#### C-8.0 CONSTRUCTION

### C-8.1 Introduction

The Permittees regulate construction activities and have responsibility for the construction and reconstruction of municipal facilities and infrastructure. Concern over construction sites as a major source of sediment and other pollutants has meant that construction activity has been a focus of the Permittees' compliance program since the First Term Permits.

The purpose of DAMP Section 8.0 is to establish requirements and guidelines for pollution prevention methods that must be used by construction site owners, developers, contractors, and other responsible parties, in order to protect water quality from discharges as a result of construction site activities. Specifically, it requires all construction projects regardless of size to implement an effective combination of erosion and sediment controls and waste and materials management BMPs. To ensure that the Program is implemented, each jurisdiction conducts inspections before the rainy season to verify the appropriateness and implementation of BMPs and takes enforcement action as necessary. Training is provided annually to support consistent countywide implementation.

## C-8.2 Accomplishments

# C-8.2.1 Model Construction Program

This Model Construction Program has been implemented since the 2002-03 reporting period.

Inventory construction sites

The Permittees maintain inventories of construction sites. These inventories are not tracked on a Countywide level.

Prioritize construction sites based upon water quality threat

During 2012-13, the Permittees reported 7,123 construction sites on their inventory, comprising 1,121 high priority sites, 429 medium priority sites and 5,573 low priority sites (**Table C-8.1**).

Prepare BMP Guidance

The Permittees have produced a *Construction Runoff Guidance Manual* and it is available at <a href="www.ocwatersheds.com">www.ocwatersheds.com</a>. Updates to ensure consistency with the Construction General Permit (Order 2009-0009-DWQ), incorporate the 2004-05 Erosion Control BMP Field Evaluation and to incorporate guidance on dewatering and BMPs appropriate for small construction sites were completed in 2012-13. The manual informed the pre-wet season construction training held on

September 24 and 25, 2013.

## Conduct Inspections of Construction Sites

Of the 7,123 construction sites inspected by the Permittees during the reporting period, 463 sites were found to be out of compliance, resulting in a total of 481 reinspections (**Table C-8.1**, **Table C-8.2** and **Figure C-8.1**).

#### Undertake Enforcement

As a result of the 2012-13 inspections, the Permittees reported issuing 505 educational letters, 110 notices of non-compliance, 25 administrative compliance orders, 3 cease and desist orders, and 4 misdemeanor/infractions for a total of 647 enforcement actions (**Table C-8.3 and Figure C-8.2**).

## Conduct Training

To assist responsible municipal and contract/lease staff in understanding the Construction Program, two training modules have been developed:

- 1) Construction Program Management.
- 2) Inspecting Construction Site BMPs.

Pre-wet season construction inspection training was provided to inspectors on September 25 and 26, 2012. Approximately 260 staff attended this training.

Qualified SWPPP Developer (QSD) and Qualified SWPPP Practitioner (QSP) training was provided to NPDES Program staff and construction inspectors on May 24, 29 and June 5, 2012. Approximately 130 staff attended this training.

# C-8.3 Assessment

The current and potential Program effectiveness Assessment Outcome Levels for the current program are summarized in **Table C-8.4**.

## C-8.3.1 Model Construction Program

#### *Inventories*

The year-to-year status of the Permittees' inventories is not tracked at a countywide level and consequently this aspect of the model program must be assessed at a jurisdiction level.

#### Prioritization

The Permittees prioritize construction sites based upon a consideration of the size and type of construction, time of construction, location, and site topography. There

continues to be inconsistent jurisdictional prioritization (**Table C-8.1 and Figure C-8.1**) although in some cases this represents the unilateral decision of a number of Permittees to give all construction sites a high priority designation.

# Inspection

The Permittees inspect construction sites to verify that the requirements of the DAMP are being implemented. The inspection frequency is determined by the season ("Wet" or "Dry") and a site's prioritization. The need for follow-up inspections also contributes significantly to the overall level of activity within a reporting period.

**Headline Indicator – Inspection Activity:** In 2012-13, the Permittees inspected 1,121 high priority sites, 429 medium priority sites, and 5,573 low priority sites. These figures compare to 2011-12 (1,737 high priority sites, 437 medium priority sites, and 6,792 low priority sites); 2010-11 (2,331 high priority sites, 574 medium priority sites, and 6,514 low priority sites); 2009-10 (1,456 high priority, 705 medium priority, and 6,699 low priority sites); and, 2008-09 (556 high priority, 2,084 medium priority, and 8,540 low priority sites) (**Table C-8.1 and Figure C-8.1**).



