

SECTION C-9

EXISTING DEVELOPMENT

**PROGRAM EFFECTIVENESS ASSESSMENT
2015-16**



C-9.0 EXISTING DEVELOPMENT

C-9.1 Introduction

The existing development component of this report is composed of the following elements:

Section C-9.2, Industrial Program

Section C-9.3, Commercial Program

Section C-9.4, Residential Program

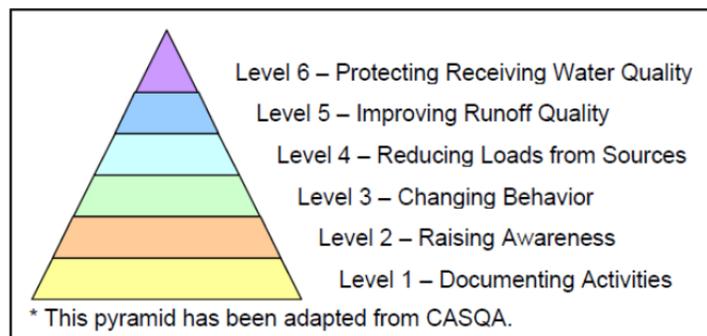
Section C-9.5, Common Interest Area/Homeowner Association (CIA/HOA) Program

Section C-9.6, Mobile Business Program

Section C-9.7, Post-Construction BMP Inspection and Verification for Existing Development

Section C-9.8, Existing Development Program Modifications

As described in detail in **Section C-2.5** of this PEA, the County utilizes the 2007 CASQA method of effectiveness assessment in order to demonstrate if program elements, activities, BMPs, etc., are resulting in desired outcomes. CASQA identifies six Outcome Levels (see pyramid below) and for each measure the County reports, the associated Outcome Level (more than one level may apply) is indicated by a colored triangle with a number.



C-9.2 Industrial Program (LIP Section A-9.1)

C-9.2.1 Organization Chart

Figure A-9.1 of the LIP provides an organizational chart that identifies which County Departments are responsible for overseeing, implementing, and enforcing the Industrial Program.



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C-9.2.2 Inventory

The County has developed a watershed based inventory of industrial facilities within its jurisdiction. Summaries of the industrial inventory are provided below by Regional Board region.

2015-16 Summary of Industrial Facilities by Watershed

Santa Ana Region	
San Gabriel River/Coyote Creek	4
Anaheim Bay/ Huntington Harbor	1
Santa Ana River	5
Newport Bay	4
Subtotal	14
San Diego Region	
San Juan Creek	10
Dana Point Coastal Streams	1
San Clemente Coastal Streams	2
Aliso Creek	1
Subtotal	14
Total	28

The County's industrial facility inventory is updated on an ongoing basis and is maintained through a GIS database system. During the reporting period this inventory was migrated from a proprietary web-based system called MS4Web to an ESRI enterprise geodatabase to allow greater integration with mobile applications and other County databases. In lieu of submitting data tables showing facility information a web map displaying the inventory can be accessed at the following link:

County of Orange MS4 Map: <http://arcg.is/2eZHGX6>



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C-9.2.3 Prioritization

The County prioritizes industrial facilities in its inventory as high, medium, or low in the Santa Ana Region based on their respective threat to water quality, type of industrial activities, and other related factors. The industrial prioritization is evaluated on an ongoing basis, and industrial inventories are segregated by Regional Board jurisdiction due to the different NPDES permit requirements for each region. The San Diego Region does not currently require prioritization of facilities as high, medium, or low; however the County has retained its historical designations of these sites as part of its inventory. Summaries of the prioritizations for the Santa Ana Region and San Diego Region are provided below.

2015-16 Summary of Industrial Facility Prioritization

Industrial Facility Prioritizations		San Diego Region	Santa Ana Region	Total Number of Facilities
High Priority	Facilities subject to the Industrial General Permit or equivalent permit	13	10	23
	Section 313 Title III Sara	0	0	0
	Facilities with a high potential for or history of non-stormwater discharges	0	0	0
	Facilities tributary to and within 500 feet of an ASBS	0	0	0
	Tributary to 303(d) water body where site generates the pollutant	0	0	0
	Facilities within, directly adjacent to or discharging directly to an ESA	0	0	0
	Number of "other" high priority facilities	0	0	0
Subtotal: number of high priority facilities listed above		13	10	23
Number of medium priority facilities		0	0	0
Number of low priority facilities		1	4	5
Total Number of Facilities		14	14	28

C-9.2.4 Monitoring

When available, the County reviews facility monitoring data at industrial sites in its inventory. This task is completed as part of the inspection process, when County inspectors ask to review available stormwater monitoring data from the industrial facility operators that monitor their runoff. If no recent data is available, industrial facilities are reminded verbally that they must



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conduct all required monitoring specified in the Industrial General Permit if it is applicable to the facility.

C-9.2.5 BMP Fact Sheets

BMP fact sheets have been developed and included as part of the Existing Development Program. The fact sheets include a description of specific BMPs for common industrial activities that may discharge pollutants and provide corresponding pollution prevention measures that facilities can implement to help meet the requirements of the MS4 Permits, the County and OCFCD Water Quality Ordinances, and the Industrial General Permit. The activity-based industrial/commercial fact sheets are numbered IC1 - IC24 and are included as **Exhibit A-9.II** of the County's LIP.

