



California Regional Water Quality Control Board, San Diego Region

April 8, 2015

Mr. Steve Sarkozy
City Manager
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad, CA 92008-1949

Certified Mail – Return Receipt Requested
Article Number 7010 1060 0000 4952 7273

In reply refer to:
CIWQS Place ID. 213271:lwash

Mr. Sarkozy:

Subject: Notice of Violation No. R9-2015-0056 and Water Code Section 13267 Request for Technical Report, City of Carlsbad

Enclosed is Notice of Violation (NOV) No. R9-2015-0056 issued by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to the City of Carlsbad (City) for violations of NPDES Order No. R9-2013-0001, the Regional Municipal Separate Storm Sewer System (MS4) Permit and Order No. R9-2007-0001, the preceding Municipal Storm Water Permit. The violations are for the City's failure to require implementation of designated minimum best management practices (BMPs) at construction sites within the City's jurisdiction, and failure to implement an escalating enforcement process to reduce, eliminate, and prevent recurrence of noncompliance at construction sites where deficiencies are noted.

Please note that pursuant to Provision E of the Regional MS4 Permit, the City is required to continue implementing the construction management requirements of Order R9-2007-0001 until such time that the City's jurisdictional program is updated to incorporate the requirements of Provision E. Accordingly, the violations noted in the NOV are in reference to the construction storm water program requirements of Order R9-2007-0001.

As described in the NOV, the violations are subject to further enforcement pursuant to the California Water Code. The San Diego Water Board reserves the right to take any enforcement action authorized by law.

Additionally, this letter serves as a request for a Technical Report issued to the City pursuant to Water Code section 13267.¹ The report is necessary for the San Diego Water Board to better determine the state of the City's compliance with the Regional MS4 Permit and Order R9-2007-0001 as well as the potential or actual harm to human health or the environment from any non-compliance. The burden, including costs of the report, bears a reasonable relationship to the need for the reports and the benefits to be obtained from them. The violations alleged in the attached NOV and the inspection reports provide evidence that supports the need to require the technical report.

Water Code Section 13267 Technical Report Is Required by June 2, 2015

Pursuant to Water Code section 13267, **the City is hereby required to provide a Technical Report by 5:00 pm June 2, 2015** that includes the following information:

1. A list of all active public and private construction sites within the City from March 1, 2014 to the present. This list must include the following information for each listed construction site:
 - a. Construction start and end dates;
 - b. A description indicating if the construction site is a public works project or a private development project;
 - c. Dates on which the City (or its contractor(s)) conducted inspections at each site;
 - d. Copies of all inspection reports for each construction site (including any photo documentation);
 - e. A determination if the construction site discharges directly or indirectly to a Clean Water Act section 303d listed water body impaired for sediment;
 - f. A description of any noncompliance noted at each site and its cause, the period of noncompliance, including exact dates and if the noncompliance has not been corrected, the anticipated duration the noncompliance is expected to continue;
 - g. A description of the follow-up actions taken at each construction site to correct any noted noncompliance. If multiple inspections were conducted, please note whether the same noncompliance deficiencies were repeatedly observed, (include photo documentation if available); *and*
 - h. A description of all elevated enforcement actions (i.e. stop work notices, fines, etc.) taken at each construction site to reduce, eliminate, and prevent recurrence of the noncompliance. Please include a citation of the specific ordinance(s) or permit provision(s) violated, the date(s) the enforcement action(s) was taken, the timetable for required corrective actions, the date the noncompliance was corrected; and proof that compliance was obtained.

¹ Water Code section 13267, subdivision (b), allows the Water Boards to conduct investigations and to require technical or monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste in accordance with the conditions in the section.

2. A copy of City grading ordinance(s) and all other ordinances, including those that require implementation of designated BMPs and other measures, used by the City to implement its construction storm water program and achieve compliance with the requirements of Order R9-2007-0001.
3. A list of all construction projects the City granted an exception to the maximum allowable active disturbed soil area of 50 acres stipulated in the City's Construction SWPPP standards section 3.3.8. This list shall include a description of the City's rationale for granting an exception to the 50 acre limit set by the City. This list must specifically document what the City relied upon as a "demonstration of adequate site protection" and an "assurance" that the site "at all times, maintained sufficient soil stabilization and sediment control materials onsite to provide adequate site protection."
4. A formal response to NOV No. R9-2015-0050 dated March 12, 2015 pertaining to the El Camino Real Road Widening Project (see Attachment 5 of the enclosed NOV No. R9-2015-0056). The response shall include the City's observations and response to each of the violations noted in the NOV. This response shall also clearly describe any steps the City has taken or plans to take to implement needed changes within the City's Construction Storm Water Program as a result of the violations noted in the NOV.

Submissions pursuant to this letter should include a statement by the City, or an authorized representative of the City, certifying (under penalty of perjury in conformance with the laws of the State of California) that the information submitted is true, complete, and accurate.

The failure to furnish any of the required reports, or the submittal of substantially incomplete reports or false information, is a misdemeanor, and may result in additional enforcement actions being taken against the City, including issuance of an Administrative Civil Liability (ACL) Complaint pursuant to Water Code section 13268. Liability may be imposed pursuant to Water Code section 13268 in an amount not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

In making the determination of whether and how to proceed with further enforcement action, the San Diego Water Board will consider both the time it takes to correct the identified violations and the sufficiency of the corrections.

Please format any written correspondence in response to this letter as an electronic document(s) and submit it to SanDiego@waterboards.ca.gov. The electronic document(s) must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). The electronic document(s) must also include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: **PIN: CW-213271:lwalsh.**

For questions pertaining to the subject matter, please contact Laurie Walsh at (619) 521-3373 or Laurie.Walsh@waterboards.ca.gov.

Respectfully,



JAMES SMITH
Assistant Executive Officer

JS:dtb:esb:cjm:law

Enclosures:

1. Notice of Violation No. R9-2015-0056

cc via email: (w/encl.)

Patrick Thomas, Public Works Director, City of Carlsbad, Patrick.Thomas@carlsbadca.gov

Kathy Dodson, Assistant City Manager, City of Carlsbad, Kathy.Dodson@carlsbad.ca.gov

Ron Kemp, City Attorney, City of Carlsbad, Ron.Kemp@carlsbadca.gov

Casey Arndt, Municipal Projects Manager, City of Carlsbad, Casey.Arndt@carlsbadca.gov

Patrick Vaughan, Engineering Manager, City of Carlsbad, Patrick.Vaughan@carlsbadca.gov

Shawnetta Grandberry, Senior Construction Inspector, City of Carlsbad, Shawnetta.grandberry@carlsbadca.gov

Elaine Lukey, Environmental Manager, City of Carlsbad, Elaine.lukey@carlsbadca.gov

| Tech Staff Info & Use | | |
|---|----------|---------------------------------|
| | WDID | 9 000510S12 |
| | Place ID | CW-213271 |
| Regulatory Measure ID (R9-2013-0001 and R9-2007-0001) | | 214419 |
| Regulatory Measure ID (NOV R9-2015-0056) | | 400365 |
| Regulatory Measure ID (13267) | | 400364 |
| Violation IDs | | CW-988177, CW-988179, CW-988180 |



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

California Regional Water Quality Control Board, San Diego Region

April 8, 2015

**NOTICE OF VIOLATION
No. R9-2015-0056**

Steve Sarkosy
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad, CA 92008-1949

City of Carlsbad

Construction Management Program
PIN No. CW-213271:lwals

Violations of

**Order No. R9-2007-0001,
Municipal Storm Water Permit**

The CITY OF CARLSBAD is hereby notified that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) reserves the right to take any enforcement action authorized by law for the violations described herein.

The CITY OF CARLSBAD is in violation of San Diego Water Board Order No. R9-2007-0001, NPDES No. CAS0108758, *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority* (Municipal Storm Water Permit or Order).¹

¹ Pursuant to Provision E. of Order No. R9-2013-0001 (Regional MS4 Permit), the requirements of Order No. 2007-0001 governing the City of Carlsbad jurisdictional runoff management program, including but not limited to construction management program requirements, remain in effect and are enforceable until such time as the City has updated its jurisdictional runoff management program in conformance with the requirements of Provision E.

A. Summary of Violations

Municipal Storm Water Permit Violations

1. Failure to Comply with Discharge Prohibitions of Municipal Storm Water Permit

- a. **Pursuant to Provision A.2 of San Diego Water Board Order No. R9-2007-0001:** Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.
- b. **Observation:** The City of Carlsbad (City) failed to implement, or require the implementation of, designated minimum best management practices (BMPs) required for construction sites within its jurisdiction. (See Attachments 1 through 7) Sediment and sediment-laden storm water runoff flows were observed and documented at multiple construction sites discharging into the City's municipal separate storm sewer system (MS4) and/or receiving waters as a result of inadequate implementation of designated minimum best management practices (BMPs) required by the City's ordinances and the Order for construction projects. (See Attachments 3 through 7, San Diego Water Board Construction Inspection Reports for Robertson Ranch, El Camino Real Road Widening, Buena Vista and James Dr., Valley Street and Oak Ave.)

