pollutant specific outreach," since the majority of stormwater is created by certain pollutants such as pesticide, fertilizer, paint, and pet waste. Educational materials promoted simple pollution prevention behaviors associated with these specific pollutants. The materials were placed in the proximity of products containing the potential pollutants. Outreach materials included tear sheets, tip cards, shelf talkers, and posters. Tear sheets listed locations of household hazardous waste centers, as well as hours of operation, and were placed on counters and checkout stands. Tip cards provided easy-to-follow pollution prevention tips and were placed on counters in the appropriate section. Shelf talkers, with tear sheets attached, provided the same information and were placed in the

appropriate aisles relating to the specific pollutant. This allowed customers to tear off individual sheets and take the information with them. Additionally, the program utilized two types of posters, one poster encouraging the proper disposal of household hazardous waste and another poster used in pet facilities to encourage pet owners to pick up after their pets in order to prevent pollution. Materials included a hotline and website, as resources of more information for residents and businesses.

In addition, owners, managers, and employees were educated on stormwater pollution. Once educated, the staff, seen as experts by the customers, served as catalysts to spread the stormwater pollution prevention message to "do-it-yourselfers" who may be unintentionally engaged in various polluting activities during their home projects or pet owners who may not be picking up after their pets resulting in pollution. By having staff deliver the stormwater pollution prevention message, the program has the advantage of "the messenger" constantly being at the customers' disposal, thereby being able to effectively reach and educate a large group of potential polluters.

School Outreach

Environmental education promotes public awareness and increases knowledge of environmental issues. The earlier that environmental education is provided, the more likely that it will have a strong effect on an individual's values, and in turn, influence lifestyle. As such, the MRWG performed outreach to elementary school students by offering pollution prevention presentations to schools throughout the area.

The Malibu Foundation for Environmental Education conducted the presentations in two different types of settings, classroom and assembly. The classroom presentation was geared toward an individual grade level; whereas, the school assembly was intended to reach the entire school. The program allowed the schools the flexibility of choosing which setting they preferred.

The presentation utilized an interactive slideshow. This interactive slideshow connects students with their surroundings, teaching them about the storm drain system and how litter in the Mojave area impacts rivers. The presentations introduced students to stormwater pollution and the impact that their actions have on the environment. It stressed responsibility and awareness within communities and the ways in which students can help improve their surroundings. The presentations were also a call to action. Students were encouraged to act on the lessons learned by hosting their own cleanup event.

Additionally, SGA worked with city/town and county representatives to use the Enviroscape, an educational tool for children that illustrates how the storm drain system works when pollutants reach the storm drain system.

MRWG Website

The MRWG developed a website as a resource for residents, businesses, and City and County representatives to access information related to stormwater pollution and the Mojave River Watershed. This website located at www.mojaveriver.org is a source of news and information on the program's efforts to reduce stormwater pollution. It also provides information on what residents, businesses, and developers can do to prevent stormwater pollution. The website went live on September 14, 2007, and has links to:

- General Information
- Pollution Prevention Tips
- Household Hazardous Waste and Oil Recycling
- Pollution Reporting
- Educational Materials and School Presentations

Distributed outreach materials included the website address as a resource for more information on stormwater pollution prevention and where to properly dispose of household hazardous waste.

3.1.2 Summary of BMPs

Educational Articles Targeted to School Children, Parents, and Teachers

Table 3.3 highlights the elementary schools that placed a stormwater pollution prevention article in their school newsletter.

Table 3.3 Elementary School Newsletter Outreach Efforts

Name of School Location	City/Area	Newsletter Name	Articles Placed in Newsletter
Mariana Elementary School 10601 Manhasset Rd.	Apple Valley	Mariana Elementary School Newsletter	1
Challenger School of Sports & Fitness 14777 Hopland St.	Victorville	Challenger School of Sports & Fitness Newsletter	1
Galileo Academy 17000 Silica Dr.	Victorville	Galileo Gazette	1
Liberty Elementary School 12900 Amethyst Rd.	Victorville	Liberty Elementary School Principal Newsletter No. 9	1
Mojave Vista Elementary School 16100 Burwood Ave.	Victorville	Mojave Vista Elementary School Principal's Newsletter No. 9	1
		Total	5

Environmental Outreach Booths at Local and Regional Events

Table 3.4 summarizes the outreach materials disseminated at the 10th Annual Victor Valley Garden Party and 24th Annual High Desert Home and Garden Show. It is estimated that a total of 1,253 residents were educated over the course of the two community events. Appendix A includes samples of the outreach materials distributed at these community events and through the business partnership program.

Table 3.4 Outreach Materials Distributed via Environmental Outreach Booths	
Educational Material	**Quantity Distributed**
Tear sheets (list of household hazardous waste collection centers)	1,253
Tip Cards (tips on paint, pesticide, and fertilizer)	1,200
Pens	900

Combined Homeowner and Business Outreach Program and Material Distribution

Outreach to homeowners and stores were performed in Winter 2008 and Summer 2008. As a result, partnerships were developed with garden centers/nurseries, paint stores, hardware stores, and home improvement stores to disseminate outreach materials within the local community. The MRWG worked with stores to train 81 employees on BMPs and the proper disposal of pesticides, fertilizers, and paint, furthering their ability to pass on these pollution prevention messages to their customers. Table 3.5 highlights the business types and number of partnerships the MRWG has been able to establish.

Table 3.5 Business Outreach Efforts and Partnerships	
Business Type	**Number of Partnerships**
Garden Centers/Nurseries	10
Paint Stores	6
Hardware Stores	5
Home Improvement Stores	5
Pet Facilities	37

The results in Table 3.6 illustrate the number of outreach materials distributed to homeowners through the MRWG's partnership with 26 local garden centers/nurseries, paint, hardware, and home improvement businesses.

Table 3.6 Outreach Materials Distributed via Local Businesses	
Educational Material	**Quantity Distributed**
Tear sheets (list of household hazardous waste collection centers)	4,450
Tip Cards (tips on paint, pesticide, and fertilizer)	2,530
Shelf Talkers (tips on pesticide, fertilizer, and paint)	32
Posters (identified phone number and website)	16

The MRWG developed partnerships with major home improvement stores and held four (4) tabling events at Home Depot and Lowe's. Tabling events were conducted in Spring 2008 and essentially consisted of setting up a table in front of the home improvement store and handing out outreach materials with the stormwater pollution prevention message to residents in their community. The tabling events also provided an opportunity to speak with residents one-on-one regarding stormwater pollution prevention. It is estimated that a total of 641 residents were educated over the course of the four tabling events. Table 3.7 details the quantity of outreach materials distributed at the four home improvement store tabling events.

Table 3.7 Outreach Materials Distributed via Home Improvement Store Tabling Events	
Educational Material	**Quantity Distributed**
Tear sheets (list of household hazardous waste collection centers)	641
Tip Cards (tips on paint, pesticide, and fertilizer)	1,105
Pens	478

Table 3.8 lists the educational materials distributed to 24 home improvement store employees during two (2) training presentations conducted in Spring 2008.

Table 3.8 Outreach Materials Distributed to Home Improvement Store Employees	
Educational Material	**Quantity Distributed**
Tear sheets (list of Household Hazardous Waste collection centers)	30
Tip Cards (tips on paint, pesticide, and fertilizer)	90
Pens	30

The MRWG partnered with 37 major pet store chains, such as PETCO and PetSmart, as well as smaller independent pet stores, veterinarian clinics, kennels, and grooming facilities to outreach to pet owners. Outreach to pet facilities was performed in Winter 2008 and Summer 2008 and 65 employees were trained. Table 3.9 details the outreach materials placed at 37 pet facilities.

Table 3.9 Outreach Materials Placed at 37 Pet Facilities	
Educational Material	**Quantity Distributed**
Pet Posters	48

The MRWG developed partnerships with pet stores and staffed one (1) tabling event at PETCO in Summer 2008. At the tabling event public education materials including doggie bags, which encouraged dog owners to pick up after their pets, were distributed. Outreach specialists at the tabling event spoke one-on-one to pet owners regarding stormwater pollution prevention and received 49 signed letters from Mojave area residents stating their commitment to pick up after their pets. Table 3.10 summarizes the number of doggie bags distributed during the pet store tabling event.

Table 3.10 Outreach Materials Distributed via Pet Store Tabling Event	
Educational Material	**Quantity Distributed**
Doggie Bags	65

School Outreach

The Malibu Foundation for Environmental Education conducted elementary school presentations and reached 4,682 students in Winter, Spring, and Summer 2008. Table 3.11 documents the schools that participated in the outreach program and number of students educated at each assembly.

Table 3.11 Elementary School Presentations			
Name of School Location	**City / Area**	**Date of Assembly**	**Number of Students Educated**
Rancho Verde Elementary School 14334 Pioneer Rd.	Apple Valley	2/21/2008	600
Mariana Elementary School 10601 Manhasset Rd.	Apple Valley	3/13/2008	600
Yucca Loma Elementary School 21351 Yucca Loma Rd.	Apple Valley	3/18/2008	420
Yucca Loma Elementary School 21351 Yucca Loma Rd.	Apple Valley	4/14/2008	256
Kingston Elementary School 7473 Kingston Ave.	Hesperia	4/21/2008	100
Eucalyptus Elementary School 11224 Tenth Ave.	Hesperia	4/30/2008	120
Lime Street Elementary School 16852 Lime St.	Hesperia	5/16/2008	102
Mission Crest Elementary School 13065 Muscatel St.	Hesperia	5/19/2008	750
Juniper Elementary School 9400 I Ave.	Hesperia	5/21/2008	353
Juniper Elementary School 9400 I Ave.	Hesperia	5/22/2008	251
Liberty Elementary School 12900 Amethyst Rd.	Victorville	2/26/2008	180
Galileo Academy 17000 Silica Dr.	Victorville	4/2/2008	250
Endeavour School of Exploration 12403 Ridgecrest Rd.	Victorville	6/9/2008	700
		Total	4,682

MRWG Website

The website developed by the MRWG includes pollution prevention tips for residents and businesses, provides household hazardous waste and oil recycling information, allows users to report observed water pollution, provides for quick and easy access to download educational materials for reproduction and reuse, and contains information on how to reserve a 45-minute interactive assembly presentation for their local schools. Table 3.12 illustrates the assorted information available on the website for businesses and residents.

Table 3.12 Website Pollution Prevention Information	
Pollution Prevention Information for Businesses	**Pollution Prevention Information for Residents**
Food Service Industry	Home Improvement
Automotive Industry	Automotive Maintenance
Construction and Development	Lawn Care and Gardening
Commercial Landscape Maintenance	Dog and Livestock Owner
Carpet Cleaning	
Mobile Vehicle Maintenance	
General Industrial and Manufacturing Businesses	
Regulatory Information	

3.1.3 Program Effectiveness

Assessment methods are the specific activities, actions, or processes used to obtain and evaluate assessment data or information. For MCM 1, Public Education and Outreach, the effectiveness assessment methods used include confirmation, tabulation, surveys, and quantification. These methods can be summarized as follows:

- Confirmation consists of documenting whether an activity or task has been completed to document compliance with activity-based permit requirements.

- Tabulation consists of simple accounting and can be expressed in both absolute and relative terms. This method relies on recordkeeping and is useful in documenting trends over time.

- Surveys encompass a variety of methods designed to discern knowledge, attitudes, awareness, or behaviors of a specific target audience. Surveys gather a sample of data that is representative of a group by asking questions of a target audience.

- Quantification refers to efforts to quantify reductions in loading or runoff discharges, or improvements in environmentally quality. There are two main approaches for using quantification methods, quantity tracking and pollutant load estimation.

The overall effectiveness of the Public Education and Outreach Program was determined to be at Outcome Levels 1 (Documenting Activities), 2 (Raising Awareness), 3 (Changing Behavior), and 4 (Reducing Loads from Sources).

Educational Articles Targeted to School Children, Parents, and Teachers

The effectiveness Outcome Level for publishing educational articles in five elementary school newsletters is estimated to be at Levels 1, 2, 3, and 4. To substantiate the level of effectiveness associated with this BMP the MRWG documented the number and location of newsletters where a stormwater pollution prevention message was included and quantified a reduction in trash loadings to the MS4. It is inferred that as a result of the newsletter articles and Malibu Foundation for Environmental Education elementary school presentations that the awareness of the target audience was raised and a direct behavioral change was observed by two elementary schools. Two (2) schools independently organized school clean up events to keep the community clean in Spring 2008, as shown in Table 3.13. Over 212 students collected a total of 28 pounds of trash during the school clean up events therefore reducing a source of pollution.

Table 3.13 Elementary School Clean Ups				
Name of School Location	**City/Area**	**Date of School Clean Up**	**Number of Participants**	**Pounds of Trash Collected**
Mariana Elementary School 10601 Manhasset Rd.	Apple Valley	3/19/2008-3/21/2008	40	8
Liberty Elementary School 12900 Amethyst Rd.	Victorville	3/3/2008-3/7/2008	172	20
		Total	212	28

Environmental Outreach Booths at Local and Regional Events

The effectiveness of the environmental outreach booths at the 10th Annual Victor Valley Garden Party and 24th Annual High Desert Home and Garden Show are considered to be at Outcome Levels 1 and 2. The MRWG concludes that as a result of one-on-one interactions with event attendees and the dissemination of outreach materials to 1,253 residents, a reasonable level of heightened awareness and understanding could be expected by event goers.

Combined Homeowner and Business Outreach Program and Material Distribution

It is realistic to deduce that the effectiveness of the combined homeowner and business outreach program conducted in partnership with garden centers/nurseries, paint stores, hardware stores, home improvement stores, and pet facilities can be assessed as Outcome Levels 1, 2, 3, and 4. As described in Section 3.1.1, the MRWG was able to document, distribute outreach materials, and interact with residents, business owners, and employees at 63 different locations. As illustrated in Table 3.14, outreach specialists at the pet store tabling event received signed letters from Mojave area residents stating their commitment to pick up after their pets. It is expected that residents will follow through on their commitment and a reduction in pollutant loads to the MS4 will be realized.

Table 3.14 Pollution Prevention Commitment Letters from Pet Owners	
Commitment	**Letters Received**
Pet Owner commitment letters to pick up after their pets	49

Homeowner and business outreach activities performed by the MRWG met the requirements of the Phase II Small MS4 General Permit and reasonably raised the target audience's awareness and understanding of stormwater pollution prevention measures. As an evaluation tool, the MRWG conducted surveys at the four (4) home improvement store tabling events. The surveys asked basic questions in regards to behaviors. The following analysis is from 74 responses:

1. Do you buy paint?
    a. Yes = 43%
    b. No = 57%

2. What do you do with the leftover paint?
    a. Household Hazardous Waste Center = 33%
    b. Store for Later = 33%
    c. Use All = 23%
    d. Trash = 9%
    e. Other 2%

3. How did you find out about the household hazardous waste center?
    a. Word of Mouth = 29%
    b. Community Event = 14%
    c. Mass Media Ads = 14%
    d. Mailer = 7%
    e. Store Staff = 14%
    f. Other 22%

4. Do you buy fertilizer/pesticides?
    a. Yes = 39%
    b. No = 61%

5. What do you do with the leftover fertilizer/pesticides?
    a. Household Hazardous Waste Center = 28%
    b. Store for Later = 35%
    c. Use All = 31%
    d. Trash = 3%
    e. Other = 3%

6. How did you find out about the household hazardous waste center?
    a. Word of Mouth = 25%
    b. Community Event = 13%
    c. Mass Media Ads = 13%
    d. Store Staff = 12%
    e. Other 37%

The surveys found that a majority of residents were properly disposing their leftover paint, fertilizer, and pesticides or saving the items for later use. The surveys also found that a majority of those properly disposing of their paint, pesticide, and fertilizers, had found out about the household hazardous waste center through word of mouth. The survey gives an initial assessment of "do-it-yourselfers" awareness of stormwater pollution and from here the MRWG can determine how best to educate residents and promote change to prevent stormwater pollution.