C-9.2.6 Inspections

The County inspects industrial facilities within its jurisdiction at the frequency determined by the priority ranking assigned to each facility as identified in **Section A-9.2** of its LIP. The inspections generally include a review of the material and waste handling practices, BMP implementation, and evidence of past or present unauthorized non-stormwater discharges. The following table presents the inspection frequency by Regional Board jurisdiction:

Industrial Facility Inspection Frequency

Priority	Santa Ana Region	San Diego Region*
High	Annually	Annually
Medium	Biennially	As-needed
Low	Once Per Permit Cycle	As-needed

*The San Diego Region Permit does not require prioritization of industrial sites but does require that the County inspect 20% of its combined industrial and commercial inventory annually.

A summary of the number of industrial facility inspections completed during the 2015-16 reporting period is presented in the table below.

Jurisdictional Industrial Facility Inspection Summary



Total Number of Industrial Facilities	Number of Facilities Inspected During the Reporting Period			
	High	Med	Low	Totals
14 (San Diego Region)	13	None in inventory	1	14
10 (Santa Ana Region)	10		0	10
Totals	23	0	1	24



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In the Santa Ana Regional Board area, the County completed industrial NPDES inspections at its 10 high priority sites and none of its low priority sites in the 2015-16 reporting year. The high priority sites include seven private companies and three public facilities managed by County Departments. Of the 10 sites inspected, the County identified two sites as having BMP deficiencies during their routine inspection. All deficiencies were addressed and corrected either on the day of inspection or prior to follow-up inspection.

On November 19, 2015, a complaint was received regarding excessive sediment tracking from one of the industrial facilities within the County's inventory. A County inspector investigated the complaint and issued enforcement via a Notice of Non-Compliance (NNC). The NNC directed the removal of sediment from the public right-of-way and called for implementation of measures to prevent future sediment tracking from the property. In response, staff from the facility cleaned the impacted area and provided documentation to the County demonstrating additional measures that had been implemented. BMP improvements were further verified during the County's annual inspection of the facility.

During the routine inspection of another facility in the County's inventory it was noted that the facility operations had changed from manufacturing to warehousing. At the time of the inspection, the facility representative was working with their consultant to determine if the current operations of this facility would still require Industrial General Permit (IGP) coverage. If IGP coverage is deemed no longer required, then this facility would transition from the County's industrial inventory to its commercial inventory.

In the San Diego Regional Board area, the County conducted industrial NPDES inspections at all fourteen facilities in its inventory. During the reporting period BMP deficiencies related to poor housekeeping were noted at three facilities at the time of inspection. The County inspector directed the facilities to implement proper corrective measures for full BMP implementation. Corrections were made and documentation was submitted to the County as verification.

The County continues to see a high level of cooperation and responsiveness at industrial facilities within its jurisdiction. County staff has observed an increase in knowledge and awareness of staff assigned to NPDES programs at most of these industrial facilities which has resulted in improved BMP implementation (Level 3 Outcome) and anticipated reduced pollutant loads from sources (potential Level 4 Outcome).

C-9.2.7 BMP Implementation

As part of the industrial facility inspections, the County inspector determines the level of BMP implementation and also assesses the effectiveness of implemented BMPs. To facilitate this process, the County's inspection form is broken down by facility activity types based on the industrial/commercial BMP fact sheets IC1 - IC24.



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The inspector may encounter situations where BMPs are in place but are not effectively applied, or where housekeeping adjustments would improve the overall BMP implementation. If BMP improvements are needed, the inspectors use their best professional judgment in deciding how much time to allow the owner or facility operator to correct the deficiency. The inspectors may verify BMP implementation through a variety of means, including directions in the routine inspection report, requesting appropriate verification from the property owner (such as photo-documentation), and/or through additional inspections.

C-9.2.8 Enforcement

The County's Authorized Inspectors (identified in **Section C-10** of this PEA) undertake enforcement activities against industrial facilities according to County Water Quality Ordinances and the accompanying Enforcement Consistency Guide (**Exhibit 4.I** of the **2003 DAMP**).

Enforcement may be handled administratively or, in more serious instances, through legal prosecution. As provided for in the Enforcement Consistency Guide, the County's inspectors ensure that violations of a comparable nature are subjected to similar types of enforcement remedies. More severe enforcement options may be selected when a violator has a history of deficiencies, has failed to take good faith actions to eliminate continuing violations, and/or has not met a previously imposed schedule for addressing violations.

The County observed one violation of County Water Quality Ordinances during the reporting period from its Santa Ana Region industrial facility inventory. As indicated in **Section C-9.2.6**, the violation was observed prior to the facility inspection. A NNC was issued and corrective actions were taken by the responsible party. The subsequent inspection of the facility did not identify any additional issues. For the remaining inspected facilities, only housekeeping issues were noted and corrections were subsequently made to ensure BMPs are being fully implemented.

C-9.2.9 Reporting

For facilities that pose an imminent threat to human health or the environment, the County provides oral or e-mail notification to the Regional Board within 24 hours. Following initial 24 hour notification, the County sends a written report within 5 days detailing the nature of the threat and any corrective action taken. In addition, the County provides quarterly updates to the Santa Ana Regional Board regarding stormwater information gathered during site inspections of industrial facilities that are, or should be, regulated by the Industrial General Permit.

During the 2015-16 reporting period, the County identified no incidents during industrial inspection activities within its inventory that required notification to the Regional Boards. Reporting of enforcement actions and related issues are discussed in **Section C-9.2.8**.