2. Failure to Identify Inadequate Implementation of Designated Minimum BMPs at Construction Sites

- a. **Pursuant to Provision D.2. of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall implement a construction program which meets the requirements of this section, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.
- b. **Pursuant to Provision D.2.a.(2)(a) of San Diego Water Board Order No. R9-2007-0001:** Prior to approval and issuance of local construction and grading permits, each Copermittee shall require all individual proposed construction sites to implement designated BMPs and other measures so that pollutants discharged from the site will be reduced to the MEP and will not cause or contribute to a violation of water quality standards.
- c. **Pursuant to Provision D.2.c.(1)(a)iv of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, minimization of exposure time of disturbed soil areas.
- d. **Pursuant to Provision D.2.c.(1)(a)vi of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall limit grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion

controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil area by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution.

- e. **Pursuant to Provision D.2.c.(1)(a)vii of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, temporary stabilization and reseeded of disturbed soil areas as rapidly as feasible.
- f. **Pursuant to Provision D.2.c.(1)(a)x of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, maintenance of all BMPs until removed.
- g. **Pursuant to Provision D.2.c.(1)(a)xi of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, retention, reduction, and proper management of all pollutant discharges on site to the MEP standard.
- h. **Pursuant to Provision D.2.c.(1)(b)i of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, erosion prevention, to be used as the most important measure for keeping sediment on site during construction, but never as the single method.
- i. **Pursuant to Provision D.2.c.(1)(b)ii of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, sediment controls, to be used as a supplement to erosion prevention for keeping sediment on site during construction.
- j. **Pursuant to Provision D.2.c.(1)(b)iii of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, slope stabilization on all inactive slopes during the rainy season and during rain events in the dry season.
- k. **Pursuant to Provision D.2.c.(1)(b)iv of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites, including, at a minimum, slope stabilization on all active slopes during rain events regardless of the season.

- l. Pursuant to Provision D.2.c.(3) of San Diego Water Board Order No. R9-2007-0001:** Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round.
 - m. Pursuant to Provision D.2.d.(5) of San Diego Water Board Order No. R9-2007-0001:** Based upon inspection findings, each Copermittee shall implement all follow-up actions (i.e. reinspection) necessary to comply with the Order.
 - n. Pursuant to Provision D.2.d.(6)(b) of San Diego Water Board Order No. R9-2007-0001:** Inspections conducted by each Copermittee shall include assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs.
 - o. Pursuant to Provision D.2.d.(6)(c) of San Diego Water Board Order No. R9-2007-0001:** Inspections conducted by each Copermittee shall include assessment of BMP effectiveness.
 - p. Observation:** In May 2014, December 2014, February 2015 and March 2015, the San Diego Water Board inspected multiple construction sites within the City's jurisdiction for evidence of adequate inspections and required compliance by the City for implementation of designated minimum BMPs. San Diego Water Board findings from these inspections revealed that the City's construction storm water program consistently failed to identify inadequate implementation of the designated minimum BMPs required by the City's ordinances and the Order for construction projects. (See Attachments 1-7, San Diego Water Board Construction Inspection Reports for La Costa Towne Square, Taylor Morrison Montecina, Robertson Ranch, El Camino Real Road Widening, Buena Vista and James Dr., and Valley Street and Oak Ave.)
- 3. Failure to Implement an Escalating Enforcement Process to Require Implementation of Designated Minimum BMPs at Construction Sites**
- a. Pursuant to Provision D.2.d.(5) of San Diego Water Board Order No. R9-2007-0001:** Based upon inspection findings, each Copermittee shall implement all follow-up actions (i.e. enforcement) necessary to comply with the Order.
 - b. Pursuant to Provision D.2.e of San Diego Water Board Order Order No. R9-2007-0001:** Each Copermittee shall develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process shall include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process shall include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

- c. **Observation:** In May 2014, December 2014, February 2015, and March 2015, the San Diego Water Board inspected multiple construction sites within the City's jurisdiction for evidence that the City's construction storm water program is adequately enforcing requirements to implement the designated minimum BMPs. Findings from the inspections revealed that the City's construction storm water program failed to implement escalating enforcement and to issue enforcement actions mandating prompt corrective actions as required by the City's ordinances and the Order for construction projects. (See Attachments 1-7, San Diego Water Board Construction Inspection Reports for La Costa Towne Square, Taylor Morrison Montecina, Robertson Ranch, El Camino Real Road Widening, Buena Vista and James Dr., and Valley Street and Oak Ave.)

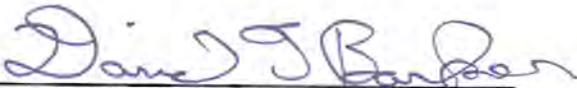
B. Summary of Potential Enforcement Options

These violations may subject you to additional enforcement by the San Diego Water Board or State Water Resources Control Board, including a potential civil liability assessment of \$10,000 per day of violation (Water Code section 13385) and/or any of the following enforcement actions:

| Other Potential Enforcement Options | Applicable Water Code Section |
|-------------------------------------|-------------------------------|
| Technical or Investigative Order | Sections 13267 or 13383 |
| Cleanup and Abatement Order | Section 13304 |
| Cease and Desist Order | Sections 13301-13303 |
| Time Schedule Order | Sections 13300, 13308 |

In addition, the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, referring the matter to the State Attorney General for injunctive relief, and referral to the municipal or District Attorney for criminal prosecution.

In the subject line of any response, please include the information located in the heading of this letter: "in reply refer to." Questions pertaining to this Notice of Violation should be directed to Laurie Walsh at (619) 521-3373 or Laurie.Walsh@waterboards.ca.gov.



David T. Barker, P.E.
Supervising Water Resource Control Engineer
Surface Water Protection Branch

DTB:esb:cjm:law

- Attachments:
- 1) May 2014 – La Costa Towne Inspection Report
 - 2) May 2014 - Taylor Morrison Montecina Inspection Report
 - 3) December 2014 – Robertson Ranch Inspection Report and NOV R9-2014-0155

- 4) February 2015 - Robertson Ranch Inspection Report and NOV R9-2015-0049
- 5) March 2015 – El Camino Real Road Widening Inspection Report and NOV R9-2015-0050
- 6) March 18, 2015 Email – Buena Vista and James Dr. Construction Inspection Report and SEL
- 7) March 27, 2015 Email - Valley Street and Oak Ave. Construction Inspection Report and SEL

| Tech Staff Info & Use | |
|--|---------------------------------|
| WDID | 9 000510S12 |
| Place ID | CW-213271 |
| <u>Regulatory Measures</u> | |
| R9-2013-0001 and R9-2007-0001 | CW-214419 |
| NOV R9-2015-0056 | CW-400365 |
| 13267 | CW-400364 |
| March 18, 2015 SEL - Buena Vista and James Drive Construction Site | CW-400416 |
| March 27, 2015 SEL – Valley Street and Oak Avenue Construction Site | CW-400410 |
| <u>Inspection IDs</u> | |
| May 2014 – La CostaTowne Inspection Report | SM-2022429 |
| May 2014 - Taylor Morrison Montecina Inspection Report | SM-2022416 |
| December 2014 – Robertson Ranch Inspection Report and NOV R9-2014-0105 | SM-2024239 |
| February 2015 - Robertson Ranch Inspection Report and NOV R9-2015-0049 | SM-2025074 |
| March 2015 – El Camino Real Road Widening Inspection Report and NOV R9-2015-0050 | SM-2024994 |
| Buena Vista and James Drive Inspection Report and Staff Enforcement Letter(SEL) | CW-19852625 |
| Valley Street and Oak Avenue Inspection Report and Staff Enforcement Letter(SEL) | SM-2025192 |
| <u>Violation IDs</u> | |
| Notice of Violation R9-2015-0056 | CW-988177, CW-988179, CW-988180 |
| El Camino Real Road Widening Construction Site | SM-856642-49 |
| Buena Vista and James Drive Construction Site | CW-988428 |
| Valley Street and Oak Avenue Construction Site | CW-988410 |

Walsh, Laurie@Waterboards

From: Chiu, Wayne@Waterboards
Sent: Monday, June 02, 2014 2:18 PM
To: Brian Thomas
Cc: Walsh, Laurie@Waterboards
Subject: WDID 937C364765 (La Costa Towne Square Commercial): 28 May 2014 Inspection Photos
Attachments: 2014-0528 Inspection Photos La Costa Towne Square.pdf

Hi Brian,

Thanks for taking the time yesterday to show me the La Costa Towne Square Commercial construction site.

Attached are photos taken from each site during the inspection that show some examples of the deficiencies that require attention to bring the site into compliance with the requirements of the Construction General Permit, Order No. 2009-0009-DWQ (CGP) for a Risk Level 2 site.

Please send me the following to demonstrate that the site has been brought into compliance with the requirements of the CGP:

1. The weekly QSP inspection reports and training records in the SWPPP were excellent, but the person who signed the LRP signature page in the SWPPP did not match the person who is listed in SMARTS as the LRP. Please let me know who the LRP for the site is.
2. Photos that show there BMPs are being implemented to prevent waste materials from being disposed on impervious or pervious surfaces, as required by Section B.2.a of Attachment D to the CGP (see Photos 1 and 2).
3. Photos that show washout areas are properly contained so there is not discharge into underlying soil and surrounding areas, as required by Section B.2.i of Attachment D to the CGP (see Photos 1 and 3).
4. Photos that show construction materials such as concrete are properly stored to minimize exposure to precipitation, as required by Section B.1.d of Attachment D to the CGP (see Photo 4).
5. Photos that show inactive areas, slopes, open spaces, etc. have effective soil cover to prevent erosion, as required by Section D.2 of Attachment D to the CGP (see Photos 5-10). Areas that can be scheduled to be inactive or sectioned off and made to be inactive should be provided effective soil cover as well. This means that just because there could be some traffic in the area, does not mean there needs to be traffic in the area. The expectation from the Board is that a construction site is trying to make as many areas of the site inactive as soon as possible instead of trying to make and keep as much of the site active for as long as possible.
6. Photos, plans, and/or schedule for implementing erosion control BMPs over the next month so I can determine that erosion controls are being implemented or will be implemented as soon as possible for active areas, as required by Section E.3 of Attachment D to the CGP (see Photos 5-10).
7. Photos that show linear sediment controls have been implemented for exposed slopes, as required by Section E.4 of Attachment D to the CGP (see Photos 8-10).
8. Photos that show adequate and effective perimeter control BMPs have been implemented to prevent sediment discharges from the site and to effectively manage runoff and runoff from the site, as required by Section E.1 and F of Attachment D to the CGP (see Photos 6 and 10).