Since homeowner and business outreach programs have been determined to be effective at Outcome Levels 1, 2, and 3, and based on the findings of the other MCMs, increased efforts and measures were taken to expand the outreach program in areas that provide the greatest opportunity to improve stormwater quality. These program areas included the following:

- Train Store Staff – Emphasis was put on educating more owners, managers, and employees on stormwater pollution while conducting outreach. This is because once educated, the staff, seen as experts by the customers, served as catalysts to spread the stormwater pollution prevention message to “do-it-yourselfers” who may be unintentionally engaged in various polluting activities during their home projects or pet owners who may not be picking up after their pets resulting in pollution. By having staff deliver the stormwater pollution prevention message, the program has the advantage of “the messenger” constantly being at the customers’ disposal, thereby being able to effectively reach and educate a large group of potential polluters.

- Partner with Local Agency – Partnered with the local water agency, Victorville Water District, which has similar initiatives in preventing urban runoff, to exchange materials allowing the expansion of outreach efforts.

- Conduct Pet Tabling – Developed a partnership and staffed one (1) pet tabling event. Distributed public educational materials including doggie bags which encouraged dog owners to pick up after their pets. At the tabling event, outreach specialists spoke one-on-one to pet owners regarding stormwater pollution prevention and received signed letters from Mojave area residents which stated a commitment to pick up after their pets.

- Attend Additional Community Event – Staffed a booth at the 10th Annual Victor Valley Garden Party to target the "do-it-yourself" audience, in this case gardeners, on how to prevent stormwater pollution by properly using and disposing fertilizer and pesticides.

- Create and Distribute Article for Elementary School Newsletter – Outreached to teachers and parents through placing an article in newsletters with information on stormwater pollution and tips to prevent it.

School Outreach

As mentioned above for the publishing of educational articles in elementary school newsletters, the combined effort of the school newsletters and Malibu Foundation for Environmental Education elementary school presentations has effectively resulted in Outcome Levels 1, 2, 3, and 4 being achieved as a result of documented implementation, a heightened sense of awareness and understanding, and quantifiable reduction of trash loadings to the MS4 because of the two self organized school clean up events.

MRWG Website

Outcome Levels 1 and 2 were attained with the launch of the MRWG website. Outreach materials distributed at community events, schools, and business partner locations all refer to the MRWG website for addition information to raise the public's awareness and understanding of stormwater pollution prevention measures and where to properly dispose of household hazardous waste.

Conclusion on Overall Public Education and Outreach Program Effectiveness

Largely, the Public Education and Outreach Program is deemed to be effective at various levels, Outcome Levels 1 (Documenting Activities), 2 (Raising Awareness), 3 (Changing Behavior), and 4 (Reducing Loads from Sources), for differing outreach efforts. The comprehensive Public Education and Outreach Program is moving forward in the right direction and will continue to foster a greater sense of awareness and understanding among Mojave River Watershed homeowners and businesses with regard to stormwater pollution and the impacts associated with specific actions that impact our waterways. It is the goal of the MRWG that this heightened sense of awareness will translate into changing behaviors that result in reduced pollutant loads to the MS4 and receiving water body. Long term analysis of the Public Education and Outreach Program will likely demonstrate more actions similar to the independently organized school clean up events observed during this Fiscal Year.

3.1.4 Proposed Program Modifications

Program modifications proposed by the MRWG include tracking the number of website visitors to quantify the number of homeowners and businesses utilizing the available stormwater pollution prevention outreach materials and household hazardous waste and oil recycling information. Another proposed program adjustment is to conduct follow up surveys of school children attending interactive presentations in order to measure their heightened level of awareness and any changes in behavior.

3.2 MCM 2 – Public Involvement and Participation

The public can often provide valuable input and assistance to the implementation of a stormwater program. Therefore, the public is given opportunities to play an active role in both the development and implementation of the Mojave River Watershed Program. An active and involved community is crucial to the success of a stormwater program because it allows for:

- Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be more likely to take an active role in its implementation;
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers;
- A broader base of expertise and economic benefits since the community can be a valuable and free intellectual resource; and
- A conduit to other programs as citizens involved in the stormwater program provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a stormwater program on a watershed basis.

The status of implementation of the Public Involvement and Participation Program Fourth Year Measureable Goal is summarized below in Table 3.15.

Table 3.15 Public Involvement and Participation Program: Year 4 Measurable Goal

BMP	Description	Status					
		Implemented	Not Applicable	Modified	Effective	Unknown	Not Effective
1	As the other five minimum control measures are implemented, reevaluate the effectiveness of the Public Involvement/Participation programs that the Permittees have become involved in. Determine necessary adjustments to the current programs or if new programs should be initiated.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.2.1 Implementation Status of Measureable Goal

The MRWG successfully accomplished the fourth year goal of MCM 2, Public Involvement and Participation. Program accomplishments included active participation with numerous organizations throughout the watershed to maximize the exposure of the stormwater message, hosting an Annual Public Workshop on November 15, 2007 to discuss implementation of the Mojave River Watershed stormwater program and solicit input from the public, and six litter clean up events. Permittees attempted to launch a media campaign using Victor Valley Transit Authority bus shelters but due to internal Transit Authority policies the MRWG's proposed advertising campaign had to be abandoned. MRWG member agencies will attempt to pursue other advertising opportunities in Fiscal Year 2008-09.

Public Involvement and Stakeholder Participation

Water supply and water quality are issues that resonate with the High Desert community. The MRWG actively pursued opportunities involving the coordination of activities amongst themselves and with other area stakeholders with similar goals and agendas. The involvement of a diverse cross-section of people has been effective in terms of providing invaluable connections, further feedback, and information sources related to stormwater pollution prevention. Permittees continued to work collectively with stakeholders to preserve water quality in the High Desert. Permittees were active in participating with the following stakeholders during this reporting year:

- Lahontan RWQCB Quarterly Stakeholder Meetings – Permittees participated at quarterly meetings that were held to discuss water quality concerns of the Mojave Watershed area.

- Mojave Water Agency Technical Advisory Committee Meetings – Permittees participated in bimonthly meetings coordinated through Mojave Water Agency Technical Advisory Committee. This group is made up of water purveyors, farmers, property owners, and other community stakeholder groups in the High Desert.

- Alliance for Water Awareness and Conservation Meetings – Permittees participated in quarterly meetings with this regional water conservation group. The Alliance for Water Awareness and Conservation is an organization which actively provides water-related public information through workshops, publications, monthly newspaper articles, and displays.

- San Bernardino County Flood Control District, Zone 4 Meeting – Permittees participated in the Flood Control District, Zone 4 Advisory Committee Meeting, which is comprised of a wide cross-section of stakeholders groups, political, and community leaders in the High Desert community.

- Victorville Water Management Ad Hoc Committee Meetings – This committee was formed with the Baldy Mesa Water District, Victor Valley Water District, Mojave Water Agency, and City of Victorville for the development of consistent water use policies for the area.

- Mojave River Watershed Group Meetings – Eleven (11) meetings were held among the Permittees for this reporting year, which were made open to other stakeholders.

Annual Public Workshop

On November 15, 2007, the MRWG hosted the 3rd Annual Public Workshop at the City of Hesperia. Residents, business and building community members, industry representatives, and elected officials of San Bernardino County, the Town of Apple Valley and the Cities of Hesperia and Victorville were invited to participate in a workshop to present information on the Mojave River Watershed stormwater program

and obtain input from the public. The main topics discussed at the workshop included an overview of the stormwater permit and management plan, required third year compliance practices, and a review of the third year annual report.

Litter Clean Up Events

Although four formal litter clean up events were organized by the MRWG Permittees, public education and outreach efforts at local elementary schools encouraged teachers and students to organize their own litter clean up events to help reduce stormwater pollution. As a result of Permittee education and outreach efforts, elementary school teachers and students from two (2) local schools took the initiative to independently coordinate their own litter clean up events. Over 212 students collected a total of 28 pounds of trash during the school litter clean up events.

The Town of Apple Valley and City of Victorville each organized two litter clean up events within their respective jurisdictions. Volunteers were provided with trash bags and event participation T-shirts to further promote the behavior of collecting trash and eliminating potential pollutants from entering the storm drain system. During the two Victorville clean up events a total of 6.9 tons of trash were collected. Numbers are unavailable for the two Apple Valley events.

3.2.2 Summary of BMPs

Public Involvement and Stakeholder Participation

The MRWG continued to work collectively with other area stakeholders to preserve water quality in the High Desert Region. Table 3.16 identifies the extent of involvement with each of the area stakeholders by attending regularly schedule meetings.

Table 3.16 Area Stakeholder Meetings Attended

Organization/Stakeholder	Meetings Attended			
	AV	H	V	SBC
Lahontan RWQCB Quarterly Stakeholder Meetings	4	4	0	0
Mojave Desert Resource Conservation District Meetings[1]	0	0	0	0
Mojave Water Agency Technical Advisory Committee Meetings	1	6	6	0
Alliance for Water Awareness and Conservation Meetings	4	4	0	0
San Bernardino County Flood Control District, Zone 4 Meeting	1	1	1	1
Victorville Water Management Ad Hoc Committee Meetings	0	0	0	0
Mojave River Watershed Permittee Meetings	10	11	11	11

[1] This organization did not have any scheduled meetings in Fiscal Year 2007-08.

Annual Public Workshop

Permittees attempted to successfully engage the public during this workshop to obtain helpful input on how to further involve the public in the implementation of the stormwater management program.

Litter Clean Up Events

As discussed in Section 3.1.3 and shown in Table 3.13, two (2) elementary schools independently organized school litter clean up events to keep the community clean in Spring 2008 and the Town of Apple Valley and City of Victorville each organized two clean up events.

3.2.3 Program Effectiveness

The overall effectiveness of MCM 2, Public Involvement and Participation, can be characterized as reaching Outcome Levels 1 and 2.

Public Involvement and Stakeholder Participation

Permittee involvement in the various stakeholder meetings has provided the MRWG with an opportunity to share information about the stormwater management efforts of the member agencies and has also fostered relationships with other stakeholder participants to jointly spread information about stormwater pollution prevention and permit compliance. Through stakeholder workshops and other public outreach efforts, Permittees have been able to connect the stormwater pollution message with other efforts within the watershed. These collaborative efforts can be viewed as raising the awareness and understanding of citizens, area stakeholders, and community leaders to further disseminate the stormwater pollution prevention message.

Annual Public Workshop

Community involvement through the Annual Public Workshop can be viewed as being effective and achieving Outcome Levels 1 and 2. Permittees issued press releases and distributed flyers to announce the 3rd Annual Public Workshop event. Members of the High Desert community, including residents, businesses, builders, industry representatives, and elected officials participated in the workshop to make it a success. It can be inferred that workshop participants gained a heightened sense of awareness and understanding as a result of actively participating in the workshop and providing input to the MRWG.

Litter Clean Up Events

As discussed in Section 3.1.3, there was an indirect benefit from the Malibu Foundation for Environmental Education elementary school presentations. These presentations raised the awareness of the target audience and resulted in a behavioral change observed by two elementary schools. This change in behavior produced a reduction in potential load sources by eliminating 28 pounds of litter that may have ended up in the MS4. A further reduction in potential load sources was realized by the four formal litter clean up events hosted by the MRWG member agencies.

3.2.4 Proposed Program Modifications

Recently proposed program modifications included revising SGA's scope of work to engage and involve the public and use existing business partnerships to increase public involvement and participation in sharing the stormwater pollution prevention message with others.

3.3 MCM 3 – Illicit Discharge Detection and Elimination

The goal of the Illicit Discharge Detection and Elimination (IDDE) Program is to detect, respond to, investigate and eliminate illicit discharges and illicit connections, and conduct enforcement so that the discharge of pollutants to the storm drain system is prevented, controlled, and mitigated to the MEP. Illicit discharges can be attributed to illegal dumping and non-stormwater discharges originating from illegal connections to the MS4. These discharges can potentially contain pollutants that may impact receiving water quality. The baseline objectives of this program are:

- Incidental spills, or disposal (including septic system failures, sanitary sewer leaks, or overflows) reported by the public or other agencies or observed by Permittee field staff during the course of their normal daily activities will be investigated, contained, and cleaned up.

- Prohibited non-stormwater discharges to the storm drain system reported by the public or other agencies or observed by Permittee field staff during the course of their normal daily activities will be eliminated through voluntary termination or enforcement action.

- Suspected prohibited non-stormwater discharges in the storm drain system reported by the public or other agencies or observed by Permittee staff during the course of their normal daily activities, that may result from illicit connections or whose origin is unknown, will be investigated to determine the nature and source of the discharge and eliminated through voluntary termination or enforcement action.

Table 3.17 provides an overview of the IDDE Program Fourth Year Measureable Goals and their status of completion.

Table 3.17 Illicit Discharge Detection and Elimination Program: Year 4 Measurable Goals								
BMP	**Description**	**Status**						
		Implemented	**Not Applicable**	**Modified**	**Effective**	**Unknown**	**Not Effective**
1	Increase public awareness of illicit discharges through the Public Education and Outreach and Public Involvement and Participation Programs.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		
2	The Permittees will implement and revise, as improvements are identified, the policies and procedures developed in the first three years. They will have an effective, enforceable program (ordinances, policies, or regulations) in place to detect and eliminate non-stormwater discharges (including illegal dumping) to the MS4. Evaluate if necessary, the 17 "categories of non-stormwater discharges" listed in the Permit, to determine if they are significant contributors of pollutants to the MS4.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.3.1 Implementation Status of Measureable Goals

The fourth year goals of MCM 3, Illicit Discharge Detection and Elimination, were reached in accordance with the SWMP. Program accomplishments included implementing an effective public education and outreach campaign to educate Mojave River Watershed residents about the impacts of illicit discharges and proper methods of household hazardous waste disposal, maintaining sufficient legal authority to enforce the goals of the IDDE program, conducting investigations of reported or observed illicit discharges, and following through with enforcement actions when appropriate.

Increase Public Awareness of IDDE

The MRWG was able to effectively increase public awareness of illicit discharges through the implementation of the Public Education and Outreach Program described in Section 3.1.1. The education and outreach activities conducted through MCM 1 included the distribution of educational brochures and other handouts that contained messages about the improper disposal of materials and non-stormwater discharges to the storm drain system. These educational materials also referenced the MRWG website, where citizens can report observed water pollution activities and retrieve additional information on pollution prevention practices. Educational materials also included the watershed's 1-800-CLEANUP hotline number for the general public to report spills and other discharges. Efforts conducted under MCM 2 also helped to spread the message about eliminating illicit discharges and illegal dumping.

IDDE Implementation and Procedures

The Mojave River Watershed can be characterized as a region with soils that rapidly infiltrate urban and stormwater runoff. In addition, the region's requirement for developed properties to retain stormwater runoff from a 100-year storm event prevents spills and other non-stormwater discharges from ever reaching the MS4. As a result of these typical conditions found throughout the watershed, a limited number of illicit discharges have been detected by the MRWG member agencies.