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C-9.2.10 Training

Training and outreach for the Industrial Program is done concurrently with the Commercial Program. These efforts are summarized in **Section C-9.3.9**.

C-9.3 Commercial Program (LIP Section A-9.2)

C-9.3.1 Organization Chart

Figure A-9.1 of the LIP provides an organizational chart that identifies which County Departments are responsible for overseeing, implementing, and enforcing the Commercial Program.

C-9.3.2 Inventory

The County has developed a watershed based inventory of specific commercial sites/sources within its jurisdiction as required by both the Santa Ana and San Diego Region permits. Inventories are updated on an ongoing basis and include relevant information on ownership, size, location, etc. of commercial facilities in the unincorporated areas. Summaries of the commercial inventory are provided below in the following tables (permit categories with no facilities represented have been removed):

2015-16 Commercial Site/Source Inventory Summary

Commercial Site/Source (by Permit Category)	Santa Ana Region (By Watershed)				San Diego Region (By Watershed)				Totals
	San Gabriel River/ Coyote Creek	Anaheim Bay/ Huntington Harbour	Santa Ana River	Newport Bay	Aliso Creek	Laguna Coast	San Juan Creek	Dana Point Coastal Streams	
Automobile mechanical repair, maintenance, fueling, or cleaning	4	29	2	0	0	0	4	0	39
Automobile and other vehicle body repair or painting	0	6	0	0	0	0	0	0	6
Automobile (or other vehicle) impound, parking lots, and storage facilities	0	7	2	0	0	0	0	0	9
Eating or drinking establishments, including food markets and restaurants* (Food Facilities)	7*	8*	12*	38*	2*	0	51*	18*	136
Public School Eating or Drinking Facilities (Non-commercial)++	3++	0	0	2++	0	1++	4++	0	10
Botanical or zoological gardens and exhibits	0	0	0	0	1	0	0	0	1



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Landscaping (and Hardscape Installations)	1	0	1	0	0	0	0	0	2
Nurseries and greenhouses	1	1	3	0	0	0	5	0	10
Golf courses, parks and other recreational areas/facilities	0	2	3	1	1	2	33	0	42
Building material retailers and storage	0	2	0	0	0	0	0	0	2
Animal facilities (includes animal facilities such as petting zoos and boarding and training facilities)	0	3	5	1	0	0	3	0	12
Other commercial sites/sources determined to be significant contributors of pollutants to the MS4, or with a history of unauthorized discharges	0	1	3	0	0	0	0	0	4
Facilities tributary to 303(d) water body for pollutant generated on-site	0	0	0	0	1**	0	0	0	1
Facilities within/directly adjacent or discharging directly to ESA	0	0	0	0	0	0	0	45***	45
Total for all Categories	16	59	31	42	5	3	100	63	319

Notes: * This list is for solely Eating or Drinking Establishments. If a commercial site primarily falls into another inventoried category and happens to have a secondary food facility on-site, this facility is inventoried in its primary category. An example would be a golf course with a snack shop, which is inventoried as a golf course. The County will continue to monitor the Orange County Health Care Agency's (HCA) NPDES inspection results related to these secondary food facilities.

** This listing refers to the Santiago Ranch Stables leasehold upstream of Aliso Creek, which could also be considered an Animal Facility in the San Diego Region. For classification purposes, the 303(d) listing takes priority over the Animal Facilities classification.

*** These 45 listings are in reference to the Dana Point Harbor ESA. Dana Point Harbor commercial facilities that are not Eating or Drinking Establishments have other varying sub-classifications, but these sites have been inventoried as ESA priority within the County's commercial inventory. The restaurants and food facilities within Dana Point Harbor are inventoried with the Eating or Drinking Establishments.

++ In 2015-16, the County tracked NPDES inspection results provided by HCA for public school cafeterias in the unincorporated areas as part of its Existing Development Program; however, these sites are not considered commercial businesses and have been segregated from other commercial Eating or Drinking Establishments for this table. Private schools are maintained with the commercial Eating or Drinking Establishments.

The industrial/commercial data set is currently managed through a GIS database which is discussed in **Section C-9.2.2**. Many of the changes that occur to the inventory are related to businesses opening and closing in the unincorporated areas.



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C-9.3.3 Prioritization

Within the Santa Ana Regional Board area, the County prioritized commercial sites/sources as high, medium, or low based on their respective threat to water quality. Eating or drinking establishments are inspected routinely by the Orange County Health Care Agency (HCA), and these sites are inventoried separately from the commercial facility prioritization. The County’s commercial site prioritization distribution by watershed in the Santa Ana Regional Board area is provided in the following table:

2015-16 Summary of Commercial Site/Source Distribution by Watershed

Commercial Site/Source Prioritizations by Watershed	Santa Ana Region				Totals
	San Gabriel River/Coyote Creek	Anaheim Harbor / Huntington Harbour	Santa Ana River	Newport Bay	
Total High Priority Sites	0	6	2	1	9
Total Medium Priority Sites	3	4	10	0	17
Total Low Priority Sites	3	41	9	1	54
Subtotal of Prioritized Sites	6	51	21	2	80
Total Number of Eating or Drinking Establishments	10	8	12	40	70
Total Number of Facilities	16	59	33	42	150

Fourth Term Permit requirements in the Santa Ana Regional Board area specify that a minimum of 10% of the non-food facility commercial inventory be designated as high priority, and 20% of the non-food facility commercial inventory be prioritized as medium. As indicated in the table above, the County prioritized 9 out of 80 commercial sites as high (11%), 17 out of 80 commercial sites as medium (21%), and 54 out of 80 sites as low (68%).