Level 1: Documenting Stormwater Program Activities

There were less inspections this reporting period than previous years (2008-09: 12,059; 2009-10: 8,860; 2010-11: 9,149; 2011-12: 8,966; 2012-13: 7,123). Indeed, the number of inspections performed FY 2012-13 is 41% less than what was reported in 2008-09. This reduction in inspection activity is likely attributable to industry economic stress.

While the Permittees have previously sought to "clarify inspection frequencies, violation definitions and re-inspection requirements" as a means of better prioritizing the use of inspection resources, the specific requirement of the Santa Ana Fourth Term Permit (Section VIII.5.b) to conduct follow-up inspections weekly until compliance is restored, effectively preempts this intent for North Orange County.

### Enforcement

Inspectors implement the Model Construction Program by enforcing compliance with grading or building permits, sediment and erosion control plans, and the Water Quality Ordinance. The enforcement actions that may be taken by inspectors include, but are not limited to, verbal warnings, administrative actions under the Water Quality Ordinance (notice of violation, administrative compliance order, etc.) and written actions under Building/Grading Ordinances (corrective action notice, stop work order, etc.).

**Headline Indicator – Extent of Compliance:** In 2012-13, 463 construction sites were found to be out of compliance, which resulted in 481 sites requiring re-inspection. These figures compare to 2011-12 (274 construction sites required 357 re-inspections); 2010-11 (462 construction sites required 529 re-inspections); 2009-10 (467 construction sites required 570 re-inspections); 2008-09 (838 construction sites required 1,326 re-inspections) (**Table C-8.2 and Figure C-8.3**).

Level 1: Documenting Stormwater Program Activities

Level 3: Changing Behavior

Headline Indicator – Number and Level of Enforcement Actions: Arising from the 2012-13 inspections, there were 647 Enforcement Actions, comprising 505 Educational Letters, 110 Notices of Non-compliance, 25 Administrative Compliance Orders, 3 Cease and Desist Orders, and 4 Misdemeanor/Infractions. These figures compare to 2011-12 (671 Enforcement Actions, comprising 315 Educational Letters, 340 Notices of Non-compliance, 11 Administrative Compliance Orders, 5 Cease and Desist Orders, and no Misdemeanor/Infractions); 2010-11 (979 Enforcement Actions, comprising 784 Educational Letters, 172 Notices of Non-compliance, 19 Administrative Compliance Orders, 3 Cease and Desist Orders, and 1 Misdemeanor/Infraction); 2009-10 (940 Enforcement Actions); 2008-09 (497 Enforcement Actions) (Table C-8.3 and Figure C-8.2).

The number and type of enforcement activities vary from year to year; however, the percentage of construction sites out of compliance has been consistently much lower each year than the 10.9% in 2008-09 (5.0% in 2009-10, 4.9% in 2010-11 and 3.1% in 2011-12) and was 6.5% 2012-13. Notably, for the period of the Fourth Term Permits, 90% of constructions sites are consistently found each year to be in compliance which represents a high overall level of compliance within the regulated community. This performance may be attributable to the long term impact of inspection program and the implementation of the new Statewide Construction General Permit requirements, including new requirements for a QSD to prepare a construction site's SWPPP, and a QSP to ensure that the SWPPP is being correctly implemented. At the same time, however, the differences in the number and type of enforcement actions between jurisdictions suggests that there are still opportunities for improving enforcement consistency and reporting on a countywide basis.

## 2013-14 Program Focus:

• Review the Enforcement Consistency Guide and provide further guidance to the Permittees on the use and reporting of the different types of enforcements actions.

### Training

The Permits require that staff is adequately trained. In response, the Permittees developed two training modules and a guidance manual and additionally provide annual pre-wet season training.

## 2013-14 Program Focus:

• Deliver training modules supportive of the specified expertise and technical competencies established for individuals in the *Construction Inspector* position.

## C-8.4 Summary

The Third Term Permits have required the Permittees to develop and implement a formal inspection program commencing with an initial prioritized inventory of construction sites, and these efforts continue into the Fourth Term. Over the ten years prior to the current reporting period, there has been a decline in the number of construction sites out of compliance that, despite some uncertainties with respect to reporting, indicates a high level of BMP implementation and compliance with local water quality and grading/building ordinances by the regulated community. However, there is also the likely influence of the prevailing economic conditions which have produced a precipitous decline in overall construction activity. In 2013-14 the emphasis of the program development effort will be on providing training supportive of the further development of staff expertise.