Please let me know if you have any questions.

Thanks,

Wayne Chiu, PE

Water Resource Control Engineer

Storm Water Management Unit

California Regional Water Quality Control Board

San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108
Direct Line: (619) 521-3354
Main Line: (619) 516-1990



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10

Walsh, Laurie@Waterboards

From: Chiu, Wayne@Waterboards
Sent: Friday, May 30, 2014 3:41 PM
To: Tom Baine (TBaine@taylormorrison.com); Kelly Morrison (KMorrison@taylormorrison.com)
Cc: Robert Slempe; Walsh, Laurie@Waterboards
Subject: WDID 937C367185 (Taylor Morrison Montecina): 28 May 2014 Inspection Photos (SM-824642)
Attachments: 2014-0528 Inspection Photos Montecina.pdf

Mr. Morrison and Mr. Baine,

My name is Wayne Chiu and I am a construction inspector for the San Diego Regional Water Quality Control Board. I recently inspected the Montecina construction site in Carlsbad for compliance with the requirements of the Construction General Storm Water Permit, Order No. 2009-0009-DWQ (CGP). I looked up the site on the Storm Water Multiple Application and Report Tracking System (SMARTS) and noted that the QSD determined to be a Risk Level 2 site. As such, I assessed compliance based on the CGP requirements for Risk Level 2 sites, found in Attachment D to the CGP. Several deficiencies were noted during my inspection.

Attached are some photos taken during the inspection that show examples of areas that need to be addressed to demonstrate that the site is in compliance with the CGP requirements for a Risk Level 2 site. I also reviewed the SWPPP that was available on SMARTS and noticed that the SWPPP itself fails to include adequate BMPs to be implemented to meet the CGP requirements for a Risk Level 2 site.

Please send me the following by the end of next week (**June 6, 2014**) to demonstrate that the site has been brought into compliance with the requirements of the CGP:

1. Because I was not able to see the SWPPP available on site, please send me copies of the signed LRP certification page, the weekly QSP inspection reports for the month of May, and the training records showing that all project personnel, contractors and sub-contractors have received training on their responsibilities under the SWPPP.
2. The SWPPP does not appear to list any erosion control BMPs required to be implemented in active or inactive areas, even though the beginning of the erosion control and sediment control BMPs section states that erosion control BMPs are to be implemented for active and inactive areas. Please send me the most recent SWPPP that includes the erosion control BMPs that are to be implemented on the site, or provide me a copy of an amendment that will be made to the SWPPP that shows what erosion control BMPs will be implemented on active and inactive areas of the site.
3. Photos that show there are waste disposal containers, with covers, that will be used to dispose of and contain waste and trash generated at the site, which is required by Section B.2.a of Attachment D to the CGP (see Photos 1 and 2).
4. Photos that show vehicle storage and maintenance BMPs are available and being implemented, as required by Sections B.3.a-c of Attachment D to the CGP (see Photo 3).
5. Photos that show stockpiles are adequately contained and protected from wind and rain erosion and concrete washout areas are adequately contained, as required by Sections B.2.f and B.2.i, respectively, of Attachment D to the CGP (see Photo 4).
6. Photos that show inactive areas, slopes, open spaces, etc. have effective soil cover to prevent erosion, as required by Section D.2 of Attachment D to the CGP (see Photos 5-8). Areas that can be scheduled to be inactive or sectioned off and made to be inactive should be provided effective soil cover as well. This means that just because there could be some traffic in the area, does not mean there needs to be traffic in the area. The

expectation from the Board is that a construction site is trying to make as many areas of the site inactive as soon as possible instead of trying to make and keep as much of the site active for as long as possible.

7. Photos, plans, and/or schedule for implementing erosion control BMPs over the next month so I can determine that erosion controls are being implemented or will be implemented as soon as possible for active areas, as required by Section E.3 of Attachment D to the CGP (see Photos 5-8).
8. Photos that adequate and effective perimeter control BMPs have been implemented to prevent sediment discharges from the site and to effectively manage runoff and runoff from the site, as required by Section E.1 and F of Attachment D to the CGP (see Photos 9 and 10).

Please let me know if you have any questions.

Thanks,

Wayne Chiu, PE

Water Resource Control Engineer

Storm Water Management Unit

California Regional Water Quality Control Board

San Diego Region

2375 Northside Drive, Suite 100

San Diego, CA 92108

Direct Line: (619) 521-3354

Main Line: (619) 516-1990



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



California Regional Water Quality Control Board, San Diego Region

January 5, 2015

**NOTICE OF VIOLATION
No. R9-2014-0155**

Kevin Brickley
Rancho Costera LLC
725 W. Town & Country Road, Suite 200
Orange, CA 92868

Rancho Costera LLC

Robertson Ranch Construction Project
PIN No. SM-829466:lwalsh

Violations of

**Order No. 2009-0009-DWQ,
Construction General Permit**

Rancho Costera LLC is hereby notified that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) reserves the right to take any enforcement action authorized by law for the violations described herein.

The Rancho Costera LLC is in violation of State Water Resources Control Board (State Water Board) Order No. 2009-0009-DWQ, NPDES No. CAS000002, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit).

A. Summary of Violations

Construction General Permit Violations

1. Failure to Comply with Discharge Prohibitions for Construction Activities:

- a. Pursuant to Provision III.B of State Water Board Order No. 2009-0009-DWQ:**
All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.
- b. Observation:** On December 12, 2014, the San Diego Water Board inspector observed evidence of sediment and sediment-laden water discharged from the

Robertson Ranch construction site (WDID 9 37C369879) to an open channel conveyance tributary to Agua Hedionda Creek due to inadequate and ineffective implementation of best management practices (BMPs), constituting an unauthorized discharge of sediment from the site. The Rancho Costera LLC is the Legally Responsible Person (LRP) enrolled under the Construction General Permit (CGP) for the site.

2. Failure to Comply with Effluent Limitations for Construction Activities:

- a. **Pursuant to Provision V.A.2 of State Water Board Order No. 2009-0009-DWQ:** Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants.
- b. **Pursuant to Provision X and Section A.1.b of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Dischargers shall minimize or prevent pollutants in storm water and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
- c. **Observation:** During the December 12, 2014 inspection, the San Diego Water Board inspector observed the lack of effective erosion controls, perimeter sediment controls, and runoff controls required by the CGP, which directly lead to erosion and sedimentation that ultimately resulted in the discharge of sediment and sediment-laden water from the site observed and/or documented on December 12, 2014. The discharge was a result of the implementation of controls, structures, and BMPs that do not achieve BCT. See attached December 12, 2014 Facility Inspection Report Photos 1 through 13.

3. Failure to Implement Adequate Erosion Controls for Inactive Areas:

- a. **Pursuant to Provision X and Section D.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots.
- b. **Observation:** During the December 12, 2014 inspection, the San Diego Water Board inspector observed several areas of the site that appeared to be inactive, or could be scheduled to be inactive, without effective soil cover or other BMPs that could prevent erosion. In particular, large slopes and dirt roadways throughout the site lacked any effective soil cover for erosion control. Evidence of erosion and sediment transport due to lack of erosion control measures were observed during the inspection throughout the site and a major discharge of sediment and sediment-

laden water at the northwest portion of the site adjacent to El Camino Real. See attached December 12, 2014 Facility Inspection Report Photos 1 through 13.

4. Failure to Implement Adequate Sediment Controls:

- a. **Pursuant to Provision X and Section E.1 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
- b. **Pursuant to Provision X and Section E.3 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active construction.
- c. **Pursuant to Provision X and Section E.4 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with Table 1 in Attachment D.
- d. **Observation:** During the December 12, 2014 inspection, the San Diego Water Board inspector observed several areas of the site where perimeter controls were not established or maintained to sufficiently control erosion and sediment discharges from the site. Appropriate erosion control BMPs *in conjunction* with sediment control BMPs were not in place throughout the site. In particular, no erosion control or sediment controls were in place on the access road off of the main entrance to the site or on the area leading to the reported sediment basin at the northwest corner of the site (See December 12, 2014 Photos 8-13) Linear sediment controls were not present on all slopes along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with the sheet flow lengths stipulated in Table 1 of Attachment D in Order No. 2009-0009-DWQ. See attached December 12, 2014 Facility Inspection Report Photos 5 through 9, 12 and 13.

5. Failure to Implement Adequate Run-on and Runoff Controls:

- a. **Pursuant to Provision X and Section F.1 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 shall effectively manage all run-on, all runoff within the site and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in the CGP.
- b. **Observation:** During the December 12, 2014 inspection, the San Diego Water Board inspector observed large areas of soil within the site unprotected from erosion and runoff that discharged from the site that was not effectively managed, which

contributed to the sediment discharges from the site. See attached December 12, 2014 Facility Inspection Report Photos 1 and 13.