Within the San Diego Regional Board area, both the Fourth and Fifth Term Permit requirements do not specify designation of high, medium, or low categories for commercial sites/sources. Instead, the commercial sites (excluding eating or drinking establishments) are combined with the industrial inventory (14 industrial facilities) to develop an inspection frequency of at least 20% of the inventory. The County’s commercial site/source distribution by watershed in the San Diego Regional Board area is provided in the following table:



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Commercial Site/Source Distribution by Watershed (No Prioritization Required)	San Diego Region				Totals
	Aliso Creek	Laguna Coast	San Juan Creek	Dana Point Coastal Streams	
Total Commercial Sites (excluding Eating or Drinking Establishments)	3	2	45	45	95
Total Number of Eating or Drinking Establishments	2	1	55	18	76
Total Number of Facilities	5	3	100	63	171

Mobile businesses are addressed through the countywide Mobile Business Pilot Program. Efforts of the Countywide Mobile Business Pilot Program are summarized in the 2015-16 Unified PEA Report. Additional details on the County’s mobile business inventory and practices are included in **Section C-9.6**.

C-9.3.4 BMP Fact Sheets

As indicated in **Section C-9.2.5**, the activity-based Industrial/Commercial fact sheets developed as part of the Existing Development Program are numbered IC1 - IC24 and are included as **Exhibit A-9.II** of the County’s LIP.

C-9.3.5 Inspections

The County inspects active commercial sites/sources in its inventory at the frequency shown in the following table (excluding eating or drinking establishments), which is also included in the County’s LIP:

Commercial Inspection Frequency

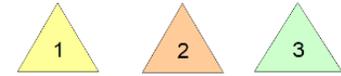
Priority	Santa Ana Region	San Diego Region
High	Annually - Minimum of 10%	<u>No Prioritization Required:</u> A minimum of 20% of the combined Industrial/Commercial Inventory must be inspected annually.
Medium	Biennially - Minimum of 20% (Once every 2 years)	
Low	Once Per Permit Cycle (Once every 5 years)	



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The number of commercial sites/sources inspected during the 2015-16 reporting period by commercial facility type is presented in the following table:

2015-16 Jurisdictional Summary of Commercial Site/Source Inspections



Commercial Site/Source Category	Number of Sites/Sources Inspected	
	Santa Ana Region	San Diego Region
Automobile mechanical repair, maintenance, fueling, or cleaning	6	3
Eating or drinking establishments, including food markets and restaurants* (Food Facilities)	50*	40*
Botanical or zoological gardens and exhibits	0	1*
Landscaping (and hardscape installations)	1	0
Nurseries and greenhouses	2	2
Golf courses, parks and other recreational areas/facilities	3	1*
Building material retailers and storage	2	0
Animal Facilities (includes animal facilities such as petting zoos and boarding and training facilities)	3	1
Other commercial sites/sources determined to be significant contributors of pollutants to the MS4, or with a history of unauthorized discharges	2	0
Facilities within/directly adjacent or discharging directly to ESA (San Diego Region/Dana Point Harbor Commercial Sites)	0	18
Commercial Site/Source Category	Santa Ana Region	San Diego Region
Industrial Facility Inspection Totals (San Diego Region)	N/A	14
Subtotal of Required Inspections Completed (Excluding Eating or Drinking Establishments)	19	38**
Total Inventory (Excluding Eating or Drinking Establishments)	80	109

*HCA provides annual NPDES commercial inspection services for Eating or Drinking Establishments countywide and maintains records associated with the inspection totals and results. Both the Santa Ana and San Diego Region Permits require Permittees to exclude these HCA inspections from determining



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the entire total of commercial NPDES inspections. Eating and Drinking Establishments include food preparations areas at facilities such as golf courses and fueling stations.

**The inspection requirement for the Fourth and Fifth Term San Diego Permits is a minimum of 20% of the combined industrial and commercial inventory annually. This number represents 14 industrial and 24 commercial facility inspections, or 35% of the combined inventory, conducted during this reporting period.

The results tabulated above indicate that the County conducted 19 commercial inspections out of a possible 80 facilities in the Santa Ana Regional Board area (excluding Eating or Drinking Establishments) during the 2015-16 reporting period. These commercial inspections included all 9 high priority sites, 9 medium priority facilities, and 1 low priority site. This represents full completion of the necessary high and medium priority inspections for the Fourth Term Permit in the Santa Ana Regional Board area.

Within the San Diego Regional Board area, the County conducted 24 commercial site inspections within the 2015-16 reporting period. By combining these 24 commercial inspections with the 14 industrial inspections, a total of 38 inspections were conducted out of a combined commercial/industrial inventory of 109 facilities (excluding Eating or Drinking Establishments from this calculation). Based on these totals, a total of 35% of the inventory was inspected, which exceeds the San Diego Region Permit requirements of 20%.