Table C-8.1: Construction Sites Inspected: Comparison of 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13

PERMITTEES	HIGH	HIGH	HIGH	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	Low	LOW	LOW	LOW	LOW	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
PERMITTEES	2008-09	2009-10	2010-11	2011-12	2012-13	2008-09	2009-10	2010-11	2011-12	2012-13	2008-09	2009-10	2010-11	2011-12	2012-13	2008-09	2009-10	2010-11	2011-12	2012-13
Aliso Viejo	9	6	6	4	4	0		0	0	0	120	147	129	102	100	129	153	135	106	104
Anaheim	1	5	2	3	0	20	2	1	5	11	547	391	294	265	225	568	398	297	273	236
Brea	3	1	6	3	2	7	0	1	1	1	33	42	24	16	7	43	43	31	20	10
Buena Park	9	12	8	11	0	118	79	4	7	0	936	1,160	375	882	298	1,063	1,251	387	900	298
Costa Mesa	7	1	3	3	3	12	0	0	0	0	4	0	18	78	32	23	1	21	81	35
Cypress	2	14	2	0	1	3	0	64	0	0	227	137	221	225	266	232	151	287	225	267
Dana Point	7	1	.0	3	1	9	14	11	4	1	524	654	771	525	542	540	669	782	532	544
Fountain Valley	0		0	3	3	2	1	0	2	0	37	66	45	32	25	39	67	45	37	28
Fullerton	0		0	0	0	5		6	8	9	5		905	1,483	1,392	10	0	911	1,491	1,401
Garden Grove	0	0	0	0	0	11	0	0	0	0	0	16	40	43	25	11	16	40	43	25
Huntington Beach	88	13	75	49	15	34	4	11	17	10	354	442	291	182	266	476	459	377	248	291
Irvine	28	16	38	30	47	29	23	27	25	6	23	23	24	21	28	80	62	89	76	81
La Habra	5	12	4	2	3	0	6	0	2	1	93	44	30	39	40	98	62	34	43	44
La Palma	0	1	1	0	4	0	0	0	0	0	1	1	0	1	0	1	2	1	1	4
Laguna Beach	14	10	14	0	10	34	62	34	0	0	6	6	0	0	0	54	78	48	0	10
Laguna Hills	214		0	0	0	0	1	1	1	1	0	294	271	245	160	214	295	272	246	161
Laguna Niguel	9	0	0	0	0	1,030	9	2	1	2	3,612	1,226	1,841	1,397	1,064	4,651	1,235	1,843	1,398	1,066
Laguna Woods	2	0	DNR	1	1	1	0	DNR	0	0	9	2	DNR	5	5	12	2	DNR	6	6
Lake Forest	0	0	3	5	4	15	9	5	13	10	172	249	170	190	145	187	258	178	208	159
Los Alamitos	0	0	DNR	DNR	1	0	0	DNR	DNR	-1	81	18	DNR	DNR	17	81	18	DNR	DNR	19
Mission Viejo	72	51	80	38	29	175	152	113	194	94	0	0	0	0	0	247	203	193	232	123
Newport Beach	30	68	67	57	23	28	42	0	0	NA	564	620	258	351	113	622	730	325	408	136
Orange	1	0	0	5	10	12	0	6	0	0	194	43	100	100	24	207	43	106	105	34
Placentia	0	DNR	DNR	DNR	0	3	DNR	DNR	DNR	0	3	DNR	DNR	DNR	14	6	0	DNR	DNR	14
Rancho Santa Margarita	2	1	2	8	12	0	0	0	0	0	137	81	52	83	46	139	82	54	91	58
San Clemente	3	3	3	11	9	417	239	252	141	160	0	0	0	0	0	420	242	255	152	169
San Juan Capistrano	20	11	6	DNR	6	39	27	2	DNR	76	340	200	19	DNR	125	399	238	27	DNR	207
Santa Ana	1	2	0	40	31	65	7	9	0	32	76	37	0	0	35	142	46	9	40	98
Seal Beach	0	2	0	0	0	0	2	0	2	0	151	164	168	113	90	151	168	168	115	90
Stanton	0	0	0	0	0	4	6	3	1	2	97	42	60	75	90	101	48	63	76	92
Tustin	25	10	0	1	1	0	10	9	8	7	0	15	5	7	11	25	35	14	16	19
Villa Park	0	0	0	0	0	0	0	0	0	0	41	67	22	23	36	41	67	22	23	36
Westminster	0	0	0	0	0	7	4	8	3	4	150	372	324	297	340	157	376	332	300	344
Yorba Linda	4	8	11	9	11	4	6	5	2	1	3	140	57	12	12	11	154	73	23	24
County of Orange/OCFCD	879	1,208	2,000	1,451	890	*See explanatio n below	*See explanatio n below	*See explanatio n below	*See explanatio n below	٠	*See explanatio n below	*See explanatio n below	*See explanatio n below	*See explanatio n below	•	879	1,208	2,000	1,451	890
Totals	1,435	1,456	2,331	1,737	1,121	2,084	705	574	437	429	8,540	6,699	6,514	6,792	5,573	12,059	8,860	9,419	8,966	7,123