However, for those instances when an illicit discharge or connection is detected, the MRWG has developed effective policies and procedures to prevent and manage the discharge of pollutants to the storm drain system. These include a comprehensive public education and outreach program, field investigations, complaint responses, incident response and tracking, enforcement, and municipal staff training. Permittees respond, report, and monitor all identified illegal discharges and the County of San Bernardino continues to operate a 24-hour water pollution reporting hotline, 1-800-CLEANUP, and a website reporting system.

The County also has an established partnership with "We Tip" to encourage citizens to turn in illegal dumpers by calling 1-800-78-CRIME. **"**We Tip" is a national nonprofit organization, staffing operators to take anonymous tips from all states within the United States, including Puerto Rico and the Virgin Islands. A $25,000 reward program is setup to reward individuals that provide information leading to the arrest and conviction of illegal dumpers.

As a preventative measure, the public education and outreach program and MRWG website promote and encourage Mojave River Watershed residents to utilize the various household hazardous waste collection sites located throughout the watershed. The household hazardous waste collection program provides residents with a legal and cost-effective way to dispose of unwanted household chemicals that cannot be disposed with regular trash.

The Apple Valley Ranchos Water Company has also been a valuable partner to the MRWG in mitigating urban runoff pollution. As part of their service, they conduct exterior water audits, which include providing irrigation system checks for possible "gutter-flooding". Additionally, they review or develop irrigation schedules to mitigate "gutter-flooding." Another aspect of their water audit is to determine if there are any unauthorized water uses through their water waste prohibition mandate, which discourages the wasteful use of water and promotes the use of water saving devices.

IDDE Legal Authority

The MRWG member agencies have adequate legal authority through existing municipal codes and ordinances to implement and enforce the IDDE Program and mitigate illicit discharges such as illegal dumping, recreational sewage, industrial/business connections, non-stormwater discharges, and sanitary sewer overflows.

Evaluation of 17 Categories of Non-Stormwater Discharges

Based on the limited number of illicit discharges identified in the Mojave River Watershed and a simple review of the 17 categories of non-stormwater discharges, the MRWG has confidently determined that these categories pose minimal risk to receiving water quality. In fact, most of these non-stormwater discharges are recognized as exempt discharges under Phase I NPDES Municipal Stormwater Permits.

3.3.2 Summary of BMPs

Increase Public Awareness of IDDE

A detailed summary of the BMPs implemented under MCM 1, Public Education and Outreach, and MCM 2, Public Involvement and Participation, are described in Sections 3.1.2 and 3.2.2, respectively. These educational activities included elementary school newsletter articles about stormwater pollution prevention, community event booths with displays conveying proper disposal of trash and household hazardous waste, outreach materials distributed at business locations which listed locations of household hazardous waste centers and encouraged proper disposal of potential pollutants, interactive school presentations on stormwater pollution and the impact that human actions have on the environment, and available resources on the MRWG website. Many of these educational activities incorporated a pointed message about illicit discharges and the impacts that they have on the environment.

IDDE Implementation and Procedures

Table 3.18 documents the number of illicit discharges reported and investigated by each MRWG member agency and the results of each recorded incident.

Table 3.18 Illicit Discharges Reported and Resolved

Permittee	Illicit Discharges Reported	Illicit Discharges Resolved[1]	Resulted in Enforcement Action
Town of Apple Valley	905	10	0
City of Hesperia	169	145	10
City of Victorville	687	324	95
County of San Bernardino	1	1	0

[1] Member agencies are unable to resolve all illicit discharges because at times the discharger is unknown and cannot be easily identified. For example, illegal dumping on a vacant lot.

The Mojave River Watershed has four (4) household hazardous waste collection centers, Table 3.19, for residents to properly dispose of their unwanted medications, paint, used motor oil, antifreeze, automotive batteries, lawn care products, drain cleaners, pool care products, and household cleaners.

Table 3.19 Household Hazardous Waste Collection Centers

Name Location	City/Area	Days of Operation	Times Open
Apple Valley 22411 Highway 18	Apple Valley	1st & 3rd Saturday	10 am to 2 pm
City of Barstow Corporation Yard 900 South Avenue H	Barstow	Saturdays	9 am to 2 pm
Hesperia Fire Station 17443 Lemon Street	Hesperia	Tuesday & Thursday Saturday	9 am to 1 pm 9 am to 3 pm
Victorville Fire Department East of Desert Knoll Dr. on Loves Ln.	Victorville	Wednesday & Sunday	9 am to 4 pm

IDDE Legal Authority

Table 3.20 highlights the municipal codes and ordinances which MRWG member agencies use to implement and enforce the procedures of the IDDE Program.

Table 3.20 Codes and Ordinances for IDDE Program

Permittee	Municipal Codes and Ordinances
Apple Valley	§6.20 Solid Waste Regulations §6.30 Nuisances §6.40 Water Conservation Plan
Hesperia	§8.04 Garbage and Refuse Collection and Disposal §8.08 Hazardous Materials §8.32 Public Nuisances §8.32.010 Trash and Debris §8.32.030 Health and Safety §8.32.040 Property Maintenance §14.40 Water Conservation Emergency Plan §14.50 Wastewater Discharge Regulations §16.40 Hillside Development Regulations §17.48 Lot Requirements Hesperia Water District Ord. 25 Public and Private Wastewater Facilities
Victorville	§6.44 Refuse §6.49 Hazardous Materials Release §8.06 Cost Recovery §10.06 Food Establishment Grease Disposal §13.39 Scrap Tires §15.36 Construction Site Maintenance and Trash Containment
County of San Bernardino	§35.0101-35.0132 Pollutant Discharge Elimination System Regulations

Evaluation of 17 Categories of Non-Stormwater Discharges

Permittees have concluded that no additional BMPs will be implemented to address non-stormwater discharges from the following 17 categories, since they have been determined to pose minimal risk to receiving water quality:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated groundwater infiltration
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges

3.3.3 Program Effectiveness

The overall effectiveness of MCM 3, Illicit Discharge Detection and Elimination, was assessed at Outcome Levels 1, 2, 3, and 4.

Increase Public Awareness of IDDE

The MRWG was able to effectively increase the public's awareness and understanding of illicit discharges and their associated impacts to water quality through the implementation of various public education and outreach methods described in Sections 3.1.1, 3.2.1, and 3.3.1. The outreach efforts connected with the IDDE Program were determined to be at Outcome Levels 1, 2, 3, and 4. The Outcome Levels achieved for the public awareness component of the IDDE Program is confirmed through the documentation of outreach materials distributed to Mojave River Watershed residents and businesses, improved level of awareness as a result of one-on-one interactions during community and tabling events, signed commitment letters from pet owners pledging to change their behavior and pick up after their pets, and reduced loads as a result of residents properly disposing their household hazardous waste at designated collection centers. In addition, the MRWG website and 1-800-CLEANUP and 1800-78-CRIME hotlines supplemented the outreach materials distributed and assisted in raising public awareness while facilitating the public's ability to reduce pollutant loads by reporting illicit discharges and dumping to the Permittees.

IDDE Implementation and Procedures

A limited number of illicit discharges have been detected by the MRWG member agencies. Due to the advantageous site conditions found throughout the watershed, where properties have onsite retention or detention facilities and dry wells, IDDE is more focused on illegal dumping and the occasionally observed or reported nuisance flow that makes it off a given property.

Program effectiveness Outcome Levels 1, 2, 3, and 4 have been attained through the implementation of the IDDE Program. MRWG member agencies have documented the number of suspected illicit discharge inspections conducted and resolved, established and maintained a hotline and website for reporting water pollution, identified problem areas with a storm drain map detailing the watershed's high risk threat zones, tracked the number of illegal discharge clean ups, and recorded the training of inspectors and responders, see Table 3.21. In addition, member agencies such as the County of San Bernardino have gone beyond the requirements of the Phase II Small MS4 General Permit to include the inspection of County Unincorporated areas outside the permit boundary for the purpose of IDDE.

Table 3.21 Illicit Discharges Detection and Elimination Related Training

Permittee	Number of Personnel Trained
Town of Apple Valley	3
City of Hesperia	0
City of Victorville	14
County of San Bernardino[1]	22

[1] Six (6) inspectors are PC-832 code enforcement certified.

Although a moderate number of illicit discharge complaints were received, it is understood that the MRWG effectively raised public awareness about illicit discharges and illegal dumping. Permittees assume that the low number of recorded complaints via the website and hotlines, and moderate numbers by residents and Permittee staff during the course of their normal daily activities are a result of post-construction BMPs infiltrating urban and stormwater runoff onsite prior to reaching the MS4.

Table 3.22 Illicit Discharge Complaints Received	
Medium through which Complaints were received	**Number of Complaints**
1-800-CLEANUP Hotline	0
1-800-78-CRIME "We Tip" Hotline	0
MRWG Website	0
Permittee Staff	447
Resident Complaints	1,106

A change in public behavior and source load reduction has been identified through the number of residents making use of the household hazardous waste collection centers. Table 3.23 documents the amount of materials collected and prevented from entering the MS4.

Table 3.23 Quantity of Materials Collected at Household Hazardous Waste Centers	
Household Hazardous Waste Collection Center Location	**Quantity of Materials Collected (Tons)**
Apple Valley 22411 Highway 18	87.5
City of Barstow Corporation Yard 900 South Avenue H	48.4
Hesperia Fire Station 17443 Lemon Street	115.6
Victorville Fire Department East of Desert Knoll Drive on Loves Lane	103.8
TOTAL	355.3

IDDE Legal Authority

Program effectiveness Outcome Level 1 was achieved for this measureable goal. Permittees conducted a review of existing municipal codes and ordinances to confirm adequate legal authority to enforce the requirements of the IDDE Program. As a result of these reviews, all MRWG member agencies determined that no changes were necessary to the existing codes and ordinances to effectively implement the IDDE Program.

Evaluation of 17 Categories of Non-Stormwater Discharges

Permittees deem the current IDDE Program effective and consider the inclusion of the 17 non-stormwater discharge categories unnecessary.

3.3.4 Proposed Program Modifications

Proposed program modifications include conducting surveys to measure the level of citizen awareness with regards to the 1-800-CLEANUP and 1-800-78-CRIME "We Tip" hotlines and other illicit discharge reporting mechanisms to better interpret the low number of illicit discharge complaints received.

3.4 MCM 4 – Construction Site Stormwater Runoff Control

The purpose of the Construction Site Stormwater Runoff Control Program is to reduce pollutants from construction activities that result in a land disturbance of greater than or equal to one acre.

The MRWG SWMP includes the development and implementation of program elements to:

- Ensure adequate legal authority to require erosion and sediment controls on construction sites;
- Review project plans to confirm the incorporation of temporary BMPs to address potential water quality impacts during construction;
- Require construction site operators to implement appropriate erosion and sediment control BMPs;
- Require construction site operators to manage construction wastes to prevent adverse impacts to water quality; and
- Conduct construction site inspections and enforce the application of control measures to effectively reduce the transport of pollutants from the construction site to the storm drain system.

Table 3.24 provides a summary of Permittee implementation for the Construction Site Stormwater Runoff Control Program Fourth Year Measureable Goal.

Table 3.24 Construction Site Stormwater Runoff Control Program: Yr. 4 Measurable Goal

BMP	Description	Status					
		Implemented	Not Applicable	Modified	Effective	Unknown	Not Effective
1	Review the construction site stormwater runoff control program, emphasizing the inspection, monitoring, and enforcement metrics for effectiveness. Modify the program as required to comply with the Permit.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.4.1 Implementation Status of Measureable Goal

The fourth year measureable goal for MCM 4, Construction Site Stormwater Runoff Control Program, was accomplished by the Permittees through the implementation of construction site inspections, monitoring, and enforcement consistent with the effectiveness metrics developed in year one of the program.

Actions taken by Permittees to implement the Construction Site Stormwater Runoff Control Program included reviewing construction plans and issuing grading permits consistent with local requirements and ordinances, conducting routine and follow up inspections of construction sites to ensure proper implementation and maintenance of BMPs and compliance with local requirements, proceeding with enforcement actions for sites in violation of local requirements, providing regular training and outreach for construction staff and contractors and municipal inspectors, and maintaining a tracking system of construction sites.

Construction Site Inspections and Monitoring

Permittees made periodic site inspections during the course of a construction project to ensure compliance with codes and ordinances. Permittee inspectors verified at project commencement the proper installation and maintenance of BMP control measures throughout the construction phase of the project. Supplemental inspections were performed by the Permittees in response to complaints received from citizens and referrals from other internal departments or intergovernmental enforcement agencies on issues related to stormwater quality.

Correction and Enforcement Actions

Permittees have issued Notices of Correction on a number of construction projects. Common deficiencies observed include the inadequate and/or improper selection and maintenance of BMPs, improper storage of materials outdoors, failure to install proper secondary containment to capture spills that may occur, outdoor washing without containment of wash water, failure to cover stock piles, and deferred BMP maintenance. MRWG Permittee inspectors have developed good working relationships with construction site operators to quickly address areas of concern without having to resort to more extreme measures such as enforcement actions or referral to the Lahontan RWQCB.

3.4.2 Summary of BMPs

Construction Site Inspections and Monitoring

To get a sense of the size of the Permittee construction programs, Table 3.25 shows the number of construction sites issued a grading permit and the relative sizes of the projects.

Table 3.25 Number of Grading Permits Issued and Project Sizes

Permittee	Grading Permits Issued	Construction Projects > 1 Acre	Construction Projects < 1 Acre
Town of Apple Valley	5,312	4,776	536
City of Hesperia	101	31	70
City of Victorville	1,486	76	1,410
County of San Bernardino	203	1	202

Table 3.26 illustrates the number of construction site inspections performed by each Permittee in compliance with MCM 4, Construction Site Stormwater Runoff Control Program, for projects greater than one acre in size.

Table 3.26 Number of Construction Sites Inspected	
Permittee	**Number of Inspections**
Town of Apple Valley	8,797
City of Hesperia	551
City of Victorville	423
County of San Bernardino[1]	0

[1] Zero inspections were necessary within the Permit boundary. However, two (2) inspections were performed in Unincorporated County areas outside the permit boundary and another 13 inspections were conducted in the Lake Arrowhead/Running Springs area following BMP installations in the fire damaged mountain area.

It is important to train inspectors and other municipal staff to perform comprehensive inspections of construction sites to ensure that construction activities do not result in adverse impacts to water quality. It is equally important to train local contractors, builders, and developers on the proper installation and maintenance of BMPs to eliminate non-stormwater discharges and reduce the impacts of erosion and sediment with site appropriate controls. On February 13, 2008, City and County inspectors attended the Construction BMP Workshop. The workshop was organized by the San Bernardino County Stormwater Program and covered inspection procedures, a field demonstration of proper construction BMP installation and maintenance, post-construction BMP inspections, and requirements for the next generation of permits. Table 3.27 highlights the number of municipal staff who received training in Fiscal Year 2007-08 and the number of construction site operator training sessions made available.