The County tracks commercial facilities that warrant additional investigation due to BMP deficiencies or other issues observed during the initial commercial facility inspection. This includes NPDES observations noted by HCA during inspections of Eating or Drinking Establishments in the County's unincorporated jurisdiction. The number of commercial sites/sources that warranted additional investigation in 2015-16, including Eating or Drinking Establishments, is presented below along with data on follow-up actions taken. The total number of commercial program inspections conducted countywide for this reporting period was 131. This was calculated by adding the total number of Eating or Drinking Establishments inspections from each region (50 and 40 respectively) to the subtotal of required commercial inspections completed for non-food facilities (19 and 24 respectively). Certain Eating or Drinking Establishments were inspected multiple times by County/HCA staff during this permit year, and the following table includes results from these inspections.



Summary of Additional Investigations by Watershed



Watershed	Number of Commercial Sites/Sources that Warranted Additional Investigation after Initial Inspection		
	2015-16	2014-15	2013-14
Aliso Creek	1	2	0
Dana Point Coastal Streams	0	3	5
San Juan Creek	16	3	16
Laguna Coastal Streams	1	0	0
Anaheim Bay/ Huntington Harbor	5	4	6
Newport Bay	12	6	3
San Gabriel River / Coyote Creek	6	2	1
Santa Ana River	3	2	2
Totals	44 (33%)	22 (19%)	33 (17%)

Watershed	Number of Commercial Sites/Sources with Follow-Up Action and/or Re-Inspection		
	2015-16	2014-15	2013-14
Aliso Creek	1	0	1
Dana Point Coastal Streams	0	3	5
San Juan Creek	10	3	2
Laguna Coastal Streams	0	0	0
Anaheim Bay / Huntington Harbor	2	4	8
Newport Bay	5	1	1
San Gabriel River / Coyote Creek	4	0	1
Santa Ana River	2	0	2
Totals	24 (17%)	11 (9%)	20 (10%)



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The percentage of commercial sites warranting additional investigation based on the initial inspection was 33% (44 of 133 inspections) in the 2015-16 reporting period, which is higher than the previous two reporting periods. The County coordinates responses on these food facilities through the following mechanisms (not all responses require follow-up field inspection to resolve the issue):

- Many of the businesses listed in the table above are Eating or Drinking Establishments that receive NPDES deficiencies from HCA for failing to properly manage their trash bins/refuse containers. A typical follow-up response to this type of deficiency may include a re-inspection of the food facility with the business owner and/or property manager for the commercial center. Since many of these Eating or Drinking Establishments share a common dumpster with other commercial retail businesses, the County has learned that a highly effective means of addressing the issue is to work with the property management company in addition to the individual food facility manager to resolve potential deficiencies.
- In other instances, a lack of grease records may be noted by the HCA inspector. In these cases, the County sends a letter to the site requesting that records be maintained and made available during inspections. In certain cases, verification of the records is requested from the business owner.
- For circumstances involving an illegal discharge from a food facility, such as washing down materials into the storm drain system, the County typically conducts follow-up inspections of the commercial facility to ensure proper BMP implementation and issue enforcement if necessary.
- Deficiencies at leased commercial sites within Dana Point Harbor are referred to Dana Point Harbor Department inspectors, who enforce on these issues as part of the County's lease agreements with the tenants.
- In certain cases, an enforcement action is needed to address violations of the County and/or OCFCD Water Quality Ordinance. Enforcement actions completed in 2015-16 are summarized in **Section C-9.3.7**.

C-9.3.6 BMP Implementation

As part of commercial facility inspections, the County inspectors determine the level of BMP implementation and also assess the effectiveness of the implemented BMPs. The inspector may encounter situations where BMPs are in place but are not effectively applied. The inspectors are trained to use their best professional judgment and decide how much time to allow the owner/operator to correct the issue. A summary of BMP implementation based on County inspections (including Eating or Drinking Establishments) is provided below.

The 2015-16 reporting year had a number of Eating or Drinking Establishments with multiple inspections. Based on these results and for purposes of the following table, a commercial site was only granted full BMP implementation if it received no deficiencies for the entire reporting



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period. Otherwise, facilities that received one or more BMP deficiencies were identified as having partial BMP implementation.

2015-16 Watershed Summary of BMP Implementation at Commercial Sites



Watershed	Number of Facilities with BMPs Fully Implemented	Number of Facilities with BMPs Partially Implemented	Number of Facilities With No BMPs or BMPs Not Fully Implemented	Number of Facilities Required to Implement or Upgrade/Modify BMPs
Aliso Creek	2	1**	0	1
Dana Point Coastal Streams*	28	0**	0	0
Laguna Coastal Streams	0	1**	0	0
San Juan Creek	16	17**	0	8
Anaheim Bay/Huntington Harbour	9	5**	0	4
Newport Bay	13	13**	0	5
San Gabriel River/Coyote Creek	5	6**	0	4
Santa Ana River	15	4**	0	3
Totals	88	47	0	25
Percentage of Facilities Required to Implement or Upgrade/Modify BMPs				
2015-16	2014-15		2013-14	
19% (25 out of 133 sites inspected)	9% (11 out of 117 sites inspected)		19% (29 out of 152 sites inspected)	

*HCA deficiencies at Dana Point Harbor Eating or Drinking Establishments are reported to Dana Point Harbor Department for follow-up. These businesses are routinely inspected for a variety of issues (including NPDES) by staff as part of their ongoing lease agreements.

**The County conducted follow-up investigations related to commercial sites with partial BMP investigation (primarily HCA Eating or Drinking Establishment inspection deficiencies). Some investigations are ongoing with issues that remain pending.