DNR = Did Not Report - See individual Permittee PEA

<sup>\*</sup> The database system the County uses to track construction inspections does not differentiate between high, medium, and low priority construction sites; therefore, all sites are classified as "high" priority. NA = Not Available

Table C-8.2: Inspection Results: Comparison of 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13

	200	8-09	200	9-10	201	0-11	201	1-12	2012-13		
PERMITTEES	Number of Construction Sites Out of Compliance		Number of Construction Sites Out of Compliance		Number of Construction Sites Out of Compliance		Number of Construction Sites Out of Compliance		Number of Construction Sites Out of Compliance		
Aliso Viejo	5	5	5	5	10	10	5	5	4	4	
Anaheim	85	130	45	80	5	8	6	6	1	3	
Brea			4	0	1	1	1	3	0	0	
Buena Park	24	39	16	17	10	8	13	10	12	12	
Costa Mesa	7	14	1	7	1	4	14	28	8	16	
Cypress	18	18	3	10	8	8	17	21	6	13	
Dana Point	57	57	13	13	45	45	23	28	23	26	
Fountain Valley	7	7	0	0	4	4	6	12	3	9	
Fullerton	7	7			1	1	0	0	4	4	
Garden Grove	3	1	12	6	15	12	8	7	13	5	
Huntington Beach	24	1	10	1	18	9	20	8	78	7	
Irvine	16	16	6	6	2	2	0	0	1	1	
La Habra	35	6	3	17	11	7	6	8	6	7	
La Palma			0	0	0	0	0	0	0	0	
Laguna Beach	7	7	2	1	4	1	0	0	31	31	
Laguna Hills	19	19	25	25	14	14	4	4	5	44	
Laguna Niguel	400	810	8	20	25	25	13	30	5	8	
Laguna Woods			0	0	DNR	DNR	1	1	0	0	
Lake Forest	8	8	30	30	17	17	5	5	9	12	
Los Alamitos	1	1	2	2	DNR	DNR	DNR	DNR	0	0	
Mission Viejo	35	60	24	34	19	95	28	65	31	60	
Newport Beach	24	28	18	22	8	8	10	10	8	8	
Orange	2	2	1	1	0	0	2	4	0	0	
Placentia					DNR	DNR	DNR	DNR	2	2	
Rancho Santa Margarita	5	5	5	5	0	0	6	14	11	11	
San Clemente*					DNR	DNR	N/A	N/A			
San Juan Capistrano	16	16	8	8	11	11	DNR	DNR	7	7	
Santa Ana	6	7	4	7	0	0	2	2	11	11	
Seal Beach	3	3	7	7	1		2	2	1	1	
Stanton	1	1	5	5	2	2	0	0	0	0	
Tustin	8	13	18	35	2	3	3	4	1	1	
Villa Park	2	2	11	11	1	1	0	0	3	3	
Westminster	10	35	4	12	8	16	7	14	5	5	
Yorba Linda	3	8	6	12	9	7	8	3	4	0	
County of Orange/OCFCD	231		171	171	210	210	64	63	170	170	
Totals	1,069	1,326	467	570	462	529	274	357	463	481	

DNR = Did Not Report - See

<sup>\* [</sup>San Clemente] Construction site violations are accounted for under Section C-10 (when violations are identified, the construction inspectors call the City's enforcement staff for the enforcement follow-up).