B. Summary of Potential Enforcement Options

These violations may subject you to additional enforcement by the San Diego Water Board or State Water Resources Control Board, including a potential civil liability assessment of \$10,000 per day of violation (Water Code section 13385) and/or any of the following enforcement actions:

| Other Potential Enforcement Options | Applicable Water Code Section |
|-------------------------------------|-------------------------------|
| Technical or Investigative Order | Sections 13267 or 13383 |
| Cleanup and Abatement Order | Section 13304 |
| Cease and Desist Order | Sections 13301-13303 |
| Time Schedule Order | Sections 13300, 13308 |

In addition, the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, referring the matter to the State Attorney General for injunctive relief, and referral to the municipal or District Attorney for criminal prosecution.

In the subject line of any response, please include the information located in the heading of this letter: "in reply refer to." Questions pertaining to this Notice of Violation should be directed to Laurie Walsh at (619) 521-3373 or Laurie.Walsh@waterboards.ca.gov.



Eric S. Becker, P.E.
Senior Water Resource Control Engineer
Storm Water Management

ESB:lw:ajs

Attachments: Facility Inspection Report dated December 12, 2014

| Tech Staff Info & Use | |
|-----------------------|----------------|
| Order No. | 2009-00009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-829466 |
| WDID | 9 37C369879 |
| Inspection ID | 2024239 |
| Violation ID | 855466, 855470 |
| Enforcement ID | 417246 |

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SAN DIEGO REGION
WATERSHED PROTECTION PROGRAM**

FACILITY INSPECTION REPORT

FACILITY: Robertson Ranch

INSPECTION DATE/TIME: 12/12/2014; 0900

WDID/FILE NO.: 9 37C369879

REPRESENTATIVE(S) PRESENT DURING INSPECTION:

NAME: Laurie Walsh, Engineer

AFFILIATION: San Diego Water Board

NAME: Kevin Brickley Rancho Costera, LLC

AFFILIATION: Robertson Ranch LLC

NAME: Joe McMahon, Public Works Inspector

AFFILIATION: City of Carlsbad

NAME: Jay Jordan, Public Works Inspector

AFFILIATION: City of Carlsbad

Kevin Brickley

NAME OF OWNER, AGENCY OR PARTY RESPONSIBLE FOR DISCHARGE

Rancho Costera LLC

FACILITY OR DEVELOPER NAME (if different from owner)

725 W. Town and Country Road, Suite 200

OWNER MAILING ADDRESS

4980 El Camino Real

Carlsbad, CA 90010

FACILITY ADDRESS

Kevin Brickley (760) 877-9885

OWNER CONTACT NAME AND PHONE #

Kevin Brickley (760) 877-9885

FACILITY OR DEVELOPER CONTACT NAME AND PHONE #

APPLICABLE WATER QUALITY LICENSING REQUIREMENTS:

- | | |
|---|---|
| <input type="checkbox"/> MS4 URBAN RUNOFF REQUIREMENTS | <input type="checkbox"/> GENERAL OR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS OR NPDES |
| <input checked="" type="checkbox"/> CONSTRUCTION GENERAL PERMIT | <input type="checkbox"/> GENERAL OR INDIVIDUAL WAIVER OF WASTE DISCHARGE REQUIREMENTS |
| <input type="checkbox"/> CALTRANS GENERAL PERMIT | <input type="checkbox"/> SECTION 401 WATER QUALITY CERTIFICATION |
| <input type="checkbox"/> INDUSTRIAL GENERAL PERMIT | <input type="checkbox"/> CWC SECTION 13264 |

INSPECTION TYPE (Check One):

- "A" TYPE COMPLIANCE--COMPREHENSIVE INSPECTION IN WHICH SAMPLES ARE TAKEN. (EPA TYPE S)
- "B" TYPE COMPLIANCE--A ROUTINE NONSAMPLING INSPECTION. (EPA TYPE C)
- NONCOMPLIANCE FOLLOW-UP--INSPECTION MADE TO VERIFY CORRECTION OF A PREVIOUSLY IDENTIFIED VIOLATION.
- ENFORCEMENT FOLLOW-UP--INSPECTION MADE TO VERIFY THAT CONDITIONS OF AN ENFORCEMENT ACTION ARE BEING MET.
- COMPLAINT--INSPECTION MADE IN RESPONSE TO A COMPLAINT.
- PRE-REQUIREMENT--INSPECTION MADE TO GATHER INFO. RELATIVE TO PREPARING, MODIFYING, OR RESCINDING REQUIREMENTS.
- NO EXPOSURE CERTIFICATION (NEC) - VERIFICATION THAT THERE IS NO EXPOSURE OF INDUSTRIAL ACTIVITIES TO STORM WATER.
- NOTICE OF TERMINATION REQUEST FOR INDUSTRIAL FACILITIES OR CONSTRUCTION SITES - VERIFICATION THAT THE FACILITY OR CONSTRUCTION SITE IS NOT SUBJECT TO PERMIT REQUIREMENTS.
- COMPLIANCE ASSISTANCE INSPECTION-OUTREACH INSPECTION DUE TO DISCHARGER'S REQUEST FOR COMPLIANCE ASSISTANCE.

INSPECTION FINDINGS:

Y WERE VIOLATIONS NOTED DURING THIS INSPECTION? (YES/NO/PENDING SAMPLE RESULTS) - PHASE I MS4 VIOLATIONS UNRELATED TO THE HALL PARK PROJECT. SEE PHOTOS 29-32, AND 34.

Facility: Robertson Ranch
Inspection Date: 12/12/2014

I. COMPLIANCE HISTORY / PURPOSE OF INSPECTION

On the morning of December 12, 2014, Laurie Walsh of the Storm Water Unit drove by the construction site located at 4890 El Camino Real in Carlsbad and discovered a major discharge of sediment and sediment-laden water from the site. In response to discovering the discharge, Ms. Walsh conducted a non-sampling site inspection, per Order 2009-0009-DWQ Construction General Permit (CGP).

According to Storm Water Multiple Application & Report Tracking System (SMARTS), the site is a Risk Level 2 construction site, approximately 139 acres in size, and owned by the Rancho Costera LLC. Construction began at Robertson Ranch in June 2014. On the day of the inspection it was raining and much of the site was without soil cover to protect against erosion. This site is located in the Carlsbad Watershed (904.00 HU) adjacent to El Camino Real between Canon Road and Tamarack. The site drains to Aqua Hedionda Creek, a water of the U.S. and tributary to the Aqua Hedionda Lagoon.

The QSP for the site is Gregory Deacon with Rancho Costera, LLC. Mr. Deacon was not present during this site inspection. Mr. Brickley with Toll Brothers Land Development (LRP in SMARTS), Joe McMahon and Jay Jordan, City of Carlsbad Public Works Inspectors was present during this inspection. During this inspection focus was on the lack of erosion controls in place throughout the site and stopping the major discharge of sediment and sediment-laden water from the northwest corner of the site. The inspection did not include review of the SWPPP.

II. FINDINGS

1. The portion of the site that was in view from El Camino Real and the entrance of the site lacked effective soil cover to prevent erosion.
2. The portion the site that was in view from El Camino Real and the entrance of the site lacked effective sedimentation controls.
3. The large slopes near the site entrance and along El Camino Real lacked linear sediment controls along the toe of the slope, face of the slop, and at the grade breaks of exposed slope to comply with sheet flow lengths in accordance with Table 1 in Attachment D or Order No. 2009-0009-DWQ.
4. A lack of adequate perimeter control was observed during this inspection.
5. Unauthorized discharge of sediment and sediment-laden water was documented through photos and videos taken during this inspection. (See Photos 1-7)

Facility: Robertson Ranch
 Inspection Date: 12/12/2014

III. COMMENTS AND RECOMMENDATIONS

Comments

1. There is evidence that erosion controls were not adequately implemented throughout the site contributing to discharges of sediment and sediment-laden storm water from the site.
2. There is evidence that sediment controls were not adequately implemented which contributed to discharges of sediment from the site.
3. There is evidence that erosion and sediment control BMPs were not adequately implemented to minimize or prevent the discharge of sediment in storm water from the site to Aqua Hedionda Creek.
4. There is evidence that the site has not implemented BMPs to meet Best Conventional Treatment (BCT) Technology Based Effluent Limitations under Section V.A.2 of the CGP, as required for all construction sites, which resulted in the unauthorized discharges of sediment and sediment-laden water from the site observed or documented on December 12, 2014.

Recommendations

1. Issue a Notice of Violation to Rancho Costera LLC for discharges of sediment and sediment-laden water from the site and failure to implement Risk Level 2 requirements of CGP.
2. Refer the site to the Compliance Assurance Unit to determine whether or not issuing formal enforcement action may be appropriate.

IV. SIGNATURE SECTION

Laurie Walsh, PE
 STAFF INSPECTOR


 SIGNATURE

12/12/2014

INSPECTION DATE

Eric Becker, PE
 REVIEWED BY SUPERVISOR


 SIGNATURE

1/5/15
 DATE

SMARTS: 829466

| Tech Staff Info & Use | |
|-----------------------|----------------|
| Order No. | 2009-00009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-829466 |
| WDID | 9 37C369879 |
| Inspection ID | 2024239 |
| Violation ID | 855466, 855470 |
| Enforcement ID | 417246 |

Facility: Robertson Ranch
Inspection Date: 12/12/2014



Photo 1: Mobilized sediment leaving Robertson Ranch construction site along the NW perimeter (view northwest on El Camino Real).