C-9.3.7 Enforcement

The County's Authorized Inspectors (identified in **Section C-10** of this PEA) undertake enforcement activities according to County and OCFCD Water Quality Ordinances and the accompanying Enforcement Consistency Guide. The enforcement mechanisms available are summarized in this section and detailed in the County's LIP. Water pollution enforcement may



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be handled administratively, or, in more serious instances, be prepared for criminal prosecution. As provided for in the Enforcement Consistency Guide (**Exhibit 4.I** of the **2003 DAMP**), when selecting enforcement options, the County’s Authorized Inspectors ensure that violations of a similar nature are subjected to similar types of enforcement remedies. More severe enforcement options may be selected when a violator has a history of deficiencies, has failed to take good faith actions to eliminate continuing violations, and/or has not met a previously imposed schedule for addressing violations.

During the 2015-16 reporting period, the County took the following enforcement actions against commercial sites/sources within its inventory:

2015-16 Summary of Enforcement Actions Commercial Sites



	Number of Educational Letters Sent	Number of Notices of Non-Compliance (NNC) Issued	Number of Administrative Compliance Orders (ACO) Issued	Number of Facilities Referred for Criminal Remedies
Totals	19	1	0	0

The County has transitioned to a standard enforcement/educational letter when a lack of grease interceptor maintenance records is the only issue identified at a restaurant. The County has found that this enforcement action has resulted in better upkeep of maintenance records (Level 3 Outcome) which translates to less potential for the grease interceptors to become a source of pollutants (potential Level 4 Outcome). The NNC issued during the 2015-16 reporting period was related to improper grease handling at a common use trash bin area in a commercial complex. In addition to the business owners that use the trash bin area, the property manager of the commercial complex was also notified of the BMP deficiencies and possible additional enforcement if corrective actions were not taken.

C-9.3.8 Reporting

For facilities that pose an imminent threat to human health or the environment, the County provides oral or e-mail notification to the Regional Board within 24 hours. Following initial 24 hour notification, the County sends a written report within 5 days detailing the nature of the threat and any corrective action taken.

Beyond the previously mentioned enforcement actions for commercial facilities, the County identified no incidents during commercial inspection activities within its inventory that required notification to the Regional Board.

C-9.3.9 Training and Outreach

Training





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The County as Principal Permittee sponsored training to assist municipal staff in understanding the industrial and commercial components of the Existing Development Program. County Authorized Inspector participation in training conducted during the reporting period is summarized in **Section C-10.5** of this PEA.

Outreach

The County continued to conduct outreach activities with industrial and commercial businesses within its jurisdiction to inform them of their responsibilities under this program. During the 2015-16 reporting period, this outreach effort included:

- Distribution of brochures, posters and the industrial/commercial BMP fact sheets through the website, field inspectors, at public facilities counters, etc.
- Posting information on the Existing Development Program (including the activity-based BMP fact sheets) on the County's website, www.ocwatersheds.com.

C-9.4 Residential Program (LIP Section A-9.3)

C-9.4.1 Organization Chart

Through its organization chart, **Figure A-9.2** of the LIP, the County identified which Departments are responsible for the implementation of the Residential Program.

C-9.4.2 Inventory

The County maintains a watershed-based map of residential areas within its jurisdiction in both Regional Board areas. Residential areas that discharge directly to an ESA may be targeted for enhanced implementation of BMPs based on the activities of concern that are identified. Additional information on this is included in **Section C-9.5.2**.

C-9.4.3 BMP Fact Sheets

BMP fact sheets have been developed as a part of the Existing Development Program. The fact sheets include a description of specific BMPs for high threat residential activities that may cause the discharge of pollutants and provide a focus on the pollution prevention measures that the facility should implement. The activity-based residential fact sheets are numbered R1 – R8 and are included as **Exhibit A-9.II** of the County's LIP. There were no modifications to the fact sheets during the reporting period.

The County has identified the following potential areas and activities that pose a high threat to water quality and/or potential sources of pollutants by following the procedure outlined in **DAMP Section 9.5.2**.

- Residential automobile repair, maintenance, washing, and parking;
- Home and garden care activities and product use (including the use and disposal of pesticides, herbicides, and fertilizers);



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- Collection and disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, household cleaning products);
- Any other residential source that the County determines may contribute a significant pollutant load to the MS4;
- Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon, the ocean, or other receiving waters within an environmentally sensitive area.

These residential activities are assumed to occur with equal likelihood in all residential areas within the County's jurisdiction. The implementation of the Residential Program is designed to address these activities on a countywide basis.

C-9.4.4 Enhanced Implementation

On February 11, 2015 the Fifth Term Permit for the San Diego Region was adopted. One requirement of this new permit is to implement a MS4 Outfall Discharge Monitoring Station Inventory by which all major outfalls that discharge to receiving waters must be visually inspected. Data from these monitoring activities will be used to characterize outfall flow conditions and prioritize subwatershed areas as part of WQIP development for South Orange County. A draft WQIP is due by April 1, 2017 and will guide future Existing Development program efforts.

C-9.4.5 Water Pollution Complaints/Incidents

The County Residential Program relies upon observations by municipal employees working in or assigned to residential areas and on complaints received from the public through the water pollution problem reporting hotline and website.