N/A = Not Applicable

Table C-8.3: Enforcement Action Taken: Comparison of 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13

			FY 2008-09					FY 2009-10					FY 2010-11		· 5			FY 2011-12					FY 2012-13		
PERMITTEES				Criminal Remedies	Administrative Remedies Criminal Remedies					Administrative Remedies Criminal Remedies					Administrative Remedies Criminal Remedies					Administrative Remedies				Criminal Remedies	
	No. of EL/VW	No. of NON	No. of AC	Number of C&D Orders	Misdr, Infret	No. of EL/VW	No. of NON	No. of AC	Number of C&D Orders	Misdr, Infret	No. of EL/VW	No. of NON	No. of AC	Number of C&D Orders	Misdr, Infrct	No. of EL/VW	No. of NON	No. of AC	Number of C&D Orders	Misdr, Infret	No. of EL/VW	No. of NON	No. of AC	Number of C&D Orders	
Aliso Viejo	5					17	0	12	0	0	3	0	7	1	0	- 3	2	2	4	0	12	0	3	2	0
Anaheim	85	- 8	- 5			62	1		9	1	3	2	0	1	0	6	1	0	0	0	0	0	0	0	0
Brea						3	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Buena Park	22	16	3			1	13	2	2	0	399	5	2	0	0	3	- 11	0	0	0	4	.11	1	0	0
Costa Mesa			7			1				- 3	8	1	0	0	1	14	0	0	0	0	8	0	0	0	0
Cypress		16					13				8	0	0	0	0	- 5	0	0	0	0	4	2	0	0	0
Dana Point*	6	49			2	4	8	2				45	0	0	0	1	18	4	0	0	1	19	3	0	0
Fountain Valley	4		2	2		NA.	NA.	NA	NA.	NA	4	0	1	0	0	6	0	1	0	0	15	3	3	0	0
Fullerton		4	1		1	5	19	- 6	0	0	1	1	0	0	0	11	0	1	0	0	4	3	0	0	3
Garden Grove		3	1			17	1	1	0	0	11	1	0	- 1	0	19	1	1	1	0	7	2	0	0	0
Huntington Beach		19	28			-	8	-11			0	13	5	0	0	15	4	1	0	0	79	9	10	0	0
Irvine		16				- 11	6	0	0	0	21	2	0	0	0	14	0	0	0	0	12	1	0	0	0
La Habra	35	- 1	- 3			7	2	0	0	0	- 11	0	0	0	0	18	- 6	0	0	0	32	5	- 1	1	0
La Palma						12		1000			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna Beach	-	2				3	2	1	0	- 1	2	1	1	0	0	0	0	0	0	0	20	9	0	0	0
Laguna Hills	18	1	- 3			24	1				14	4	0	0	0	4	0	0	0	0	44	0	0	0	0
Laguna Niguel		13				28	0	0	0	0	32	1	0	0	0	33	0	0	0	0	12	0	0	0	0
Laguna Woods						1	0	0	0	0	DNR	DNR	DNR	DNR	DNR	0	1	0	0	0	0	0	0	0	0
Lake Forest		8				46	16	1	0	0	16		1			2	3	0	0	0	- 8	3	NA.	NA.	NA.
Los Alamitos	1	1				NA .	NA.	NA	NA.	NA .	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	0	0	0	0	0
Mission Viejo		27				26	14	0	0	0	87	8	0	0	0	45	22	0	0	0	43	15	NA NA	NA.	NA NA
Newport Beach		24	7			-	22	4			0	7	1	0	0	0	10	0	0	0	0	8	0	0	0
Orange		2				0	0	0	- 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Placentia	-	2	5	2		NA.	NA	NA	NA.	NA .	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	0	0	0	0	0
Rancho Santa Margarita	- 5					7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Clemente**	_	13			$\vdash$	120	13	35			**		**			- 14	**	***	"			**	**		**
San Juan Capistrano	15	1									0	11	0	0	0	DNR	DNR	DNR	DNR	DNR	0	7	0	0	0
Santa Ana		2				0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	4	0	0
Seal Beach		3				7	0	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0
Stanton		1				4	1	1	0	0	2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
Tustin		1				21	10	0	0	0	0	2	0	0	0	0	4	0	0	0	0	1	0	0	0
Villa Park	2	2	- 8			17	3	2	1	0	6	1	1	0	0	0	0	0	0	0	15	0	0	0	0
Westminster		10				15	3	0	0	0	8	3	0	0	0	0	6	1	0	0	NA .	5	0	0	1
Yorba Linda	3					18	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
County of Orange/OCFCD	5	226	0	0	0	10	171	0	0	0	146	64	0	0	0	114	250	0	0	0	179	5	0	0	0
Totals	206	462	53	4	3	487	370	78	4	1	784	172	19	3	1	315	340	-11	5	0	505	110	25	3	4

DNR = Did Not Report - See individual Permittee PEA

NA = Not Available

<sup>\* [</sup>Dana Point] Per revised LIP verbal warnings are effective, obtain compliance while on site and not documented by written record. AC = Citations

\*\* [San Clemente] Construction site violations are accounted for under Section C-10 (when violations are identified, the construction inspectors call the City's enforcement staff for the enforcement follow-up).