Table 3.27 Construction Site Stormwater Runoff Control Training		
Permittee	**Municipal Staff Trained**	**Construction Site Operator Trainings Made Available**
Town of Apple Valley	3	1
City of Hesperia	2	0
City of Victorville	0	0
County of San Bernardino	4	1

Correction and Enforcement Actions

Although Notices of Correction have been issued on numerous projects, Permittee inspectors have worked closely with construction owners and operators to resolve deficiencies in a prompt manner to prevent polluted discharges for construction sites. Table 3.28 summarizes the number of Notices of Correction issued and the number of projects requiring enforcement action as a result of non-compliance.

Table 3.28 Notices of Correction and Enforcement Actions		
Permittee	**Notices of Correction**	**Enforcement Actions**
Town of Apple Valley	10	0
City of Hesperia	358	0
City of Victorville	0	0
County of San Bernardino[1]	0	0

[1] Two (2) Notices of Correction were issued for projects outside the Permit boundary. In both instances the deficiencies were adequately addressed and no enforcement actions were necessary.

3.4.3 Program Effectiveness

Program effectiveness for MCM 4, Construction Site Stormwater Runoff Control, was assessed at Outcome Levels 1, 2, and 3.

Construction Site Inspections and Monitoring

A large portion of the construction program is typically focused on site inspections that can serve as the basis for establishing baselines regarding how the sites are operating, what pollutants are of concern, and the level of BMP implementation and maintenance. In turn, follow-up inspections can be used to track changes and ensure that the sites are properly implementing and maintaining their BMPs.

MRWG Permittees have effectively achieved Outcome Levels 1, 2, and 3. Construction programs have documented and maintained adequate legal authority to enforce the Construction Site Stormwater Runoff Control Program, tracked the number of grading permits issued and construction sites inspected, and maintained records of training sessions attended by municipal staff and construction site operators. These training sessions have raised the awareness and understanding of impacts associated with construction site activities on the receiving water body and routine inspections have also served to reinforce the level of awareness necessary to install and maintain appropriate BMPs at construction sites. A change in behavior is inferred due to the number of construction sites complying with the Construction General Permit requirements and adequately implementing and maintaining BMPs to reduce and control erosion, sediment, and non-stormwater discharges from construction sites. In addition, up front reviews of project specific Storm Water Pollution Prevention Plans (SWPPPs) provide plan checkers with an opportunity to communicate with construction site operators to raise their level of awareness with regards to the proper installation and maintenance of stormwater BMPs.

Correction and Enforcement Actions

As a result of Notices of Correction and Enforcement Actions, Permittees have effectively achieved Outcome Levels 1 and 2 for this portion of the Construction Site Stormwater Runoff Control Program. Permittees have previously documented adequate enforcement policies and mechanisms to issue Notices of Correction and Enforcement Actions to influence a change in behavior at deficient construction sites. By recording the number of Notices of Correction and Enforcement Actions taken over the last Fiscal Year, Permittees have effectively documented their activities to achieve Level 1 status. By working closely with construction site operators to correct BMP shortcomings, Permittees have been able to increase the level of awareness amongst these problematic construction site owners and operators.

3.4.4 Proposed Program Modifications

Permittees are implementing an effective Construction Site Stormwater Runoff Control Program and have good working relationships with construction site operators to promptly address project site deficiencies should a concern arise. One area of proposed program enhancement is to continue regular staff training for construction site inspection since the draft Construction General Permit proposes many new requirements.

3.5 MCM 5 – Post-Construction Stormwater Management in New Development and Redevelopment

The purpose of the Post-Construction Stormwater Management in New Development and Redevelopment Program is to minimize potential adverse impacts to water quality from development projects by incorporating site planning, post-construction controls (site design, source control, and treatment control BMPs), and long-term maintenance agreements.

The goal of this Program is to assure that appropriate post-construction BMPs are included in New Development and Redevelopment project plans to minimize impacts from urban and stormwater runoff on the receiving water body. Permittees currently have a system in place to address urban and stormwater runoff by using post-construction BMPs such as retention and detention basins incorporated into the project site. These devices function to control stormwater volume and improve water quality by settling out particulates and other pollutants of concern.

Table 3.29 provides the status of implementation of the Post-Construction Stormwater Management in New Development and Redevelopment Program for the fourth year Measureable Goal.

Table 3.29 Post-Construction Stormwater Management in New Development and Redevelopment Program: Year 4 Measurable Goal

BMP	Description	Status					
		Implemented	Not Applicable	Modified	Effective	Unknown	Not Effective
1	Implement and revise ordinances and policies.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.5.1 Implementation Status of Measureable Goal

The fourth year measurable goal for MCM 5, Post-Construction Stormwater Management in New Development and Redevelopment, was to implement and revise ordinances and policies. Permittees successfully accomplished this goal by requiring project proponents to submit engineering and grading plans which incorporated structural and non-structural BMPs appropriate for the High Desert communities, contracting with qualified consultants to provide professional services to review plans, inspect BMP installation, and ensure compliance with the post-construction program, and assessing ordinances and policies to verify adequate legal authority and guidelines to achieve the requirements of the Small MS4 General Permit.

Post-Construction Stormwater Management Implementation

Permittees are currently conditioning new development and redevelopment projects to submit engineering and grading plans which incorporate post-construction controls (site design, source control, and treatment control BMPs) and long-term maintenance agreements to mitigate urban and stormwater runoff after a developer has completed a project. MRWG member agencies are using discretionary approval and placing conditions on developments to require the incorporation of post-construction BMP controls. In addition, flood damage prevention ordinances that place requirements on new construction also help with conditioning projects to mitigate post-development urban and stormwater runoff. These ordinances seek to limit peak discharges from new developments by retaining and infiltrating stormwater onsite. These devices function to control stormwater volume and improve water quality by settling out particulates and other pollutants of concern.

To improve awareness of the post-construction requirements, the County of San Bernardino organized a workshop for project planners. The August 29, 2007 workshop was attended by 56 individuals consisting of developers, engineers, consultants, City and County planners, Building and Safety officials, and RWQCB staff. Workshop topics covered included the use of LID control measures and Water Quality Management Plan (WQMP) implementation procedures and challenges.

Ordinance and Policy Revisions

Permittees have adequate legal authority through existing municipal codes and ordinances to implement and enforce the Post-Construction Stormwater Management in New Development and Redevelopment Program. Previous ordinances were enacted to promote water conservation which also prevents excessive discharges of nuisance water. Existing landscape ordinances attempt to prepare for the area's growing water needs and aim to eliminate sprinkler runoff from filing retentions.

The City of Hesperia is in the process of updating its General Plan. Updates may produce changes to development codes, have certain LID provisions, and require addition BMPs for stormwater management.

3.5.2 Summary of BMPs

Post-Construction Stormwater Management Implementation

Table 3.30 shows the number of projects meeting the threshold for post-construction BMP requirements and implementing control measures.

Table 3.30 Number of Projects Implementing Post-Construction BMPs	
Permittee	**Number of Projects**
Town of Apple Valley	27
City of Hesperia	Unknown[1]
City of Victorville	7
County of San Bernardino[2]	0

[1] City of Hesperia requires post-construction BMPs under several different codes and ordinances but the number of actual projects implementing post-construction BMPs was not available at the time of reporting.
[2] No projects existed within the permit boundary that would have triggered post-construction BMP requirements.

Table 3.31 provides the number of Permittee staff and private industry personnel trained on the selection and implementation of post-construction BMPs and LID strategies.

Table 3.31 Number of Personnel Trained on Post-Construction BMP Implementation	
Permittee/Private Industry	**Personnel Trained**
Town of Apple Valley	3
City of Hesperia	3
City of Victorville	0
County of San Bernardino	22
Private Industry	15

Ordinance and Policy Revisions

Table 3.32 highlights the municipal codes and ordinances which MRWG member agencies use to implement and enforce the Post-Construction Stormwater Management in New Development and Redevelopment Program.

Table 3.32 Codes and Ordinances for Post-Construction Stormwater Management in New Development and Redevelopment Program	
Permittee	**Municipal Codes and Ordinances**
Apple Valley	§6.40 Water Conservation Plan §9.37 Commercial and Office Districts Design Standards §9.71 Subdivision Regulations §9.75 Water Conservation/Landscaping Regulations
Hesperia	§8.28 Flood Hazard Protection Regulations §16 Development Code, Article XII Landscape Regulations §16.24 Protected Plants §16.32 Planned Developments §16.40 Hillside Development Regulations §17.04.060 Subdivision Design and Improvement Standards §17.48 Lot Requirements §17.48.070 Alternative Lot Design and Grading Standards Hesperia Water District Code §14.38 Wasting Water Resolution 89-16 Prevention of Flood Damage
Victorville	§13.60 Water Conservation §15.20 Flood Damage Prevention §17.36 Parcel Map §18.46 FP-Conservancy and Flood Plain District
County of San Bernardino	§82.14 Flood Plain Safety Overlay §83.08 Hillside Grading Standards §83.10 Landscaping Standards §83.11 Parking and Loading Standards §83.15 Conditional Compliance for Water Quality Management Plans §85.11 Pre-Construction Flood Hazard Inspection §88.02 Soil and Water Conservation

3.5.3 Program Effectiveness

Overall, the assessed program effectiveness for MCM 5, Post-Construction Stormwater Management in New Development and Redevelopment, was at Outcome Levels 1, 2, 3, and 4.

Post-Construction Stormwater Management Implementation

Implementation of MCM 5, Post-Construction Stormwater Management in New Development and Redevelopment, has been assessed at Outcome Levels 1, 2, 3, and 4. Permittees have documented the appropriate legal authority to enforce the requirements of this MCM and noted the number of projects conditioned for the incorporation of post-construction BMPs. Permittees have actively targeted planners, engineers, landscape architects, and the development community to put on focused trainings to educate project proponents on the use of post-construction BMPs and LID strategies to mitigate urban and stormwater runoff. This concentrated effort has resulted in a greater awareness of BMP options and MCM 5 requirements. The Post-Construction Stormwater Management in New Development and Redevelopment Program has demonstrated an effective change in behavior from the way developers constructed projects to now incorporating post-construction BMPs. Although pollutant load reduction quantities, as a result of post-construction BMPs installed on project sites, have not been assessed it can be concluded that these BMPs are making a positive impact in reducing pollutant loads to the storm drain system.

Ordinance and Policy Revisions

Program effectiveness Outcome Level 1 was achieved for this portion of the measureable goal. Permittees conducted a review of existing municipal codes and ordinances to confirm adequate legal authority to enforce the requirements of the Post-Construction Stormwater Management in New Development and Redevelopment Program. As a result of these reviews, all MRWG member agencies determined that no changes were necessary to the existing codes and ordinances to effectively implement the program.

3.5.4 Proposed Program Modifications

Permittees propose to modify the Post-Construction Stormwater Management in New Development and Redevelopment Program by developing a unified WQMP procedure that applies to all MRWG member agencies. Enforcing consistent requirements throughout the region will aid in program implementation and ensure a level playing field across for all Permittees.

3.6 MCM 6 – Pollution Prevention and Good Housekeeping for Municipal Operations

Municipalities conduct various activities that can generate or mobilize pollutants in stormwater runoff. The purpose of the Pollution Prevention and Good Housekeeping for Municipal Operations Program is to reduce pollutants from these operations and maintenance activities (e.g. small construction improvement projects, street sweeping, storm drain cleaning, corporation yard operation, etc.) through the development and implementation of good housekeeping, BMPs, and activity specific stormwater pollution prevention training.

Pollution prevention and good housekeeping practices are critical to maintaining progress and achieving continued improvement in water quality. Permittees have developed a pollution prevention and good housekeeping program that requires employees to examine and subsequently alter their actions to reduce the type and amount of pollution. Recognizing the benefits of pollution prevention practices, the MRWG has developed this program based on the following goals:

- Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm drain system;
- Integrate pollution prevention and good housekeeping practices training into municipal employee training programs; and
- Implement the appropriate BMPs to mitigate urban and stormwater runoff pollution.

Implementation status of the Pollution Prevention and Good Housekeeping for Municipal Operations Program Fourth Year Measureable Goal is summarized below in Table 3.33.

Table 3.33 Pollution Prevention and Good Housekeeping for Municipal Operations Program: Year 4 Measurable Goal

BMP	Description	Status					
		Implemented	Not Applicable	Modified	Effective	Unknown	Not Effective
1	Reevaluate municipal stormwater training programs to ensure that they are consistent with the current ordinances, BMPs, etc. based on feedback from the inspection/monitoring/enforcement program. Target the audience and schedule training for the following year.	**Town of Apple Valley**					
		✓			✓		
		City of Hesperia					
		✓			✓		
		City of Victorville					
		✓			✓		
		County of San Bernardino					
		✓			✓		

3.6.1 Implementation Status of Measureable Goal

Program accomplishments to satisfy the fourth year measurable goal included evaluating routine municipal operations to identify possible stormwater pollutants associated with specific work activities in order to focus good housekeeping and pollution prevention training on these areas of concern. To find municipal stormwater training programs suitable for the MRWG, several training materials from the USEPA, State of California, and other organizations were collected and evaluated.

Municipal Training Program Evaluation

Permittees assessed the current methods and materials used to train municipal employees to ensure that training programs were comprehensive, covered all applicable BMPs, and complied with the requirements of the Small MS4 General Permit. Current training materials used met the requirements of the permit and provided municipal staff with adequate training to perform their duties in a manner that reduces the potential to discharge pollutants of concern to the storm drain system.

Training materials used included Microsoft PowerPoint presentations, videos, BMP manuals, brochures, booklets, and in the field hands on training. Training programs provided to municipal operations staff covered the following topics:

- BMPs for the daily duties of a municipal employee
- Pollution Prevention
- Good housekeeping
- Stormwater compliance rules and regulations
- Spill reporting procedures
- Outdoor storage of materials
- Vehicle and equipment maintenance

In addition to the office and job site training sessions, municipal staff regularly attended CASQA meetings and seminars to further their knowledge of pollution prevention and good housekeeping practices. For a portion of the Fiscal Year, County of San Bernardino municipal employees utilized an online training program which unfortunately is no longer available.

3.6.2 Summary of BMPs

Table 3.34 briefly summarizes the number of municipal operations staff trained in Fiscal Year 2007-08.

Table 3.34 Number of Staff Trained for Municipal Operations

Permittee	Number of Staff Trained
Town of Apple Valley	3
City of Hesperia	3
City of Victorville	1
County of San Bernardino	16

3.6.3 Program Effectiveness

Effectiveness Outcome Levels 1, 2, and 3 were measured for MCM 6, Pollution Prevention and Good Housekeeping for Municipal Operations.

Municipal Training Program Evaluation

Documented municipal training programs were determined to increase the knowledge of municipal staff. As a result municipal staff used good judgment and appropriate housekeeping measures while performing municipal operations. This higher level of comprehension and change in behavior by municipal operations staff facilitated the use of site appropriate BMPs and pollution prevention techniques to minimize impacts to receiving water quality.

3.6.4 Proposed Program Modifications

Proposed program modifications include conducting pre- and post-training surveys of municipal staff to establish baseline information on current knowledge and practices in order to develop future training that is tailored to addressing identified weaknesses.