Photo 2: Mobilized sediment downstream of Photo 1 draining into tributary drainage (view NW on El Camino Real).



Photo 3: Mobilized sediment discharging into tributary drainage displayed in photo 2 (looking south along El Camino Real).



Photo 4: Mobilized sediment discharging into drainage culvert underneath El Camino Real (red).

Facility: Robertson Ranch
Inspection Date: 12/12/2014



Photo 5: Discharge looking south along El Camino Real. Large slopes on site without erosion control shown in photo.



Photo 6: Discharge looking south along El Camino Real. Large slopes on site without erosion control shown in photo.



Photo 7 Discharge looking south along El Camino Real. Large slopes on site without erosion control shown in photo.



Photo 8: Slopes lacking adequate erosion and sediment control BMPs; erosional gully shown in photo.

Facility: Robertson Ranch
Inspection Date: 12/12/2014

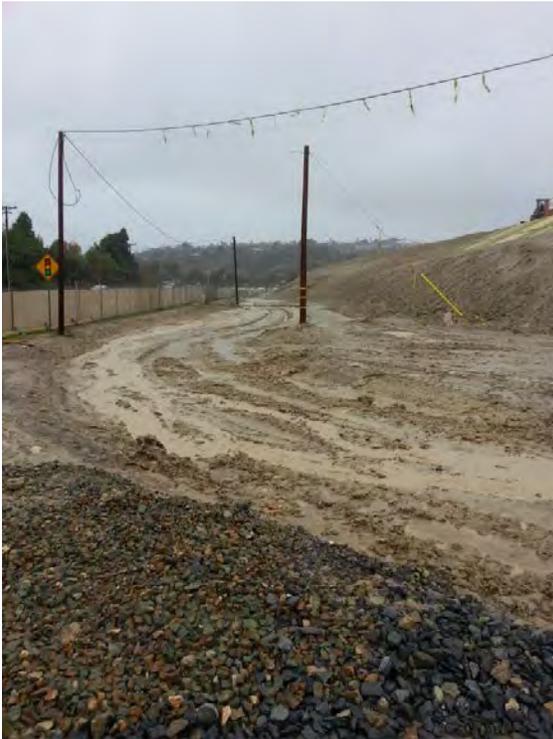


Photo 9 No erosion controls present on large slopes. No linear sediment controls on large slopes. No erosion in conjunction with sediment controls present on other areas of site.



Photo 10 Partial erosion control present (i.e. straw blankets) on one large slope. Partial linear sediment controls on a part of the large slope in this photo. No erosion in conjunction with sediment controls present on other areas of site in this photo.

Facility: Robertson Ranch
 Inspection Date: 12/12/2014



Photo 11 Partial erosion control present (i.e. straw blankets) on one large slope. Partial linear sediment controls on a part of the large slope in this photo. No erosion in conjunction with sediment controls present on other areas of site in this photo.



Photo 12 Partial erosion control present (i.e. straw blankets) on one large slope. Partial linear sediment controls on a part of the large slope in this photo. No erosion in conjunction with sediment controls present on other areas of site in this photo. No protection on large open areas of excavated land shown in back of photo.



Photo 13 No erosion in conjunction with sediment controls present on other areas of site in this photo. No protection on large open areas of excavated land shown in back of photo.



California Regional Water Quality Control Board, San Diego Region

March 18, 2015

**NOTICE OF VIOLATION
No. R9-2015-0049**

Kevin Brickley
Toll Brothers
725 W. Town & Country Road, Suite 200
Orange, CA 92868

Toll Brothers

Robertson Ranch Construction Project
PIN No. SM-829466:lwalsh

Violations of

**Order No. 2009-0009-DWQ,
Construction General Permit**

Toll Brothers is hereby notified that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) reserves the right to take any enforcement action authorized by law for the violations described herein.

Toll Brothers is in violation of State Water Resources Control Board (State Water Board) Order No. 2009-0009-DWQ, NPDES No. CAS000002, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit).

A. Summary of Violations

Construction General Permit Violations

1. Failure to Comply with Effluent Limitations for Construction Activities:

- a. Pursuant to Provision V.A.2 of State Water Board Order No. 2009-0009-DWQ:**
Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants.

- b. Pursuant to Provision X and Section A.1.b of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Dischargers shall minimize or prevent pollutants in storm water and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
- c. Observation:** During the February 26, 2015 inspection, the San Diego Water Board inspector observed a lack of effective erosion controls and runoff controls required by the CGP on the site within 48 hours prior to a qualifying rain event based on the amount of active acreage under mass grading during the rainy season. Soil stabilization (e.g. soil tackifiers, hydroseed, etc.) technologies were not deployed in conjunction with runoff controls (i.e. earth dikes and drainage swales) at the site. Without soil stabilization BMPs in place in addition to runoff controls the site did not meet BCT. See attached February 26, 2015 Facility Inspection Report Photos 1, 2, and 5 through 18.

2. Failure to Implement Good Site Management “Housekeeping”

- a. Pursuant to Provision X and Section B.1.b of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).
- b. Pursuant to Provision X and Section B.1.c of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall store chemicals in watertight containers (with appropriate secondary containment to prevent any pillage or leakage) or in a storage shed (completely enclosed).
- c. Pursuant to Provision X and Section B.2.f of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall implement good housekeeping measures for waste management to contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
- d. Pursuant to Provision X and Section B.3.c of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall implement good housekeeping measures for vehicle storage and maintenance to clean leaks immediately and disposing of leaked materials properly.

- e. **Observation:** During the February 26, 2015 inspection, the San Diego Water Board inspector observed loose stockpiled construction materials there were not actively being used without berms or covers (see Photos 1 and 2), chemicals stored onsite without secondary containment and outside storage sheds (see Photo 3), unprotected stockpiled waste materials exposed to wind and rain (see Photo 3 through 6), and measures to clean leaks immediately and dispose of leaked materials (see Photo 4). See attached February 26, 2015 Facility Inspection Report Identified Photos.

3. Failure to Implement Adequate Erosion Controls Active and Inactive Areas:

- a. **Pursuant to Provision X and Section D.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots.
- b. **Pursuant to Provision X and Section E.3 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active construction. Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
- c. **Observation:** During the February 26, 2015 inspection, the San Diego Water Board inspector observed several inactive areas of the site, or could be scheduled to be inactive, without effective soil cover or other BMPs that could prevent erosion. Steep slopes on the perimeter of the site lacked any effective soil cover for soil stabilization or runoff controls for erosion control. See attached February 26, 2015 Facility Inspection Report Photos 7 through 11, 13 and 15.

The San Diego Water Board inspector observed a lack of erosion control BMPs in conjunction with sediment control BMPs throughout the site. Erosion control BMPs include both runoff controls and soil stabilization controls. Order 2009-0009-DWQ defines erosion control BMPs as vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc. placed to stabilized areas of disturbed soils, to reduce loss of soil due to the action of water or wind, and prevent water pollution.” CASQA Construction BMP Guidance Manual defines erosion control as “any source control practice that protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind. Erosion control consists of preparing the soil surface **and** (emphasis added) implementing one or more of the BMPs listed in Table 3-1 (e.g. EC-9 Earth Dikes and Drainage Swales)” Erosion controls/Soil stabilization controls were not deployed throughout the site to stabilize the soil surface and prevent soil particles from being detached by rainfall, flowing water, or wind. See February 26, 2015 Facility Inspection Report Photos 1 through 18.

4. Failure to Implement Adequate Sediment Controls:

- a. **Pursuant to Provision X and Section E.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.
- b. **Pursuant to Provision X and Section E.4 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with Table 1 in Attachment D.
- c. **Observation:** During the February 26, 2015 inspection, the San Diego Water Board inspector observed sedimentation basins that were not designed in accordance with CASQA Construction BMP Guidance Handbook. The sedimentation basin created to retain runoff from the south east portion of the site was constructed prior to the QSD providing design calculations. See attached February 26, 2015 Facility Inspection Report Photos 17 and 18.

Linear sediment controls were not present on all slopes along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with the sheet flow lengths stipulated in Table 1 of Attachment D in Order No. 2009-00009-DWQ. See attached February 26, 2015 Facility Inspection Report Photos 6 through 13, and 15.

5. Failure to Implement Adequate Run-on and Runoff Controls:

- a. **Pursuant to Provision X and Section F.1 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 shall effectively manage all run-on, all runoff within the site and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in the CGP.
- b. **Observation:** During the January 26, 2015 inspection, the San Diego Water Board inspector observed areas of the site unprotected from run-on. The northwestern portion of the site was not protected from run-on coming from El Camino Real. See attached February 26, 2015 Facility Inspection Report Photo 15.

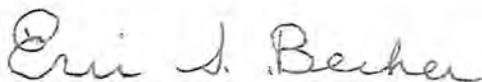
B. Summary of Potential Enforcement Options

These violations may subject you to additional enforcement by the San Diego Water Board or State Water Resources Control Board, including a potential civil liability assessment of \$10,000 per day of violation (Water Code section 13385) and/or any of the following enforcement actions:

| Other Potential Enforcement Options | Applicable Water Code Section |
|-------------------------------------|-------------------------------|
| Technical or Investigative Order | Sections 13267 or 13383 |
| Cleanup and Abatement Order | Section 13304 |
| Cease and Desist Order | Sections 13301-13303 |
| Time Schedule Order | Sections 13300, 13308 |

In addition, the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, referring the matter to the State Attorney General for injunctive relief, and referral to the municipal or District Attorney for criminal prosecution.