The County tracks water pollution complaints under the ID/IC program and provides a summary of the number of complaints received, including residential runoff enforcement actions, and the source area associated with the complaint (e.g. commercial business, resident, etc.). Additional information on residential enforcement is provided as part of **Section C-10** of this PEA.

C-9.4.6 Enforcement

Enforcement actions taken by the County throughout its jurisdiction, including those against individual residents, are summarized in **Section C-10** of this PEA.

C-9.4.7 Outreach and Training

Outreach



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Education and outreach targeted towards residents is a major component of the Residential Program. The County encourages the implementation of a set of designated BMPs for residents. The BMPs are presented in a series of fact sheets specific to high threat residential activities. The County has developed outreach efforts to encourage the use of the designated BMPs. This outreach has included efforts such as mass media advertising campaigns, mailings, holding workshops, development and distribution of brochures, posters, fact sheets, posting information on the County's webpage, etc. Information on specific outreach efforts can be referenced in **Section C-6** and **Section 6** of the PEA Unified Report.

Training

Successful implementation of the residential program relies on education of municipal employees that conduct activities in residential areas. For the County, it is primarily OC Public Works/Operations & Maintenance field program crews who are entering into residential areas on a routine basis to maintain the public infrastructure. Training efforts during the 2015-16 reporting period covering municipal activities are discussed in **Section C-5** of this PEA. While many of the field programs conducted by the County are inherently pollution prevention practices (such as street sweeping and drainage facility cleaning), the field program crews are trained to notify the County's Authorized Inspectors (identified in **Section C-10**) of any issues impacting or having the potential to impact runoff from residential areas.

C-9.5 CIA/HOA Program (LIP Section A-9.4)

C-9.5.1 Organization Chart

The County utilizes the LIP residential organization chart (**Figure A-9.2**) and **Section A.6** of the LIP to implement its CIA/HOA Program.

C-9.5.2 Inventory

As part of its LIP, the County has expanded its use of GIS mapping to facilitate various components of the Existing Development program, including utilizing watershed-based mapping of residential and CIA/HOA areas within its jurisdiction. Residential communities that discharge directly to an ESA may be targeted for enhanced implementation of BMPs based on the activities of concern that are identified. In addition, GIS mapping has been essential to responding to complaints or reported ID/IC issues within the unincorporated CIA/HOA areas. The GIS mapping and inventorying of residential and CIA/HOA communities has also been incorporated into post-construction BMP verification activities, which are discussed in **Section 9.7** below.

C-9.5.3 BMP Fact Sheets

BMP fact sheets have been developed as part of the Existing Development program. The fact sheets include a description of specific BMPs for high threat CIA/HOA activities that may discharge pollutants and provide a focus on the pollution prevention measures that the



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community or facility should implement. The activity based fact sheets that were developed are included in **Exhibit A-9.II** of the County's LIP.

C-9.5.4 Enforcement Actions

Enforcement actions conducted by the County throughout its jurisdiction, including CIA/HOA areas, are summarized in **Section C-10** of this PEA.

C-9.5.5 Outreach and Training

Outreach

As described in **Section C-9.4.7**, there are a number of ways in which the County performs general outreach to residents. CIA/HOA communities present a tremendous opportunity for outreach due to their organizational structure, and the County encourages and promotes distribution of stormwater education material through association newsletters, association websites, etc.

In addition to this outreach, the County interacts with multiple CIA/HOA entities through other relevant Existing Development programs. These interactions included direct inspections of CIA/HOA managed facilities such as commercial parks and common recreational areas within CIA/HOA authority as part of the commercial inspection programs. Appropriate property management associations are contacted to assist with issues observed, such as catch basin maintenance, street sweeping frequencies, irrigation, and landscape maintenance procedures. The following HOAs were included in this outreach effort in 2015-16.

- LARMAC (Ladera Ranch)
- CZ Master Association (Coto de Caza)
- Westar Associates (Ladera Ranch)
- First Service Residential (Rancho Mission Viejo)

In addition to utilizing commercial inspections, the post-construction BMP verification program has provided an additional pathway for outreach to CIA/HOA communities that have WQMP(s) for prior development or redevelopment projects. Opportunities to coordinate additional outreach concurrently with the post-construction BMP verification program are being considered.

The CIA/HOA outreach also uses similar outreach techniques to the residential program such as mass media advertising, which is discussed in **Section 9.4.7**.

C-9.6 Mobile Business Program

The model Mobile Business Pilot Program was developed in 2009-10 by the Orange County Stormwater Program as part of the Fourth Term Permit implementation in both Regional Board areas. The Mobile Business Pilot Program subsequently commenced in 2010-11 with the



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development of an online, countywide inventory and enforcement database that contains mobile business inventories for each jurisdiction in Orange County. Along with other city jurisdictions, the County supplied a list of mobile businesses for a variety of mobile business categories that are based and/or operating within its unincorporated area to initially populate the County's portion of the database. Currently there are more than 1,780 mobile businesses in the database and the County continues to update the inventory on an ongoing basis. New mobile businesses are identified through a variety of means including public outreach, complaint response, inquiries from mobile businesses on BMP requirements, and coordination with cities and regulatory agencies.