4.0 Goals and Activities Planned for Fiscal Year 2008-09

In Fiscal Year 2008-09 the MRWG will review the overall implementation of the SWMP and effectiveness of the stormwater program developed. Anticipated goals and activities will include:

- Distribution of brochures to all homeowners and final development of an educational website.
- Effectiveness evaluation of the Homeowner Education and Outreach Program based on the findings of the other MCMs and focus the program in areas that promise the greatest opportunity to improve stormwater quality.
- Effectiveness evaluations of the Business Outreach Program based on the findings of the other MCMs and focus the program in the areas that promise the greatest opportunity to improve stormwater quality.
- Effectiveness evaluation of the Public Involvement and Participation Programs that the Permittees have become involved in to determine necessary adjustments to the current programs or if new programs should be initiated.
- Implementation of the Illicit Discharge Detection and Elimination Program and revision of the policies and procedures developed in the first three to four years.
- If necessary, evaluation of the 17 "categories of non-stormwater discharges" listed in the Permit, to determine if they are significant contributors of pollutants to the MS4.
- Review and amend the Construction Site Stormwater Runoff Control Program inspection, monitoring, and enforcement metrics for effectiveness.
- Implementation and revision of ordinances and policies for Post-Construction Stormwater Management in New Development and Redevelopment.
- Train Permittee employees in pollution prevention and good housekeeping for municipal operations.

5.0 Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Town of Apple Valley

Signature of Permittee (legally responsible representative)	Date signed
Brad Miller, P.E.	Town Engineer
Name (Please print)	Title

City of Hesperia

Signature of Permittee (legally responsible representative)	Date signed
Tom Thornton	Senior Engineer
Name (Please print)	Title

City of Victorville

Signature of Permittee (legally responsible representative)	Date signed
John A. McGlade	City Engineer
Name (Please print)	Title

County of San Bernardino

Signature of Permittee (legally responsible representative)	Date signed
Mazin Kasey, P.E.	Assistant Director
Name (Please print)	Title

6.0 MRWG Member Agency Contact Information

The following is contact information for each of the MRWG Member Agencies:

Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Contact Person: Mark Abbott
Contact Phone No.: (760) 240-7000 ext. 7353

City of Hesperia
9700 Seventh Avenue
Hesperia, CA 92345

Contact Person: Tom Thornton
Contact Phone No.: (760) 947-1000

City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001

Contact Person: Helen Wilson
Contact Phone No.: (760) 955-5158

County of San Bernardino
825 E. Third Street
Second Floor, Room 201
San Bernardino, CA 92415-0835

Contact Person: Dan Ilkay
Contact Phone No.: (909) 387-8119

APPENDIX A – Outreach Material Samples

Tear Sheets

Muy Tóxico Para Tirar a La Basura

Deshágase de Desperdicios Tóxicos del Hogar de la Manera Correcta.

Ejemplos de artículos que son colectados:
pesticidas - fertilizantes - pinturas - limpiadores - cloro - productos de limpieza para drenajes - productos de aerosol enlatados - pulidores para muebles - desodorantes - productos para eliminar hierbas - anticongelantes - baterías de mercurio - aceite para motor

- No se aceptarán desperdicios tóxicos de negocios

CENTROS de RECOLECCIÓN de DESPERDICIOS TÓXICOS del HOGAR:

APPLE VALLEY
22411 Highway 18
Horario: 1° y 3° sábado del mes, de 10 a.m. a 2 p.m.

BARSTOW - City of Barstow Corporation Yard
900 South Avenue 'H'
Horario: sábados, de 9 a.m. a 2 p.m.

HESPERIA - Hesperia Fire Station
17443 Lemon Street
Horario: martes y jueves, de 9 a.m. a 1 p.m. y sábados, de 9 a.m. a 3 p.m.

VICTORVILLE - Victorville Fire Department
al este de Desert Knoll Drive sobre Loves Lane
Horario: miércoles y domingo, de 9 a.m. a 4 p.m.

Para mas información llame al (800) CLEAN UP o visite www.cleanup.org

Too Toxic to Trash

Take Your Household Hazardous Waste to a Collection Center Near You.

Examples of items collected:
pesticides - fertilizers - paints - cleaners - bleach - drain cleaner - furniture polish - deodorizers - aerosol - weed killers - antifreeze - pool chlorine - batteries - motor oil

- No Business Waste Accepted

HOUSEHOLD HAZARDOUS WASTE COLLECTION CENTER LOCATIONS:

APPLE VALLEY
22411 Highway 18
Hours: 1st & 3rd Saturday of each month, 10 a.m. to 2 p.m.

BARSTOW - City of Barstow Corporation Yard
900 South Avenue 'H'
Hours: Saturdays, 9 a.m. to 2 p.m.

HESPERIA - Hesperia Fire Station
17443 Lemon Street
Hours: Tuesdays & Thursdays, 9 a.m. to 1 p.m. and Saturdays, 9 a.m. to 3 p.m.

VICTORVILLE - Victorville Fire Department
East of Desert Knoll Drive on Loves Lane
Hours: Wednesdays & Sundays, 9 a.m. to 4 p.m.

For additional information call (800) CLEAN UP or visit www.cleanup.org

Pesticide, Paint, and Fertilizer Tip Cards

Pesticide, Paint, and Fertilizer Shelf Talkers

Posters


TOO
TOXIC
TO
TRASH
Recycle paint and other household hazardous waste.
Find out how to take unwanted paints, cleaners, pesticides and more to a FREE Household Hazardous Waste Collection facility near you.
800-CLEANUP
ww.cleanup.org


Pick Up After Your Pooch to Curb Pollution.
Maybe you weren't aware, but dog waste left on the ground gets into storm drains, polluting rivers, lakes and beaches.
The bacteria and risk of disease threatens the health of our kids and communities. Wherever you live in San Bernardino County, this pollution is a problem. The answer? Pick up after your dog, to help prevent pollution and protect our health. It's in your hands.
MOJAVE RIVER WATERSHED GROUP
www.cleanup.org

APPENDIX B – Meeting Sign-in Sheets

Mojave River Watershed Group - Sign-In Sheet	
Committee Meeting	**Meeting Date:** 7/26/07
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Dan Ilkay	SB County
Brian Gengler	Victorville
Tina Souza	Hesperia
MARK ABBOTT	APPLE VALLEY
ATHAR KHAN	RWQCB – Lahontan Region
CINDI MITTON	" "

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	**Meeting Date:** 8/23/07
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Terry Moran	Environmental Compliance
Johnny Salazar	Environmental Compliance
Luis Guardado	San Bernardino County BNS
Tina Souza 760. 947. 1474	City of Hesperia
Brian Gengler 760. 955. 5000	City of Victorville
Dan Ilkay 909. 387- 8119	County of San Bernardino
MARK ABBOTT 760. 240. 7000	TOWN OF APPLE VALLEY
ATHAR KHAN	RWQCB Lahontan Reg.

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	**Meeting Date:** 9/27/07
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Dan Ilkay	G. of SB
Brian Gengler	Victorville
Mark Abbott	Apple Valley
Tina Souza	Hesperia
Athar Khan	Lohontan RWQCB
Jeniel Cass	CARWQCB

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	**Meeting Date:** 10/25/07
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Dan Ilkay	County of San Bern.
Brian Gengler	Victorville
Tina Souza	Hesperia
JACKIE LINDGREN	MDRCD
Kirsten Johnson	MDRCD
CINDI MITTON	WATERBOARD

February 28, 2008 Mojave River Watershed Group

Lynn Saenz - City of Hesperia
Dan Elkay - County of San Bern.
Brian Gengler City of Victorville
MARK ABBOTT - TOWN OF APPLE VALLEY
TOM THORNTON - CITY OF HESPERIA
CINDI MITTON - WATER BOARD

March 20, 2008
MRWG

Sign-in Sheet

Name	Agency
Dan Ilkay	SB County
MARK R. MILLER	CITY OF VV
Tina Souza	City of Hesperia
CINDI MITTON	CA WATER BOARD
MARK ABBOTT	APPLE VALLEY

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	Meeting Date: 4/24/08
Facilitator Dan Ilkay	Place/Room: Hesperia/Mesquite

Name	Agency
Dan Ilkay	SB County
Tom Thornton	Hesperia
Helen Wilson	Victorville
Tina Souza	Hesperia
John Morales	Water Quality Control Board

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	**Meeting Date:** May 29, 2008
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Dan Ilkay	SB County
Mark Abbott	Apple Valley
Helen Wilson	City of Victorville
Tom Thornton	Hesperia
Cindi Mitton	Waterboard

Mojave River Watershed Group - Sign-In Sheet

Committee Meeting	**Meeting Date:** June 26, 2008
Facilitator Dan Ilkay	**Place/Room:** Hesperia/Joshua

Name	Agency
Mark Abbott	Town of Apple Valley
John Morales	Water Board - Lahontan
Helen Wilson	City of Victorville
Thomas Thornton	City of Hesperia
Dan Ilkay	County of SB

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
ZONE 4 ADVISORY QUARTERLY MEETING
RECORD OF ATTENDANCE

Date: April 17, 2008 **Meeting Place:** City of Barstow

COMMITTEE MEMBERS:	Initials
Louis Chavez	LC
Vester B. Lawrence	VL
William 'Larry' Kempton	WLK
Guy E. Williams	
Rick Roelle	

FLOOD CONTROL DISTRICT STAFF:	Initials
Vana Olson	
Mazin Kasey	
Melissa Walker	
Trish Uribe	
Hany Peters	H.P.
Jim Borcuk	JB

BOARD OF SUPERVISORS	Initials
Brad Mitzelfelt First District Supervisor	
First District Representative	

MAYORS/Alternates:	Initials
City of Adelanto Pro Tem Charley B. Glasper	
Town of Apple Valley Tim Jasper	
City of Barstow Rita K. Vogler	
City of Hesperia Ed Pack	
City of Victorville Rudy Cabriales	

OTHERS: Name / Organization
Rob Sorenson City of VV
Jose Rodriguez City of VV.
Jesse Estrada Cal Fire
Brian Gengler City of VV

CITY ENGINEERS:	Initials
City of Adelanto Wilson So	
Town of Apple Valley Brad Miller	
City of Hesperia Scott Priester	
City of Barstow Mike Stewart Jim Mitsch	
City of Hesperia Mike Podegracz	
City of Hesperia John Leveillee	
City of Victorville Sean McGlade	
City of Victorville Joe Flores	

Barb Ilkay Mitchell - KIM Rhonda Neill Harold Zamora

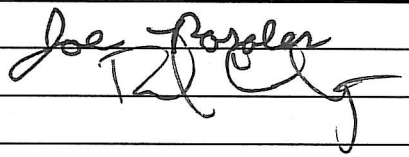
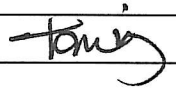
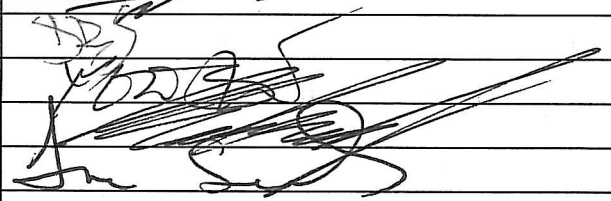
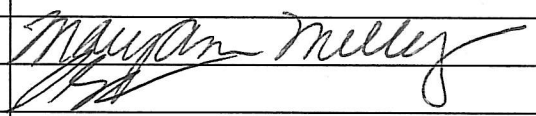
Please **Print Clearly!**
This list will be used to confirm your attendance.

115

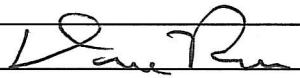
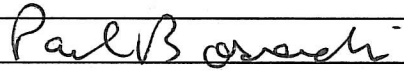
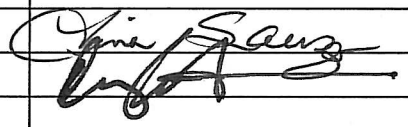
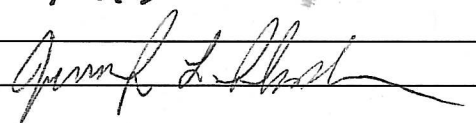
Class: LID Workshop
Instructors: County of S.B.

Date: 08/29/2007
Location: Inland Empire Utilities Agency
6075 Kimball Ave Chino, CA 91710

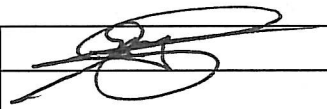
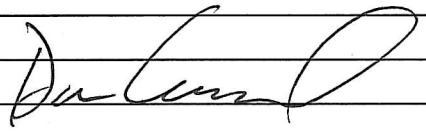
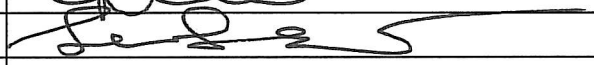
Time: 8:30 am - 3:30 pm

	Name (Please Print Clearly)		Signature	CITY / Department	PHONE	CONF. DATE
1	Joe	Rosales		City of Montclair, NPDES	909-625-9470	7/24/2007
2	Raul	Colunga		City of Loma Linda, Assistant Planner	909-799-2832	7/25/2007
3	Heidi	Mellor		City of Loma Linda, Planning Intern	909-799-2832	7/25/2007
4	Denny	Chen		City of Ontario, Planning	909-395-2036	7/24/2007
5	Yvonne	Elliott		City of Ontario, Assistant Engineer, Engineering Dep.	909-395-2143	7/31/2007
6	Tom	Nievez		AEI-CASC Consulting, Planning Director	909-783-0101	7/19/2007
7	James	Troyer		City of Rancho Cucamonga, Planning Director	909-477-2750	7/19/2007
8	Sam	Spagnolo		City of Rancho Cucamonga, Councilmember	909-919-2615	7/30/2007
9	Manuel	Baeza		City of Redlands	909-798-7555	7/25/2007
10	Tamara	Alaniz		City of Redlands	909-798-7555	7/25/2007
11	Dwane	Hartwill		City of Redlands, NPDES Inspector	909-798-7655	7/31/2007
12	Tom	Fujiwara		City of Redlands, Assistant Public Works Director	909-798-7655	7/31/2007
13	Paul	Schenck		L.D. King, Inc, Project Manager	909-937-0200	7/26/2007
14	Bill	DePoto		County of LA, P.E. Watershed Management Division	626-458-4313	7/26/2007
15	Maged	Soliman		County of LA, Watershed Management Division	626-458-4313	7/26/2007
16	Amir	Ibrahim		County of LA, Senior Civil Engineering	626-458-5915	7/26/2007
17	Daniel	Sharp		County of LA, Watershed Management Division	626-458-4345	7/30/2007
18	Youn	Sim		County of LA, Ph.D, P.E., Watershed Management Div.	626-458-4314	8/6/2007
19	Gunnar	Hand		County of LA, AICP, Regional Planning	213-974-6417	8/10/2007
20	Travis	Seawards		County of LA, Regional Planning		8/10/2007
21	Jodie	Sackett		County of LA, Regional Planning	323-222-7936	8/14/2007
22	Mary Ann	Melleby		Public Affairs Director, Monte Vista Water District	909-624-0035	7/26/2007
23	Justin	Scott-Coe		Public Affairs Specialist, Monte Vista Water District	909-624-0035	7/26/2007
24	Shokoufe	Marashi		City of LA, Environmental Specialist III	213-485-3937	7/26/2007
25	Charlie	Yu		City of LA, Watershed Protection Division	213-485-3937	7/26/2007