In the subject line of any response, please include the information located in the heading of this letter: "in reply refer to." Questions pertaining to this Notice of Violation should be directed to Laurie Walsh at (619) 521-3373 or Laurie.Walsh@waterboards.ca.gov.



Eric S. Becker, P.E.
Senior Water Resource Control Engineer
Storm Water Management

ESB:lw

Attachments: Facility Inspection Report dated February 26, 2015

| Tech Staff Info & Use | |
|-----------------------|---|
| Order No. | 2009-00009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-829466 |
| WDID | 9 37C369879 |
| Inspection ID | 2025074 |
| Violation ID | 856699, 856700, 856701, 856702, 856703 |
| Enforcement ID | 418529 |

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SAN DIEGO REGION
WATERSHED PROTECTION PROGRAM**

FACILITY INSPECTION REPORT

FACILITY: Robertson Ranch

INSPECTION DATE/TIME: 02/26/2015; 12:30

WDID/FILE NO.: 9 37C369879

REPRESENTATIVE(S) PRESENT DURING INSPECTION:

| | |
|--|--|
| NAME: <u>Laurie Walsh, PE WRC Engineer</u> | AFFILIATION: <u>San Diego Water Board</u> |
| NAME: <u>Kevin Brickley Land Development Manager</u> | AFFILIATION: <u>Toll Brothers Land Development</u> |
| NAME: <u>Greg Deacon, Asst. Vice President</u> | AFFILIATION: <u>Toll Brothers</u> |
| NAME: <u>Joe McMahon, Public Works Inspector</u> | AFFILIATION: <u>City of Carlsbad</u> |
| NAME: <u>Shawnetta Grandberry, Senior Construction Inspector</u> | AFFILIATION: <u>City of Carlsbad</u> |
| NAME: <u>Grant Clavier, Public Works Inspector</u> | AFFILIATION: <u>City of Carlsbad</u> |

| | |
|--|--|
| <u>Kevin Brickley</u> | <u>Toll Brothers Land Development /formerly Rancho Costera LLC</u> |
| NAME OF OWNER, AGENCY OR PARTY RESPONSIBLE FOR DISCHARGE | FACILITY OR DEVELOPER NAME (if different from owner) |
| <u>725 W. Town and Country Road, Suite 200</u> | <u>4980 El Camino Real</u> |
| OWNER MAILING ADDRESS | FACILITY ADDRESS |
| <u>Kevin Brickley (760) 877-9885</u> | <u>Kevin Brickley (760) 877-9885</u> |
| OWNER CONTACT NAME AND PHONE # | FACILITY OR DEVELOPER CONTACT NAME AND PHONE # |

APPLICABLE WATER QUALITY LICENSING REQUIREMENTS:

- | | |
|---|---|
| <input type="checkbox"/> MS4 URBAN RUNOFF REQUIREMENTS | <input type="checkbox"/> GENERAL OR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS OR NPDES |
| <input checked="" type="checkbox"/> CONSTRUCTION GENERAL PERMIT | <input type="checkbox"/> GENERAL OR INDIVIDUAL WAIVER OF WASTE DISCHARGE REQUIREMENTS |
| <input type="checkbox"/> CALTRANS GENERAL PERMIT | <input type="checkbox"/> SECTION 401 WATER QUALITY CERTIFICATION |
| <input type="checkbox"/> INDUSTRIAL GENERAL PERMIT | <input type="checkbox"/> CWC SECTION 13264 |

INSPECTION TYPE (Check One):

- "A" TYPE COMPLIANCE--COMPREHENSIVE INSPECTION IN WHICH SAMPLES ARE TAKEN. (EPA TYPE S)
- "B" TYPE COMPLIANCE--A ROUTINE NONSAMPLING INSPECTION. (EPA TYPE C)
- NONCOMPLIANCE FOLLOW-UP--INSPECTION MADE TO VERIFY CORRECTION OF A PREVIOUSLY IDENTIFIED VIOLATION.
- ENFORCEMENT FOLLOW-UP--INSPECTION MADE TO VERIFY THAT CONDITIONS OF AN ENFORCEMENT ACTION ARE BEING MET.
- COMPLAINT--INSPECTION MADE IN RESPONSE TO A COMPLAINT.
- PRE-REQUIREMENT--INSPECTION MADE TO GATHER INFO. RELATIVE TO PREPARING, MODIFYING, OR RESCINDING REQUIREMENTS.
- NO EXPOSURE CERTIFICATION (NEC) - VERIFICATION THAT THERE IS NO EXPOSURE OF INDUSTRIAL ACTIVITIES TO STORM WATER.
- NOTICE OF TERMINATION REQUEST FOR INDUSTRIAL FACILITIES OR CONSTRUCTION SITES - VERIFICATION THAT THE FACILITY OR CONSTRUCTION SITE IS NOT SUBJECT TO PERMIT REQUIREMENTS.
- COMPLIANCE ASSISTANCE INSPECTION-OUTREACH INSPECTION DUE TO DISCHARGER'S REQUEST FOR COMPLIANCE ASSISTANCE.

INSPECTION FINDINGS:

Y WERE VIOLATIONS NOTED DURING THIS INSPECTION? (YES/NO/PENDING SAMPLE RESULTS) -

Facility: Robertson Ranch
Inspection Date: 02/26/2015

I. COMPLIANCE HISTORY / PURPOSE OF INSPECTION

On February 26, 2015 Laurie Walsh of the San Diego Water Board performed a routine inspection of the Robertson Ranch LLC Construction Site (site). The 211 acre site is a Risk Level 2 construction project that has been entirely disturbed during the mass grading phase. Construction began at Robertson Ranch in June 2014. This site is located in the Carlsbad Watershed (904.00 HU) adjacent to El Camino Real between Canon Road and Tamarack. The site drains to Aqua Hedionda Creek, a water of the U.S. and tributary to the Aqua Hedionda Lagoon. The inspection occurred at within 48 hours of a qualifying rain event. During the inspection it was documented that much of the site was without soil stabilization controls and linear sediment controls on both active and inactive portions of the site during mass grading. Sedimentation basins were not constructed in accordance with CASQA Construction BMP Guidance Handbook.

Ms. Walsh conducted a non-sampling site inspection, per Order 2009-0009-DWQ Construction General Permit (CGP) and ultimately issued the site Notice of Violation No. R9-2015-0049 for multiple violations of the Construction General Permit Order No. 2009-0009-DWQ.

The QSP for the site is Greg Deacon with Toll Brothers, LLC. The QSD is Wayne Chang with ChangConsultants. Mr. Deacon was present during this site inspection; Mr. Chang was not present during the site inspection. Mr. Brickley with Toll Brothers Land Development (LRP in SMARTS), Joe McMahon, Grant Clavier, and Shawnetta Grandberry, City of Carlsbad Inspectors was present during this inspection. During this inspection focus was again on the lack of erosion controls and sediment controls in place throughout the site on both active and inactive portions of the project less than 48 hours prior to a forecasted 100% chance of rain. The inspection did include review of the SWPPP prior to and after the field visit.

II. FINDINGS

1. A lack of controls, structures, and management practices to achieve Best Conventional Pollutant Control Technology for conventional pollutants (i.e. TSS, pH, oil and grease) was observed during this inspection.
2. A lack of good housekeeping related to stockpile management, waste management, prevention of discharges from vehicle maintenance, and timely response and disposal of materials leaked to the ground was observed during this inspection.
3. Inactive portions of the site lacked soil cover to prevent erosion.
4. At the time of this inspection, the constructed sedimentation basins were not designed in accordance with the method provided in the CASQA Construction BMP Guidance Handbook. Only after the San Diego Water Board inspector brought this requirement to the attention of Mr. Brinkley and City of Carlsbad

| | |
|-------------------------|-----------------|
| Facility: | Robertson Ranch |
| Inspection Date: | 02/26/2015 |

Inspectors did the QSD provide an engineering analysis to provide guidance for sizing the sedimentation basins (see Attachment 1 - Rancho Costera – Temporary Sedimentation Basins February 27, 2015 Letter by ChangConsultants)

5. Areas of the site under active construction lacked appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs.
6. Slopes throughout the site lacked effective sedimentation controls.
7. The large slopes at the perimeter of the site lacked linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slope to comply with sheet flow lengths in accordance with Table 1 in Attachment D or Order No. 2009-0009-DWQ.
8. The SMARTS database on the project indicates grading will be completed by January 19, 2015. Since that date has passed and there is evidence that grading is not complete as of the date of this inspection, an update to SMARTS is required.