C-9.7 Post-Construction BMP Inspection and Verification for Existing Development

The County conducts post-construction BMP verifications to assure that implementation and appropriate maintenance described in a project's WQMP/WQP is taking place during the post-construction phase. **Section C-7** of this PEA contains a summary of newly approved WQMPs/WQPs during the 2015-16 reporting period for proposed new development and redevelopment. This section discusses the current WQMP/WQP inventory and conducted post-construction BMP verification inspections. The inventory includes private sector industrial, commercial, residential, and CIA/HOA sites within County unincorporated areas and County municipal facilities and capital improvement projects with approved WQMPs/WQPs.

During the reporting period the County WQMP/WQP inventory was migrated from a proprietary web-based system called MS4Web to an ESRI enterprise geodatabase to allow for greater integration with mobile applications and other County databases. The County's WQMP/WQP inventory is made available through the following web link:

County of Orange MS4 Map: <http://arcg.is/2eZHGX6>

WQMP/WQP Inventory (As of October 1, 2016)

	Santa Ana Region*		San Diego Region**	
	Public	Private	Public	Private
WQMP (Post-Construction Priority Projects) Inventory	42	26	10	148
WQP (Post-Construction Non-Priority Projects) Inventory	16	7	5	13
Totals	58	34	13	161

*The current Santa Ana Region Permit requires that the WQMP/WQP database include information regarding structural treatment control BMPs installed after May 22, 2009. The numbers listed above reflect this requirement, but also include projects with treatment control BMPs constructed prior to this date.

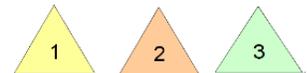
**The current San Diego Region Permit requires that the inventory of priority development projects and associated structural BMPs are included beginning February 2003. The numbers listed above reflect this requirement, but also include some projects with structural BMPs constructed prior to this date.



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Verification of post-construction BMP implementation and ongoing maintenance is conducted by inspection, drive-by surveys, and self-certifications. Inspections of post-construction BMPs on private property are conducted when access is granted by the property owner or verification can be completed by a drive-by survey. When access is denied or a drive-by survey is infeasible a self-certification verification form, requested from the property owner or designee, serves as verification.

For private property WQMPs/WQPs, the County retained a consultant to assist with post-construction BMP verifications in 2015-16. Inspections are conducted annually prior to the start of the wet season. The following table summarizes the post-construction BMP inspections/assessments conducted:



Post-Construction BMP Inspection Summary

Inspection Summary	2016				2015			
	Santa Ana Region		San Diego Region		Santa Ana Region		San Diego Region	
	Public	Private	Public	Private	Public	Private	Public	Private
Number of Projects with Structural BMPs	41	26	10	50	39	21	8	45
Number of Projects that Utilize Regional BMPs	0	0	0	97*	0	0	0	97*
Structural BMP Inspections	41	14	10	84	39	21	8	64
Number of Projects Identified to have BMP Deficiencies	17	2	4	5	7	6	1	2

*Includes some projects that utilize regional BMPs and have structural BMPs.

In the Santa Ana Region, all public projects WQMPs with structural treatment control BMPs were inspected in 2016. For private projects, 14 of the 26 WQMPs with structural treatment control BMPs were inspected. This equals 54% of the private project inventory which exceeds the required minimum of 25% specified by the Santa Ana Region Fourth Term Permit.

In the San Diego Region, all public project WQMPs with structural treatment control BMPs were inspected in 2016. A total of 84 inspections were conducted for private projects which included individual projects with structural treatment controls as well as projects that utilize regional BMPs. Projects not inspected included 10 commercial facilities with structural BMPs and 31 single-family residences where access to the property was either not granted or the property owner was unresponsive. None of these projects are considered as high priority for inspection. The San Diego Fifth Term Permit requires only projects designated as high priority to be inspected annually. During the 2016-17 reporting period a self-certification form will be sent to the single-family property owners as an alternative form of verification and commercial facilities not inspected in 2015-16 will be inspected.



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In 2015 post-construction BMP deficiencies were noted at 8 private projects and 8 public projects. During the reporting period private landowners were notified of the deficiencies and requested to make corrections and provide documentation of those corrections, if necessary. Deficiencies at the County municipal projects were addressed through additional BMP maintenance.

In 2016 post-construction BMP deficiencies were noted at 7 private projects and 21 public projects. Follow up actions to ensure correction of these BMPs have been or will be initiated during the 2016-17 reporting period. For BMPs deficiencies at public projects County inspectors have notified the responsible County department and requested that additional maintenance or other corrective action be conducted. For BMP deficiencies on private property the County notifies that landowner and requests the corrective action.

C-9.8 Existing Development Program Modifications

During the reporting period, the County updated the DAMP inspection form template for commercial/industrial facilities seeking to add better consistency for Permittee unified reporting and correlate inspection findings with identified watershed pollutants of concern. The County also developed a mobile inspection form for industrial/commercial inspections in unincorporated areas helping to increase the efficiency of the inspection process. A similar mobile application form was developed for post-construction BMP inspections.

With the adoption of the San Diego Region Fifth Term Permit and the continued development of a WQIP for south Orange County, the County will continue to evaluate its Existing Development Program to ensure compliance with new permit requirements. Planned program activities include:

- Migration of the County's Automated Permitting and Planning System to a GIS-based Land Management System. This change is expected to greatly improve the efficiency and integration of the County's planning and development databases with its asset management and stormwater databases.
- Training and initial implementation of the new CASQA PEA Manual.

As adoption of a Fifth Term Permit in the Santa Ana Region is still pending no further program modifications are proposed at this time under the Fourth Term Permit.