26	Rick	Thomas		California Resource Connection, Inc	951-779-6300	7/30/2007
27	Ian	Adam		Fuscoe Engineering, Inc, Environ. Resource Manager	949-271-4318	7/30/2007
28	Beatrice	Musacchia		City of La Habra	562-905-9720	7/30/2007
29	Ruby	Maldonado		County of Orange, Chief, Special Projects Section	714-834-4414	7/31/2007
30	Rick	Sherry		County of Orange, Planner IV, Special Projects Section	714-834-4414	7/31/2007
31	Chris	Crompton		County of Orange		8/10/2007
32	Larry	Mainez		City of Highland, Planner	909-864-6861	7/31/2007
33	John	Jaquess		City of Highland, Community Development Director	909-864-6861	7/31/2007
34	Scott	Hutter		City of La Palma, Associate Planner	714-690-3336	7/31/2007
35	Kim	Le		City of Chino, Assistant Planner	909-591-9893	8/1/2007
36	Andrea	Gilbert		City of Chino, Water & Environmental Section	909-464-0781	8/6/2007
37	Brian	Sitton		City of Chino, Water & Environmental Section	909-464-0781	8/6/2007
38	Mike	Kellison		City of Chino, Water & Environmental Section	909-464-0781	8/6/2007
39	Jesus	Plasencia		City of Chino, Assistant Engineer, Water & Environmental S	909-464-0781	8/6/2007
40	Henry	Garcia		City of Rialto, City Administrator	909-421-4921	8/2/2007
41	~~Walter~~	~~Allison~~	AMER IQBAL	City of Rialto, Principal Civil Engineer	909-421-4921	8/2/2007
42	Christina	Taylor		City of Rialto, Assistant Planner	909-421-4921	8/2/2007
43	Gina	Gibson		City of Rialto, Senior Planner	909-421-4921	8/7/2007
44	Julie	Carver		City of Rialto, Environmental Compliance Coordinator	909-421-4921	8/7/2007
45	Robert	Dawson		County of SB, Deputy Director, Land Use Services	909-387-4146	8/2/2007
46	Judy	Tatman		County of SB, Land Use Services	909-387-4146	8/2/2007
47	Shellie	Zias-Churchman		County of SB, Environmental Planner, Land Use Services	909-387-4124	8/7/2007
48	Chema	Ude		County of SB, Environmental Planner, Land Use Services	909-387-4124	8/7/2007
49	Patrick	McGuckian		County of SB, Supervising Planner, Land Use Services	909-387-4146	8/9/2007
50	Heidi	Duron		County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	8/9/2007
51	Tracy	Creason		County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	8/9/2007
52	Loretta	Mathieu		County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	8/9/2007
53	Oxso	Shahriari		County of SB, Planner, Land Use Services	909-387-4146	8/9/2007
54	Greg	Bennett		County of SB, Planner, Land Use Services	909-387-4116	8/9/2007
55	Henry	Roe		County of San Bernardino, Building & Safety	909-387-4237	8/7/2007
56	Harmon	Randall		County of San Bernardino, Building & Safety	909-387-4237	8/7/2007
57	Mike	Cameron		County of San Bernardino, Building & Safety	909-387-4237	8/7/2007

58	Gary	Given		County of San Bernardino, Building & Safety	909-387-4237	8/7/2007
59	Len	Davis		County of San Bernardino, Building & Safety	909-387-4237	8/7/2007
60	Gia	Kim		County of San Bernardino, Chief Land Development	909-387-8218	7/26/2007
61	Sameh	Basta		County of San Bernardino, PWE III, Water Resource	760-843-4366	7/26/2007
62	Anthony	Pham		County of San Bernardino, PWE II, Land Development	909-387-8229	7/26/2007
63	Julie	Gilbert		County of San Bernardino, Planner III, EMD	909-387-8115	8/9/2007
64	Michelle	Kim		County of San Bernardino, Planner III, EMD	909-387-8114	8/9/2007
65	Kathleen	Dale		City of Moreno Valley, Associate Planner	951-413-3228	8/6/2007
66	Dave	Reno		City of Hesperia, Principal Planner	760-947-1224	8/7/2007
67	Joline	Hahn		City of Hesperia, Planning Commission Chair	760-947-1224	8/7/2007
68	Paul	Bosacki		City of Hesperia, Planning Commissioner	760-947-1224	8/7/2007
69	John	Leveillee		City of Hesperia, City Engineer		8/9/2007
70	Tina	Souza		City of Hesperia, NPDES Coordinator		8/9/2007
71	Douglas	Fenn		Town of Apple Valley, Senior Planner	760-240-7000X7208	8/7/2007
72	John	Atwater		City of Upland, Planning Division	909-931-4132	8/6/2007
73	Silvia	Scharf		City of Upland, Planning Division	909-931-4132	8/6/2007
74	Molly	Bogh		Lilburn Corporation, Community Planning Manager	909-890-181	8/8/2007
75	Michael	Tree		City of Twentynine Palms, City Manager	760-367-6799	8/8/2007
76	Alex	Meyerhoff		City of Twentynine Palms	760-367-6799	8/8/2007
77	Richard	Pedersen		City of Twentynine Palms	760-367-6799	8/8/2007
78	Steve	Flock		City of Twentynine Palms	760-367-6799	8/8/2007
79	Elaine	Bernal		City of Twentynine Palms	760-367-6799	8/8/2007
80	Joel	Klink		City of Twentynine Palms	760-367-6799	8/8/2007
81	Aron	Liang		City of San Bernardino, Senior Planner	909-384-5154	8/8/2007
82	Brian	Foote		City of San Bernardino, Associate Planner	909-384-5154	8/8/2007
83	John	Oquendo		City of San Bernardino, Assistant Planner	909-384-5154	8/8/2007
84	Waen	Messner		City of San Bernardino, Assistant Planner	909-384-5154	8/8/2007
85	DeLisa	Billups		City of San Bernardino, Associate Engineer	909-384-5154	8/8/2007
86	Jennifer	Shepardson		City of San Bernardino, NPDES Coordinator	909-384-5154	8/8/2007
87	Paul	Welsh		Massaro & Welsh, Civil Engineer		8/8/2007
88	Ryan	Waddell		Massaro & Welsh, Land Planners		8/8/2007
89	Cindi	Mitton		CRWQCB Region 6, Senior Engineer, P.E.	760-241-7413	8/9/2007

90	Athar	Khan		CRWQCB Region 6, Water Resource Control Engineer	760-241-7413	8/9/2007
91	Joe	Mosca		City of Sierra Madre, Councilmember		8/9/2007
92	John	Tilton		City of Dana Point, City Architect	949-248-3570	8/10/2007
93	Joe	Sovela		South Coast Water District, Lead Engineer		8/10/2007
94	Daniel	Hsieh		City of Westminster, Civil engineering Associate		8/10/2007
95	Harry	Tran	FOLLOW-IN – JUSTIN WATTS	City of Westminster		8/10/2007
96	Humza	Javed		City of Laguna Hills, Assistant Engineer	949-707-2637	8/10/2007
97	Devin	Slaven		City of Lake Forest, Water Quality Specialist	949-461-3436	8/10/2007
98	Khanh	Nguyen		City of Costa Mesa, Building Official		8/10/2007
99	Patrick	Bauer		City of Costa Mesa, Associate Engineer	714-754-5633	8/10/2007
100	Soroosh	Rahbari		City of Costa Mesa, Building Official		8/10/2007
101	Phil	Hodgetts		City of Costa Mesa, Energy Committee Chair		8/10/2007
102	Siri	Eggebraten		Director of Spatial Analysis & Translational Planning	323-662-0233	8/10/2007
103	Krista	Sloniowski			3043558773	8/10/2007
104	Otto	Kroutil		City of Ontario Development Director		8/10/2007
105	Iris	Patronite		City of Ontario Senior Project Manager		8/10/2007
106	John	Hildebrand		City of Ontario Associate Planner		8/10/2007
107	Charity	Hernandez		City of Ontario Project Manager		8/10/2007
108	Richard	Ayala		City of Ontario Senior Planner		8/10/2007
109	Luis	Batres		City of Ontario Senior Planner		8/10/2007
110	Clarice	Ramey		City of Ontario Associate Planner		8/10/2007
111	Carolyn	Bell		City of Ontario Senior Planner		8/10/2007
112	Amy	Lizarraga		City of Ontario Assistant Planner		8/10/2007
113	Dan	Yuhasz		City of Ontario Assistant Planner		8/10/2007
114	Amer	Jakher		City of Colton, Public Works Director	909-514-4209	8/13/2007
115	Donna	Warden		City of Colton, Associate Planner	909-514-4209	8/13/2007
116	Chris	Winters		City of Colton, Planning Assistant	909-514-4209	8/13/2007
117	Reggie	Torres		City of Colton, Engineering Assistant	909-514-4209	8/13/2007
118	Matt	Yeager		County of San Bernardino Flood	909-387-8109	7/24/2007
119	Ed	Varga		County of San Bernardino	909-387-8109	7/24/2007
120	Raul	Briseno		County of San Bernardino	909-387-8109	7/24/2007
121	Kenneth	Le		County of San Bernardino	909-387-8109	7/24/2007

122	Elias	Severo		County of San Bernardino	909-387-8109	7/24/2007
123	Del	Ross		EDAC, Watershed Consultant	800-222-9686	8/16/2007
124	Neil	Weinstein		Low Impact Development Center		
125	Peg	Staeheli		SVR Design Company		
126	Tom	Richman		Tom Richman & Associates		
127	Steve	Lustro		City of Montclair		
128	Darren	Greenwood		City of Livermore		
129	Celeste	Cantu		Santa Ana Watershed Project Authority, General Manager	951-354-4229	8/27/2007
130	Chandra	Santiago		AEI-CASC Consulting, Water Quality Services	909-783-0101	8/27/2007
131	Jeffrey	Endicott		AEI-CASC Consulting, Water Quality Services	909-783-0101	8/27/2007
132	Robert	Pham		Premier Productions		8/27/2007
133						
134						
135						
136						
137						
138						
139						

Please **Print Clearly!**
This list will be used to confirm your attendance.

Class: LID Workshop
Instructors: County of S.B.

Date: 08/29/2007
Location: Inland Empire Utilities Agency
6075 Kimball Ave Chino, CA 91710

Time: 8:30 am - 3:30 pm

		Name (Please Print Clearly)		Signature	CITY / Department	PHONE	CONF. DATE
✓	1	Joe	Rosales		City of Montclair, NPDES	909-625-9470	07/24/2007
	2	Raul	Colunga		City of Loma Linda, Assistant Planner	909-799-2832	07/25/2007
	3	Heidi	Mellor		City of Loma Linda, Planning Intern	909-799-2832	07/25/2007
	4	Denny	Chen		City of Ontario, Planning	909-395-2036	07/24/2007
	5	Yvonne	Elliott		City of Ontario, Assistant Engineer, Engineering Dep.	909-395-2143	07/31/2007
✓	6	Tom	Nievez		AEI-CASC Consulting, Planning Director	909-783-0101	07/19/2007
✓	7	James	Troyer		City of Rancho Cucamonga, Planning Director	909-477-2750	07/19/2007
	8	Sam	Spagnolo		City of Rancho Cucamonga, Councilmember	909-919-2615	07/30/2007
	9	Manuel	Baeza		City of Redlands	909-798-7555	07/25/2007
	10	Tamara	Alaniz		City of Redlands	909-798-7555	07/25/2007
	11	Dwane	Hartwill		City of Redlands, NPDES Inspector	909-798-7655	07/31/2007
	12	Tom	Fujiwara		City of Redlands, Assistant Public Works Director	909-798-7655	07/31/2007
	13	Paul	Schenck		L.D. King, Inc, Project Manager	909-937-0200	07/26/2007
	14	Bill	DePoto		County of LA, P.E. Watershed Management Division	626-458-4313	07/26/2007
	15	Maged	Soliman		County of LA, Watershed Management Division	626-458-4313	07/26/2007
	16	Amir	Ibrahim		County of LA, Senior Civil Engineering	626-458-5915	07/26/2007
	17	Daniel	Sharp		County of LA, Watershed Management Division	626-458-4345	07/30/2007
	18	Youn	Sim		County of LA, Ph.D, P.E., Watershed Management Div.	626-458-4314	08/06/2007
	19	Gunnar	Hand		County of LA, AICP, Regional Planning	213-974-6417	08/10/2007
	20	Travis	Seawards		County of LA, Regional Planning		08/10/2007
	21	Jodie	Sackett		County of LA, Regional Planning	323-222-7936	08/14/2007
	22	Mary Ann	Melleby		Public Affairs Director, Monte Vista Water District	909-624-0035	07/26/2007
	23	Justin	Scott-Coe		Public Affairs Specialist, Monte Vista Water District	909-624-0035	07/26/2007
	24	Shokoufe	Marashi		City of LA, Environmental Specialist III	213-485-3937	07/26/2007
	25	Charlie	Yu		City of LA, Watershed Protection Division	213-485-3937	07/26/2007
	26	Rick	Thomas		California Resource Connection, Inc	951-779-6300	07/30/2007

James Troyer

	LISA	GONZALES	L Gonzales	FUSCOE	949-271-4455	
27	Ian	Adam		Fuscoe Engineering, Inc, Environ. Resource Manager	949-271-4318	07/30/2007
28	Beatrice	Musacchia		City of La Habra	562-905-9720	07/30/2007
29	Ruby	Maldonado		County of Orange, Chief, Special Projects Section	714-834-4414	07/31/2007
30	Rick	Sherry		County of Orange, Planner IV, Special Projects Section	714-834-4414	07/31/2007
31	Chris	Crompton		County of Orange		08/10/2007
32	Larry	Mainez		City of Highland, Planner	909-864-6861	07/31/2007
33	John	Jaquess		City of Highland, Community Development Director	909-864-6861	07/31/2007
34	Scott	Hutter		City of La Palma, Associate Planner	714-690-3336	07/31/2007
35	Kim	Le		City of Chino, Assistant Planner	909-591-9893	08/01/2007
36	Andrea	Gilbert		City of Chino, Water & Environmental Section	909-464-0781	08/06/2007
37	Brian	Sitton		City of Chino, Water & Environmental Section	909-464-0781	08/06/2007
38	Mike	Kellison		City of Chino, Water & Environmental Section	909-464-0781	08/06/2007
39	Jesus	Plasencia		City of Chino, Assistant Engineer, Water & Environmental S	909-464-0781	08/06/2007
40	Henry	Garcia		City of Rialto, City Administrator	909-421-4921	08/02/2007
41	Walter	Allison		City of Rialto, Principal Civil Engineer	909-421-4921	08/02/2007
42	Christina	Taylor		City of Rialto, Assistant Planner	909-421-4921	08/02/2007
43	Gina	Gibson		City of Rialto, Senior Planner	909-421-4921	08/07/2007
44	Julie	Carver		City of Rialto, Environmental Compliance Coordinator	909-421-4921	08/07/2007
45	Robert	Dawson	R.D.	County of SB, Deputy Director, Land Use Services	909-387-4146	08/02/2007
46	Judy	Tatman		County of SB, Land Use Services	909-387-4146	08/02/2007
47	Shellie	Zias-Churchman		County of SB, Environmental Planner, Land Use Services	909-387-4124	08/07/2007
48	Chema	Ude		County of SB, Environmental Planner, Land Use Services	909-387-4124	08/07/2007
49	Patrick	McGuckian		County of SB, Supervising Planner, Land Use Services	909-387-4146	08/09/2007
50	Heidi	Duron	James Squire	County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	08/09/2007
51	Tracy	Creason		County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	08/09/2007
52	Loretta	Mathieu		County of SB, Sr. Associate Planner, Land Use Services	909-387-4146	08/09/2007
53	Oxso	Shahriari		County of SB, Planner, Land Use Services	909-387-4146	08/09/2007
54	Greg	Bennett		County of SB, Planner, Land Use Services	909-387-4116	08/09/2007
55	Henry	Roe		County of San Bernardino, Building & Safety	909-387-4237	08/07/2007
56	Harmon	Randall		County of San Bernardino, Building & Safety	909-387-4237	08/07/2007
57	Mike	Cameron	MB	County of San Bernardino, Building & Safety	909-387-4237	08/07/2007
58	Gary	Given		County of San Bernardino, Building & Safety	909-387-4237	08/07/2007