III. COMMENTS AND RECOMMENDATIONS

Comments

1. There is evidence that the site has not implemented BMPs to meet Best Conventional Treatment Technology Based Effluent Limitations under Section V.A.2 of the CGP, as required for all construction sites.
2. There is evidence that the site did not implement good housekeeping BMPs. Loose stockpiles were not covered and bermed (see Photos 1 and 2). Chemicals were not stored in watertight containers and lacked any secondary containment (see Photo 3). Waste was not securely protected from wind and rain at all times unless being actively used (see Photos 3 through 6). Leaked materials were not cleaned immediately and disposed of properly (see Photo 4).
3. There is evidence that erosion controls were not adequately implemented throughout the site. The site lacked soil cover technologies to prevent erosion on both inactive and active portions of the site. (see Photos 6 through 13).
4. At the time of this inspection, the constructed sedimentation basins were not designed in accordance with the method provided in the CASQA Construction BMP Guidance Handbook. (see Photos 15 and 16)
5. There is evidence that areas of the site under active construction lacked adequate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs. (see Photos 7 through 16)

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6. Slopes throughout the site lacked linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slope to comply with sheet flow lengths in accordance with Table 1 in Attachment D or Order No. 2009-0009-DWQ. (see Photos 7 through 18)
7. There is evidence that sediment controls were not adequately implemented throughout the site. (Photos 7 through 13 and see Photo 14 (e.g. improper installation of fiber rolls, and 15 through 18)
8. There is evidence that run-on, all run-off within the site and all runoff that discharges from the site was not properly managed. At the time of this inspection (i.e. less than 48 hours prior to a qualifying rain event) run-on from El Camino Real and Tamarack was not directed away from all disturbed areas. (see Photo 16). The southernmost portion of the site was not reviewed during this inspection, therefore it is uncertain if that portion of the site was adequately protected from run-on.
9. SMARTS requires updating to reflect an accurate date upon which grading will be complete.

Recommendations

1. Issue a Notice of Violation to Rancho Costera LLC for failure to implement Risk Level 2 requirements of CGP.
2. Refer the site to the Compliance Assurance Unit to determine whether or not issuing formal enforcement action may be appropriate.

IV. SIGNATURE SECTION

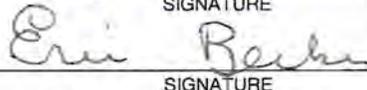
Laurie Walsh, PE
 STAFF INSPECTOR



2/26/2015

INSPECTION DATE

Eric Becker, PE
 REVIEWED BY SUPERVISOR



SIGNATURE

3/18/15

DATE

SMARTS:

| Tech Staff Info & Use | |
|-----------------------|---|
| Order No. | 2009-00009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-829466 |
| WDID | 9 37C369879 |
| Inspection ID | 2025074 |
| Violation ID | 856699, 856700, 856701, 856702, 856703 |
| Enforcement ID | 418529 |

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Photo 1: Loose soil stockpiles were not covered or bermed. Evidence supports stockpiles were not being used because there is no disturbance of pile.



Photo 2: Loose piles of gravel were not covered or bermed. Evidence supports stockpiles were not being used because there is no disturbance of pile.



Photo 3: Chemicals were not stored in watertight container or storage shed. Waste without secondary containment and not protected from wind and rain.



Photo 4: Leaks to the ground must be cleaned up immediately and disposed of leaked materials appropriately.

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Photo 5: Stockpiled tires not contained and securely protected from rain. Waste bin not covered and no evidence of cover nearby indicating that the container is covered at the end of each workday.



Photo 6: Waste bin not covered to provide protection from wind and rain. No evidence of cover nearby indicating that the container is covered at the end of each workday.



Photo 7: Signs of erosion on inactive areas of the site. Portion of the site without erosion or sediment control BMPs even though it has been inactive for more than 14 days (CGP requirement) which also exceeded the City's 10 day definition of inactive.



Photo 8: Large steep slopes along much of the perimeter of the site (this view is of the northern perimeter of the site parallel to Tamarack) without linear sediment controls or erosion controls. Portion of the site without erosion or sediment control BMPs even though it has been inactive for more than 14 days (CGP requirement) which also exceeded the City's 10 day definition of inactive. Silt fence is present at the toe of the slope that surrounds the perimeter of the site.

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Photo 9: No erosion controls present on large slopes. No linear sediment controls on large slopes. No erosion in conjunction with sediment controls present on other areas of site.



Photo 10 Partial erosion control present (i.e. straw blankets) on one large slope. Partial linear sediment controls on a part of the large slope in this photo. No erosion in conjunction with sediment controls present on other areas of site in this photo.



Photo 11 No erosion controls present on large slopes. No linear sediment controls on large slopes. No erosion in conjunction with sediment controls present on other areas of site.



Photo 12 Erosion and sediment controls present only on those slopes that have reached final grade. No erosion in conjunction with sediment controls present on other areas of site.

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Photo 13 No erosion controls present on large slopes. No linear sediment controls on large slopes. No erosion in conjunction with sediment controls present on other areas of site.



Photo 14 Erosion controls present only on slopes that have reached final grade. Linear sediment controls installed end to end and not overlapped per CASQA Construction BMP Handbooks. None of the fiber rolls on the site at the time of this inspection were installed with overlapping ends. It was unclear if the rolls were trenched in 4 inches.



Photo 15 No erosion controls present on large steep slopes (red arrow). No linear sediment controls on large slopes steep slopes (outlined in orange). No erosion in conjunction with sediment controls present on either areas.



Photo 16 No protection from run-on. Looking south onto the site this area is subject to run-on from El Camino Real and Tamarak (yellow arrows indicate plath of flow) At the time of this inspection (less than 48 hours prior to a rain event) this area was unprotected from run-in. The large soil stockpile was unprotected from wind and rain. The stockpile was not protected using soil stabilizers or bermed.

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Photo 17 Large sediment basin (outlined in red) is the only BMP being relied upon to capture sediment and runoff from the approximately 45 acre portion of the site identified by the yellow line. At the time of this inspection this basin had not been designed in accordance with CASQA guidelines. No erosion controls present.



Photo 18 Large sediment basin (outlined in red) is the only BMP being relied upon to capture sediment and runoff from the surrounding area site shown in the photo. At the time of this inspection this basin had not been designed in accordance with CASQA guidelines. At the time of this inspection a berm to close off this basin (blue line) had not been constructed. No soil stabilization erosion controls are present. No linear sediment controls are in place on slopes. No erosion in conjunction with sediment controls present.



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February 27, 2015

Kevin Brickley
Toll Brothers
725 W. Town & Country Road, Suite 200
Orange, CA 92868

Subject: Rancho Costera – Temporary Sedimentation Basins

Dear Kevin:

As requested, I have performed engineering analyses to provide guidance for sizing the temporary sediment basins implemented during your Rancho Costera grading operations. Sediment basins will be constructed at various locations throughout the site during grading, and are an appropriate construction best management practice because the primary pollutant generated by grading is sediment. Since the grading is dynamic, these guidelines should be used to ensure that the storage volume is adequate as grading progresses. A temporary sediment basin is only needed until its tributary area receives final stabilization.

The California Stormwater Quality Association's (CASQA) *California Stormwater BMP Handbook – Construction* provides sizing criteria for sediment basins (see attached data sheet SE-2). The data sheet outlines three design options. The first option was chosen because the input values can be specifically determined for the site. The associated equation is:

$$A_s = 1.2Q / V_s \quad \text{where} \quad \begin{array}{l} A_s \text{ is the required sediment basin surface area, square feet} \\ Q \text{ is the discharge rate, cubic feet per second} \\ V_s \text{ is the settling velocity, feet per second} \end{array}$$

Q is determined from the rational method equation:

$$Q = CIA \quad \text{where} \quad \begin{array}{l} C \text{ is the runoff coefficient, dimensionless} \\ I \text{ is the 10-year, 6-hour intensity rainfall; inches per hour} \\ A \text{ is the area tributary to the sediment basin, acres} \end{array}$$

The input values for Q are as follows (the supporting data is attached). The runoff coefficient, C, is determined from Table 3-1 from the County of San Diego's *Hydrology Manual*, which is based on the hydrologic soil group and land use. The hydrologic soil group at the site was conservatively selected as D and the land use during grading is equivalent to 0 percent impervious. Table 3-1 shows that these values result in a C of 0.35. The rainfall intensity, I, is determined from Figure 3-1 from the *Hydrology Manual*. The 10-year rainfall amounts are entered into Figure 3-1 to determine the 10-year, 6-hour intensity-duration curve. Since the

sediment basins will be installed throughout the site, the flow path to each basin will be relatively short, so the time of concentration was assumed to be 5 minutes. Based on this Figure 3-1 shows that I is approximately 4.9 inches per hour. Therefore, $Q = (0.35)(4.9)A = 1.72A$.

The Q value is entered into the first equation along with the appropriate settling velocity. According to the Web Soil Survey, the soil within the grading footprint is predominantly loamy fine sand. The fall velocity for fine sand is 0.023 feet per second. Therefore, $A_S = 1.2 (1.72A) / 0.023 = 89.5A$. This can be rewritten as $A_S / A = 89.5$, which indicates that the surface area of a sediment basin must cover 89.5 square feet (approximately 9.5 feet by 9.5 feet) for every acre that drains to the basin. This should be used as guidance in establishing the sediment basin sizing during the grading operations. The attached data sheet SE-2 should be referred to for additional sediment basin guidelines.