Table C-8.4: Current and Potential Outcome Levels (Construction)

	Effectiveness Assessment Outcome Levels												
Construction	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6							
Program Component	Document Stormwater Program Activities	Raise Awareness	Change Behavior	Load Reduction	Runoff Quality	Receiving Water Quality							
Inventory	✓ Maintain inventory												
Prioritization	✓ Assign priorities												
Inspection	✓ Conduct and track number of inspections		P # BMPs implemented	P Load reduction associated with BMPs									
Enforcement/ Reporting	✓ Conduct enforcement		✓ Extent and correction of problem resulting from enforcement										
Training	✓ Track number/type of training sessions	<sup>P</sup> Surveys of trainees show improved knowledge											

# Key:

<sup>✓ =</sup> Currently Achieved Outcome Level

<sup>&</sup>lt;sup>P</sup> = Potentially Achievable Outcome Level

Figure C-8.1 Construction Site Inspections & Prioritizations, 2008-09 to 2012-13

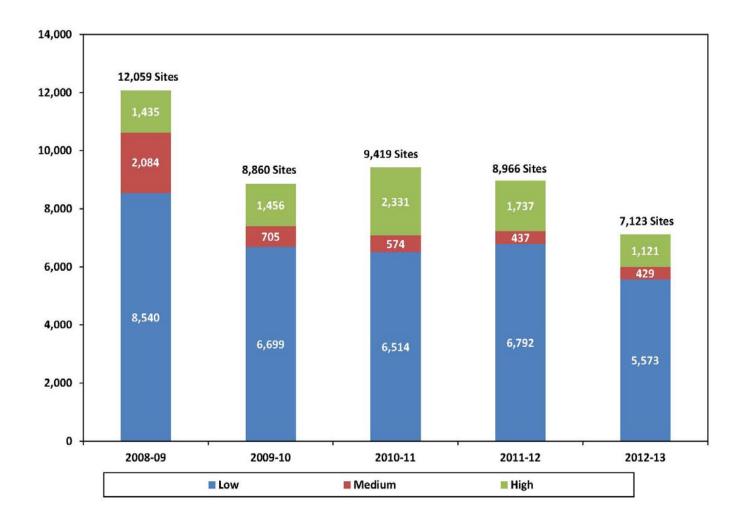


Figure C-8.2: Enforcement Actions Taken, 2008-09 to 2012-13

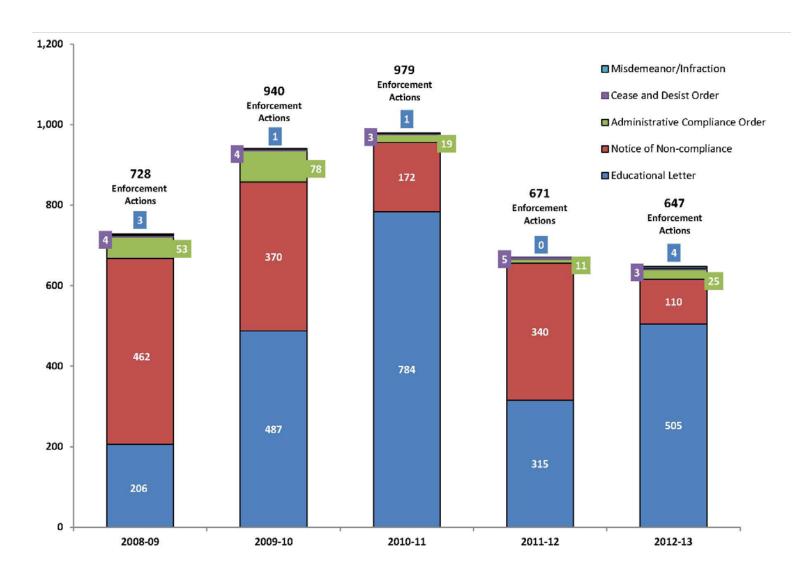


Figure C-8.3 Construction Site Compliance Inspections, 2008-09 to 2012-13