59	Len	Davis	Len Davis	County of San Bernardino, Building & Safety	909-387-4237	08/07/2007
60	Gia	Kim		County of San Bernardino, Chief Land Development	909-387-8218	07/26/2007
61	Sameh	Basta		County of San Bernardino, PWE III, Water Resource	760-843-4366	07/26/2007
62	Anthony	Pham		County of San Bernardino, PWE II, Land Development	909-387-8229	07/26/2007
63	Julie	Gilbert		County of San Bernardino, Planner III, EMD	909-387-8115	08/09/2007
64	Michelle	Kim		County of San Bernardino, Planner III, EMD	909-387-8114	08/09/2007
65	Kathleen	Dale		City of Moreno Valley, Associate Planner	951-413-3228	08/06/2007
66	Dave	Reno		City of Hesperia, Principal Planner	760-947-1224	08/07/2007
67	Joline	Hahn		City of Hesperia, Planning Commission Chair	760-947-1224	08/07/2007
68	Paul	Bosacki		City of Hesperia, Planning Commissioner	760-947-1224	08/07/2007
69	John	Leveillee		City of Hesperia, City Engineer		08/09/2007
70	Tina	Souza		City of Hesperia, NPDES Coordinator		08/09/2007
71	Douglas	Fenn		Town of Apple Valley, Senior Planner	760-240-7000X7208	08/07/2007
72	John	Atwater		City of Upland, Planning Division	909-931-4132	08/06/2007
73	Silvia	Scharf		City of Upland, Planning Division	909-931-4132	08/06/2007
74	Molly	Bogh	M.B.	Lilburn Corporation, Community Planning Manager	909-890-181	08/08/2007
75	Michael	Tree		City of Twentynine Palms, City Manager	760-367-6799	08/08/2007
76	Alex	Meyerhoff		City of Twentynine Palms	760-367-6799	08/08/2007
77	Richard	Pedersen		City of Twentynine Palms	760-367-6799	08/08/2007
78	Steve	Flock		City of Twentynine Palms	760-367-6799	08/08/2007
79	Elaine	Bernal		City of Twentynine Palms	760-367-6799	08/08/2007
80	Joel	Klink		City of Twentynine Palms	760-367-6799	08/08/2007
81	Aron	Liang		City of San Bernardino, Senior Planner	909-384-5154	08/08/2007
82	Brian	Foote		City of San Bernardino, Associate Planner	909-384-5154	08/08/2007
83	John	Oquendo		City of San Bernardino, Assistant Planner	909-384-5154	08/08/2007
84	Waen	Messner		City of San Bernardino, Assistant Planner	909-384-5154	08/08/2007
85	DeLisa	Billups	Laura Weidemann	City of San Bernardino, Associate Engineer	909-384-5154	08/08/2007
86	Jennifer	Shepardson		City of San Bernardino, NPDES Coordinator	909-384-5154	08/08/2007
87	Paul	Welsh		Massaro & Welsh, Civil Engineer		08/08/2007
88	Ryan	Waddell		Massaro & Welsh, Land Planners		08/08/2007
89	Cindi	Mitton	*Mary DeNavalle	CRWQCB Region 6, Senior Engineer, P.E.	760-241-7413	08/09/2007
90	Athar	Khan		CRWQCB Region 6, Water Resource Control Engineer	760-241-7413	08/09/2007

91	Joe	Mosca		City of Sierra Madre, Councilmember		08/09/2007
92	John	Tilton		City of Dana Point, City Architect	949-248-3570	08/10/2007
93	Joe	Sovela		South Coast Water District, Lead Engineer		08/10/2007
94	Daniel	Hsieh		City of Westminster, Civil engineering Associate		08/10/2007
95	Harry	Tran		City of Westminster		08/10/2007
96	Humza	Javed		City of Laguna Hills, Assistant Engineer	949-707-2637	08/10/2007
97	Devin	Slaven		City of Lake Forest, Water Quality Specialist	949-461-3436	08/10/2007
98	Khanh	Nguyen		City of Costa Mesa, Building Official		08/10/2007
99	Patrick	Bauer		City of Costa Mesa, Associate Engineer	714-754-5633	08/10/2007
100	Soroosh	Rahbari		City of Costa Mesa, Building Official		08/10/2007
101	Phil	Hodgetts		City of Costa Mesa, Energy Committee Chair		08/10/2007
102	Siri	Eggebraten		Director of Spatial Analysis & Translational Planning	323-662-0233	08/10/2007
103	Krista	Sloniowski				08/10/2007
104	Otto	Kroutil		City of Ontario Development Director		08/10/2007
105	Iris	Patronite		City of Ontario Senior Project Manager		08/10/2007
106	John	Hildebrand		City of Ontario Associate Planner		08/10/2007
107	Charity	Hernandez		City of Ontario Project Manager		08/10/2007
108	Richard	Ayala		City of Ontario Senior Planner		08/10/2007
109	Luis	Batres		City of Ontario Senior Planner		08/10/2007
110	Clarice	Ramey		City of Ontario Associate Planner		08/10/2007
111	Carolyn	Bell		City of Ontario Senior Planner		08/10/2007
112	Amy	Lizarraga		City of Ontario Assistant Planner		08/10/2007
113	Dan	Yuhasz		City of Ontario Assistant Planner		08/10/2007
114	Amer	Jakher	= Jude Abeto	City of Colton, Public Works Director	909-514-4209	08/13/2007
115	Donna	Warden		City of Colton, Associate Planner	909-514-4209	08/13/2007
116	Chris	Winters		City of Colton, Planning Assistant	909-514-4209	08/13/2007
117	Reggie	Torres		City of Colton, Engineering Assistant	909-514-4209	08/13/2007
118	Matt	Yeager		County of San Bernardino Flood	909-387-8109	07/24/2007
119	Ed	Varga		County of San Bernardino	909-387-8109	07/24/2007
120	Raul	Briseno		County of San Bernardino	909-387-8109	07/24/2007
121	Kenneth	Le		County of San Bernardino	909-387-8109	07/24/2007
122	Elias	Severo		County of San Bernardino	909-387-8109	07/24/2007

Garcia Henry V City of Rialto

123	Del	Ross		EDAC, Watershed Consultant	800-222-9686	08/16/2007
124	Neil	Weinstein		Low Impact Development Center		
125	Peg	Staeheli		SVR Design Company		
126	Tom	Richman		Tom Richman & Associates		
127	Steve	Lustro		City of Montclair		
128	Darren	Greenwood		City of Livermore		
129	Celeste	Cantu		Santa Ana Watershed Project Authority, General Manager	951-354-4229	08/27/2007
130	Chandra	Santiago	CS	AEI-CASC Consulting, Water Quality Services	909-783-0101	08/27/2007
131	Jeffrey	Endicott	JE	AEI-CASC Consulting, Water Quality Services	909-783-0101	08/27/2007
132	Robert	Pham	KP	Premier Productions		08/27/2007
133						
134						
135						
136						
137						
138						
139						

NO. Daniel Hsieh

DENNY CHEN – CITY OF ONTARIO (PLNG Dept.)

Tina Tusson – Riverside Co. Flood Control

PING KHO – CITY OF RANCHO CUCAMONGA

Dani Wray – City of Los Alamitos

Susan Longville – CS USB Water Resources Institute

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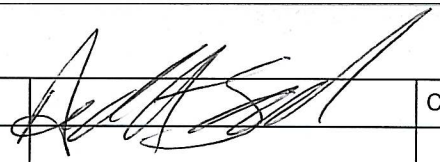
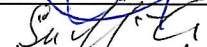
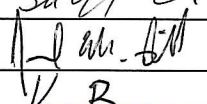
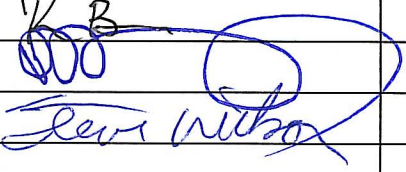
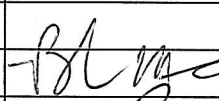
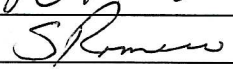
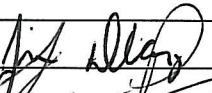
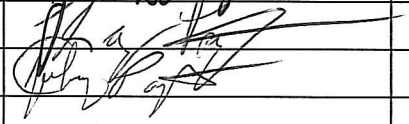
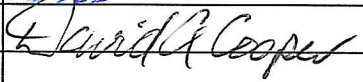
Class: Construction BMP Workshop **Date: 2/13/2008** **Time:** 8:45 am - 3:00 pm
Instructors: County of S.B. **Location:** Ontario/Chino

	Name (Please Print Clearly)		Signature	CITY / Department	Email	PHONE	CONF. DATE
1	Dan	Ilkay		County of San Bernardino	dilkay@dpw.sbcounty.gov	909-387-8119	2/5/2008
2	Eduard	Varga		County of San Bernardino	evarga@dpw.sbcounty.gov	909-387-8132	2/5/2008
3	Kenneth	Le		County of San Bernardino	kle@dpw.sbcounty.gov	909-387-8038	2/5/2008
4	Elias	Severo		County of San Bernardino	esevero@dpw.sbcounty.gov	909-387-8103	2/5/2008
5	Raul	Briseno		County of San Bernardino	rbriseno@dpw.sbcounty.gov	909-387-8140	2/5/2008
6	Vu	Nguyen		County of San Bernardino	vnguyen@dpw.sbcounty.gov	909-387-8117	2/5/2008
7	Julie	Carver		City of Rialto Environmental Coordinator	jcarver@rialtoca.gov	909 421-4921	1/16/2008
8	Jamie	Cruz		City of Rialto Construction Inspector	jcruz@rialtoca.gov		1/16/2008
9	Mark	Devlin		City of Rialto Construction Inspector	mdevlin@rialtoca.gov		1/16/2008
10	Ruben	Valdez		City of Chino			1/17/2008
11	Ron	Hernandez		City of Chino			1/30/2008
12	Pete	Reinheimer		City of Chino			1/30/2008
13	Vince	Ledesma		City of Chino			1/30/2008
14	~~Don~~ Jesus	~~Allinder~~ Plasencia		City of Chino ~~Environmental Coordinator~~ Assistant Engineer	JPlasencia ~~DAllinder~~@cityofchino.org	909-464-0781 ~~909-591-9850~~	1/17/2008
15	George	Anchales		City of Yucaipa	georgeanchales@caaprofessionals.com	909 841-3614	1/17/2008
16	John	LaRose		City of Yucaipa	jlarose@yucaipa.org		2/4/2008
17	Mike	Seal		City of Yucaipa			2/4/2008
18	Dave	Mitchell		City of Yucaipa			2/4/2008
19	John	Ruggs		City of Yucaipa			2/4/2008
20	Robert	Herbster		City of Upland	rherbster@ci.upland.ca.us	909 931-4267	1/17/2008
21	Nisha	Wells		City of Upland Assistant Engineer	nwells@ci.upland.ca.us	909 291-2965	1/22/2007
22	Thomas	Guymon		City of Upland	tguymon@ci.upland.ca.us	909 931-4370	1/17/2008
23	Joe	Cylwik		City of Big Bear P.E.	jcylwik@citybigbearlake.com	909 866-5831	1/17/2008
24	Harry	Babbitt		City of Big Bear	hlbabbitt@hotmail.com		1/17/2008

25	Andrea	Saavedra		City of Highland Public Services Coordinator	asaavedra@cityofhighland.org	909-863-0284	1/22/2008
26	George	Harold		City of Highland Inspector			1/28/2008
27	Larry	Brown		City of Highland Inspector			1/28/2008
28	Tom	Pacheco		City of Colton Building Inspector			1/22/2008
29	Douglas	Louis		City of Colton Building Inspector			1/22/2008
30	~~Daniel~~ ABETO	~~Peraas~~ JUDE		City of Colton Engineering			1/22/2008
31	Sultan	Tahir		City of Colton PW Inspector			1/22/2008
32	Jarrod	Gibbon		City of San Bernardino NPDES Inspector	ja@ci.san-bernardino.ca.us		1/23/2008
33	Kenny	Barron		City of San Bernardino Const. Inspector			1/23/2008
34	ROJOA ~~Mark~~	PUEBLITES ~~Kalfell~~		City of San Bernardino Const. Inspector			1/23/2008
35	Steve	Wilson		City of Ontario Stormwater Coordinator	swilson@ci.ontario.ca.us	909 395-2389	1/24/2008
36	Yvonne	Elliott		City of Ontario Assistant Engineer	yelliott@ci.ontario.ca.us	909 395-2143	1/23/2008
37	Arij	Baddour		City of Ontario Engineering Dept.	abaddour@ci.ontario.ca.us	909 395-2177	1/23/2008
38	Bob	Makowski		City of Fontana Environmental Tech.	rmakowski@fontana.org	909 350-6531	1/24/2008
39	Sal	Romero		City of Fontana Environmental Tech.			1/24/2008
40	Mike	Cimmarusti		City of Hesperia			1/24/2008
41	Keith	Otjen		City of Hesperia			1/24/2008
✓ 42	David	Mitchell		Apple Valley	davidmitchell@caaprofessionals.com	909 721-1334	1/24/2008
43	Jim	Diaz		City of Montclair PW Inspector	jdiaz@ci.montclair.ca.us	909 625-9442	1/25/2008
44	Kay	Payton		City of Victorville	kpayton@victorvilleca.gov	951 279-0031	1/25/2008
45	Jhonny	Payton		City of Victorville		951 279-0031	1/25/2008
46	Tad	Garrety		City of Chino Hills NPDES Coordinator	tgarrety@chinohills.org		1/29/2008
47	Carlos	Picasso		City of Chino Hills Building Inspector			1/28/2008
48	Jarrod	Manuel		City of Chino Hills Building Inspector			1/28/2008
49	Randy	Hendricks		City of Chino Hills PW Inspector			1/29/2008
50	Jeff	Bohlander		City of Chino Hills PW Inspector			1/29/2008
51	Dave	Cooper		Simmons Const	dave@simmonsbuilt.com	909 795-8428	
✓ 52	Leon	McCarty					
✓ 53	Kim	Goodenough		County of San Bernardino	kgoodenough@dpw.sbcounty.gov	909-387-8118	2/5/2008

54	Roger	Williams		Torrent Resources			2/5/2008
55	Reggie	Torres		City of Colton, Engineering Assistant	rtorres@ci.colton.ca.us	909-514-4209	2/11/2008
56	Dwane	Hartwill		City of Redlands, NPDES Inspector		909-798-7655	2/11/2008
57	PAUL	OSTERMAN		Charles Abbott ASSC.		760 240-7000	
58	KEVIN	WHITE		TORRENT RESOURCES			
59							
60							
61							
62							
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Instructors: County of S.B. **Location:** Ontario/Chino

	Name (Please Print Clearly)		Signature	CITY / Department	Email	PHONE	CONF. DATE
1	Dan	Ilkay		County of San Bernardino	dilkay@dpw.sbcounty.gov	909-387-8119	2/5/2008
2	Eduard	Varga		County of San Bernardino	evarga@dpw.sbcounty.gov	909-387-8132	2/5/2008
3	Kenneth	Le		County of San Bernardino	kle@dpw.sbcounty.gov	909-387-8038	2/5/2008
4	Elias	Severo		County of San Bernardino	esevero@dpw.sbcounty.gov	909-387-8103	2/5/2008
5	Raul	Briseno		County of San Bernardino	rbriseno@dpw.sbcounty.gov	909-387-8140	2/5/2008
6	Vu	Nguyen		County of San Bernardino	vnguyen@dpw.sbcounty.gov	909-387-8117	2/5/2008
7	Julie	Carver		City of Rialto Environmental Coordinator	jcarver@rialtoca.gov	909 421-4921	1/16/2008
8	~~Jamie~~ Hank	~~Cruz~~ Gonzales		City of Rialto Construction Inspector	jcruz@rialtoca.gov		1/16/2008
9	Mark	Devlin		City of Rialto Construction Inspector	mdevlin@rialtoca.gov		1/16/2008
10	Ruben	Valdez		City of Chino			1/17/2008
11	Ron	Hernandez		City of Chino			1/30/2008
12	Pete	Reinheimer		City of Chino			1/30/2008
13	Vince	Ledesma		City of Chino			1/30/2008
14	Don	Allinder		City of Chino Environmental Coordinator	DAllinder@cityofchino.org	909 591-9850	1/17/2008
15	George	Anchales		City of Yucaipa	georgeanchales@caaprofessionals.com	909 841-3614	1/17/2008
16	John	LaRose		City of Yucaipa	jlarose@yucaipa.org		2/4/2008
17	Mike	Seal		City of Yucaipa	M.SEALE@yucaipa	909 797-2489	2/4/2008
18	Dave	Mitchell		City of Yucaipa			2/4/2008
19	John	Ruggs		City of Yucaipa			2/4/2008
20	Robert	Herbster		City of Upland	rherbster@ci.upland.ca.us	909 931-4267	1/17/2008
21	Nisha	Wells		City of Upland Assistant Engineer	nwells@ci.upland.ca.us	909 291-2965	1/22/2007
22	Thomas	Guymon		City of Upland	tguymon@ci.upland.ca.us	909 931-4370	1/17/2008
23	Joe	Cylwik		City of Big Bear P.E.	jcylwik@citybigbearlake.com	909 866-5831	1/17/2008
24	Harry	Babbitt		City of Big Bear	hlbabbitt@hotmail.com		1/17/2008

25	Andrea	Saavedra		City of Highland Public Services Coordinator	asaavedra@cityofhighland.org	909-863-0284	1/22/2008
26	George	Harold		City of Highland Inspector			1/28/2008
27	Larry	Brown		City of Highland Inspector			1/28/2008
28	Tom	Pacheco		City of Colton Building Inspector			1/22/2008
29	Douglas	Louis		City of Colton Building Inspector			1/22/2008
30	Daniel	Porras		City of Colton Engineering			1/22/2008
31	Sultan	Tahir		City of Colton PW Inspector			1/22/2008
32	Jarrod	Gibbon		City of San Bernardino NPDES Inspector	ja@ci.san-bernardino.ca.us		1/23/2008
33	Kenny	Barron		City of San Bernardino Const. Inspector			1/23/2008
34	Mark	Kalfell		City of San Bernardino Const. Inspector			1/23/2008
35	Steve	Wilson		City of Ontario Stormwater Coordinator	swilson@ci.ontario.ca.us	909 395-2389	1/24/2008
36	Yvonne	Elliott		City of Ontario Assistant Engineer	yelliott@ci.ontario.ca.us	909 395-2143	1/23/2008
37	Arij	Baddour		City of Ontario Engineering Dept.	abaddour@ci.ontario.ca.us	909 395-2177	1/23/2008
38	Bob	Makowski		City of Fontana Environmental Tech.	rmakowski@fontana.org	909 350-6531	1/24/2008
39	Sal	Romero		City of Fontana Environmental Tech.			1/24/2008
40	Mike	Cimmarusti		City of Hesperia			1/24/2008
41	Keith	Otjen		City of Hesperia			1/24/2008
42	David	Mitchell		Apple Valley	davidmitchell@caaprofessionals.com	909 721-1334	1/24/2008
43	Jim	Diaz		City of Montclair PW Inspector	jdiaz@ci.montclair.ca.us	909 625-9442	1/25/2008
44	Kay	Payton		City of Victorville		951 279-0031	1/25/2008
45	Jhonny	Payton		City of Victorville		951 279-0031	1/25/2008
46	Tad	Garrety		City of Chino Hills NPDES Coordinator	tgarrety@chinohills.org		1/29/2008
47	Carlos	Picasso		City of Chino Hills Building Inspector			1/28/2008
48	Jarrod	Manuel		City of Chino Hills Building Inspector			1/28/2008
49	Randy	Hendricks		City of Chino Hills PW Inspector			1/29/2008
50	Jeff	Bohlander		City of Chino Hills PW Inspector			1/29/2008
51	Dave	Cooper					
52	Leon	McCarty					
53	Kim	Goodenough		County of San Bernardino	kgoodenough@dpw.sbcounty.gov	909-387-8118	2/5/2008

54	Roger	Williams		Torrent Resources			2/5/2008
55	Reggie	Torres		City of Colton, Engineering Assistant	rtorres@ci.colton.ca.us	909-514-4209	2/11/2008
56	Dwane	Hartwill		City of Redlands, NPDES Inspector		909-798-7655	2/11/2008
57	James	MacDougall		Charles Abbott & Assoc.		760-240-7000	2-13-8
58	Albert	Cammarota		charles Abbott & Assoc		760 948-2034	2-13-08
59	James	Woodrow		City of Yucaipa		909-797-2498	
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70							

SIGN-IN SHEET

MUNICIPAL STORMWATER POLUTION PREVENTION TRAINING

LOCATION: NEEDLES YD 515

DATE: 6-4-08

NAME	ORGANIZATION / DEPT.	SIGNATURE
GARY GREGOR	TRANS - FLOOD OPS.	[signature]
JACK Smith	TRANS- Flood	[signature]
Donald S. Toy	Trans / Flood	[signature]

Economic Development/Public Services Group
DEPARTMENT OF PUBLIC WORKS
COUNTY SURVEYOR

DON TOY
Public Works Operations Supervisor
Needles Maintenance Yard

dtoy@dpw.co.san-bernardino.ca.us

(760) 326-2535
Fax (760) 326-5933
cell 760-285-4287

5 Airport Road, P.O. Box 707
Needles, CA 92363

SIGN-IN SHEET

MUNICIPAL STORMWATER POLUTION PREVENTION TRAINING

LOCATION: BAKER

DATE: 6-5-2008

NAME	ORGANIZATION / DEPT.	SIGNATURE
DELVIN HOLMES	TRANSPORTATION	Delvin Holmes
RICHARD MORGAN	"	Richard Morgan
KEVIN M. LANG	"	Kevin M. Lang

Economic Development/Public Services Group
DEPARTMENT OF PUBLIC WORKS
COUNTY SURVEYOR

DELVIN HOLMES
Maintenance & Construction Supervisor II
Baker Maintenance Yard

dholmes@dpw.co.san-bernardino.ca.us

(760) 733-4736
Fax (760) 733-4737

56500 Hwy. 127, P.O. Box 750
Baker, CA 92309

SIGN-IN SHEET

MUNICIPAL STORMWATER POLUTION PREVENTION TRAINING

LOCATION: BARSTOW RD. YD. DATE: 6/5/2008

NAME	ORGANIZATION / DEPT.	SIGNATURE
DAN RAWLINSON	ROAD DEPT.	Dan Rawlinson
Robert Bedford	Road Dept	
VINCENT RUSSO	ROAD DEPT	
LARRY McNAIR	ROAD	
ANTHONY MONTANO	ROAD.	
Lewis LAWSON	ROAD	
Robert Byrkett	Road Dept	R Byrkett
Bill Little	Road Dept	
Arnold Cruz	ROAD	
Thomas Robertson	ROAD	Thomas Robertson

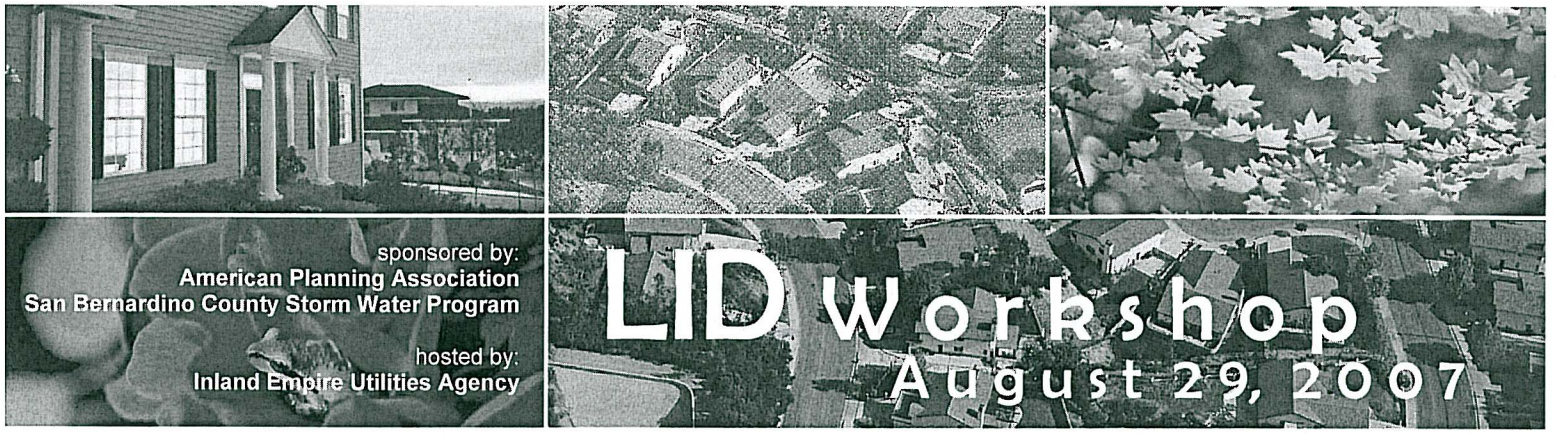
County of San Bernardino
Public and Support Services Group
DEPARTMENT OF PUBLIC WORKS

BILL LITTLE
Public Works Operations Supervisor

(760) 256-3631
Fax (760) 256-5859
Cell (760) 793-0236

29802 Old Highway 58
Barstow, CA 92311
blittle@dpw.sbcounty.gov

APPENDIX C – Training and Public Workshop Flyers



LOW IMPACT DEVELOPMENT (LID) WORKSHOP

132 people

AN INTRODUCTION FOR PLANNERS AND CITY LEADERS

This event is intended to introduce LID, its benefits, and its challenges.

TOPICS INCLUDE

- LID in Action—Urban Development
- LID in Action—New Development
- What is LID?
- Group Tour of BMPs at IEUA Headquarters
- Local Challenges Facing LID Implementation
- Overcoming Implementation Obstacles
- Discussion

EXPERT PANEL OF SPEAKERS

- **CHARLES RANGEL**
  APA President
- **NEIL WEINSTEIN**
  Low Impact Development Center
- **PEG STAEHELI, ASLA, LEED AP**
  SVR Design Company
- **TOM RICHMAN, ASLA, AICP**
  Tom Richman & Associates
- **STEVE LUSTRO**
  City of Montclair
- **DARREN GREENWOOD**
  City of Livermore

The course objective is to assist in preparation for upcoming mandated LID requirements which will substantially benefit stormwater management and the environment.

This event may qualify for CM Credits; see details later.

WHEN
August 29, 2007
8:30 a.m.– 3:30 p.m.

WHERE
Inland Empire Utilities Agency
6075 Kimball Ave
Chino, CA 91710
(909) 357-0241

CALL NOW TO RESERVE SPACE
For reservations please contact:
Mr. Ken Lee
County of San Bernardino
klee@dpw.sbcounty.gov
(909) 387-8038

For questions please contact:
Chandra Santiago
AEI-CASC Consulting
csantiago@aei-casc.com
(909) 783-0101

Workshop planning by AEI-CASC Consulting. Funding for this project has been provided in full or in part through and agreement with the State Water Resources Control Board. The contents of this document do not necessarily reflect the views and policies of the State Water Resources Control Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Mojave River Watershed
Storm Water Management Program

Third Annual Public Workshop

IN COMPLIANCE WITH THE PHASE II REQUIREMENTS CLEAN WATER ACT STORM WATER

City of Hesperia
9650 Seventh Ave
Hesperia, CA 92345

Third Annual Public Workshop

on the

Storm Water Management Program

for the

Upper Mojave River Watershed

November 15, 2007
6:00 – 7:00 pm
Library Conference Room

In compliance with the Clean Water act Stormwater Phase II regulations which affect our High Desert Communities, this workshop will include:

- An outline of the SWRCB stormwater permit
- Required compliance practices (geared towards year 3)
- Third annual report

Who should attend:

- Interested residents of the High Desert communities
- Elected officials and staff members of public agencies
- Building community members
- Industry representatives

For more information, call Tina Souza at 760-947-1474

Mojave River Watershed
Storm Water Management Program

Third Annual Public Workshop

November 15, 2007 **6:00 – 7:00 pm**

IN COMPLIANCE WITH THE CLEAN WATER ACT

The Mojave River Watershed
Storm Water Management Program

Invites you to Join us at:

CITY OF HESPERIA
9650 Seventh Ave.
Hesperia, CA 92345
Library Conference Room

This workshop will include:

- An overview of the stormwater permit and management plan
- Required third year compliance practices
- Review of third year annual report

Who should attend:

- Interested residents of the High Desert communities
- Elected officials and staff members of public agencies
- Building community members
- Industry representatives

For more information, call Tina Souza at (760) 947-1474

SAN BERNARDINO COUNTY STORMWATER PROGRAM

56 people

A Consortium of Local Agencies

CONSTRUCTION BMP WORKSHOP

The County of San Bernardino County Stormwater Program in conjunction with California Commerce Center and Meritage Development is sponsoring a half-day classroom and field based training on WQMP, erosion and sediment control BMPs.

This workshop is a training opportunity for those working in the construction inspection field to learn about:

- Proper construction BMP installation and maintenance
- WQMP and erosion/sediment control BMP's overview
- An overview of construction stormwater inspection procedures
- Draft Construction General permits requirements

■ MARK THIS DATE AND ATTEND:

February Wednesday, 13, 2008

Location: Lowe's of Ontario
2390 South Grove Ave
Ontario, CA 91716

Registration Contact phone number	8:45 – 9:00 am day of the event	(909) 556-6606
Construction site visit	Leave at 9:00 sharp	Transportation will be provided from Lowe's parking lot
Workshop discussion	12 – 3 pm Return to Lowe's. by 3pm	Lunch and refreshments will be provided

■ TO REGISTER:

Please RSVP by sending an email to Eduard Varga at:evarga@dpw.sbcounty.gov. In the email, please include your name, title, agency name, email, and phone number.

■ COST:

Registration fees, transportation costs, and lunch will be provided at no cost to San Bernardino County Stormwater Program member agency employees.