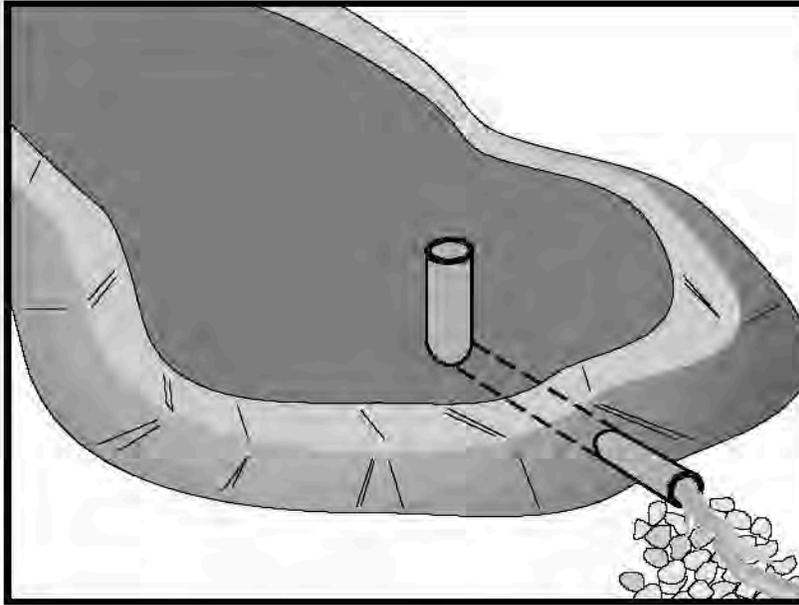
Sincerely,

A handwritten signature in black ink, appearing to read 'Wayne W. Chang', with a stylized flourish at the end.

Wayne W. Chang, M.S., P.E.

Sediment Basin

SE-2



Description and Purpose

A sediment basin is a temporary basin formed by excavation or by constructing an embankment so that sediment-laden runoff is temporarily detained under quiescent conditions, allowing sediment to settle out before the runoff is discharged.

Sediment basin design guidance presented in this fact sheet is intended to provide options, methods, and techniques to optimize temporary sediment basin performance and basin sediment removal. Basin design guidance provided in this fact sheet is not intended to guarantee basin effluent compliance with numeric discharge limits (numeric action levels or numeric effluent limits for turbidity). Compliance with discharge limits requires a thoughtful approach to comprehensive BMP planning, implementation, and maintenance. Therefore, optimally designed and maintained sediment basins should be used in conjunction with a comprehensive system of BMPs that includes:

- Diverting runoff from undisturbed areas away from the basin
- Erosion control practices to minimize disturbed areas on-site and to provide temporary stabilization and interim sediment controls (e.g., stockpile perimeter control, check dams, perimeter controls around individual lots) to reduce the basin's influent sediment concentration.

At some sites, sediment basin design enhancements may be required to adequately remove sediment. Traditional

Categories

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | <input checked="" type="checkbox"/> |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

SE-3 Sediment Trap (for smaller areas)



Sediment Basin

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(aka “physical”) enhancements such as alternative outlet configurations or flow deflection baffles increase detention time and other techniques such as outlet skimmers preferentially drain flows with lower sediment concentrations. These “physical” enhancement techniques are described in this fact sheet. To further enhance sediment removal particularly at sites with fine soils or turbidity sensitive receiving waters, some projects may need to consider implementing Active Treatment Systems (ATS) whereby coagulants and flocculants are used to enhance settling and removal of suspended sediments. Guidance on implementing ATS is provided in SE-11.

Suitable Applications

Sediment basins may be suitable for use on larger projects with sufficient space for constructing the basin. Sediment basins should be considered for use:

- Where sediment-laden water may enter the drainage system or watercourses
- On construction projects with disturbed areas during the rainy season
- At the outlet of disturbed watersheds between 5 acres and 75 acres and evaluated on a site by site basis
- Where post construction detention basins are required
- In association with dikes, temporary channels, and pipes used to convey runoff from disturbed areas

Limitations

Sediment basins must be installed only within the property limits and where failure of the structure will not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities. In addition, sediment basins are attractive to children and can be very dangerous. Local ordinances regarding health and safety must be adhered to. If fencing of the basin is required, the type of fence and its location should be shown in the SWPPP and in the construction specifications.

- As a general guideline, sediment basins are suitable for drainage areas of 5 acres or more, but not appropriate for drainage areas greater than 75 acres. However, the tributary area should be evaluated on a site by site basis.
- Sediment basins may become an “attractive nuisance” and care must be taken to adhere to all safety practices. If safety is a concern, basin may require protective fencing.
- Sediment basins designed according to this fact sheet are only effective in removing sediment down to about the silt size fraction. Sediment-laden runoff with smaller size fractions (fine silt and clay) may not be adequately treated unless chemical (or other appropriate method) treatment is used in addition to the sediment basin.
- Basins with a height of 25 ft or more or an impounding capacity of 50 ac-ft or more must obtain approval from California Department of Water Resources Division of Safety of Dams (<http://www.water.ca.gov/damsafety/>).

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- Water that stands in sediment basins longer than 96 hours may become a source of mosquitoes (and midges), particularly along perimeter edges, in shallow zones, in scour or below-grade pools, around inlet pipes, along low-flow channels, and among protected habitats created by emergent or floating vegetation (e.g. cattails, water hyacinth), algal mats, riprap, etc.
- Basins require large surface areas to permit settling of sediment. Size may be limited by the available area.

Implementation

General

A sediment basin is a controlled stormwater release structure formed by excavation or by construction of an embankment of compacted soil across a drainage way, or other suitable location. It is intended to trap sediment before it leaves the construction site. The basin is a temporary measure expected to be used during active construction in most cases and is to be maintained until the site area is permanently protected against erosion or a permanent detention basin is constructed.

Sediment basins are suitable for nearly all types of construction projects. Whenever possible, construct the sediment basins before clearing and grading work begins. Basins should be located at the stormwater outlet from the site but not in any natural or undisturbed stream. A typical application would include temporary dikes, pipes, and/or channels to convey runoff to the basin inlet.

Many development projects in California are required by local ordinances to provide a stormwater detention basin for post-construction flood control, desilting, or stormwater pollution control. A temporary sediment basin may be constructed by rough grading the post-construction control basins early in the project.

Sediment basins if properly designed and maintained can trap a significant amount of the sediment that flows into them. However, traditional basins do not remove all inflowing sediment. Therefore, they should be used in conjunction with erosion control practices such as temporary seeding, mulching, diversion dikes, etc., to reduce the amount of sediment flowing into the basin.

Planning

To improve the effectiveness of the basin, it should be located to intercept runoff from the largest possible amount of disturbed area. Locations best suited for a sediment basin are generally in lower elevation areas of the site (or basin tributary area) where site drainage would not require significant diversion or other means to direct water to the basin but outside jurisdictional waterways. However, as necessary, drainage into the basin can be improved by the use of earth dikes and drainage swales (see BMP EC-9). The basin should not be located where its failure would result in the loss of life or interruption of the use or service of public utilities or roads.

Construct before clearing and grading work begins when feasible.

- Do not locate the basin in a jurisdictional stream.

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- Basin sites should be located where failure of the structure will not cause loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities.
- Basins with a height of 25 ft or more or an impounding capacity of 50 ac-ft must obtain approval from the Division of Dam Safety. Local dam safety requirements may be more stringent.
- Limit the contributing area to the sediment basin to only the runoff from the disturbed soil areas. Use temporary concentrated flow conveyance controls to divert runoff from undisturbed areas away from the sediment basin.
- The basin should be located: (1) by excavating a suitable area or where a low embankment can be constructed across a swale, (2) where post-construction (permanent) detention basins will be constructed, and (3) where the basins can be maintained on a year-round basis to provide access for maintenance, including sediment removal and sediment stockpiling in a protected area, and to maintain the basin to provide the required capacity.

Design

When designing a sediment basin, designers should evaluate the site constraints that could affect the efficiency of the BMP. Some of these constraints include: the relationship between basin capacity, anticipated sediment load, and freeboard, available footprint for the basin, maintenance frequency and access, and hydraulic capacity and efficiency of the temporary outlet infrastructure. Sediment basins should be designed to maximize sediment removal and to consider sediment load retained by the basin as it affects basin performance.

Three Basin Design Options (Part A) are presented below along with a Typical Sediment/Retention Basin Design Methodology (Part B). Regardless of the design option that is selected, designers also need to evaluate the sediment basin capacity with respect to sediment accumulation (See “*Step 3. Evaluate the Capacity of the Sediment Basin*”), and should incorporate approaches identified in “*Step 4. Other Design Considerations*” to enhance basin performance.

A) Basin Design Options:

Option 1:

Design sediment basin(s) using the standard equation:

$$A_s = \frac{1.2Q}{V_s} \quad \text{(Eq. 1)}$$

Where:

A_s = Minimum surface area for trapping soil particles of a certain size

V_s = Settling velocity of the design particle size chosen ($V_s = 0.00028$ ft/s for a design particle size of 0.01 mm at 68°F)

1.2 = Factor of safety recommended by USEPA to account for the reduction in basin efficiency caused due to turbulence and other non ideal conditions.

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$$Q = CIA \quad \text{(Eq. 2)}$$

Where

Q = Discharge rate measured in cubic feet per second.

C = Runoff coefficient (unitless)

I = Peak rainfall intensity for the 10-year, 6-hour rain event (in/hr)

A = Area draining into the sediment basin in acres

The design particle size should be the smallest soil grain size determined by wet sieve analysis, or the fine silt sized (0.01 mm [or 0.0004 in.]) particle, and the Vs used should be 100 percent of the calculated settling velocity.

This sizing basin method is dependent on the outlet structure design or the total basin length with an appropriate outlet. If the designer chooses to utilize the outlet structure to control the flow duration in the basin, the basin length (distance between the inlet and the outlet) should be a minimum of twice the basin width; the depth should not be less than 3 ft nor greater than 5 ft for safety reasons and for maximum efficiency (2 ft of sediment storage, 2 ft of capacity). If the designer chooses to utilize the basin length (with appropriate basin outlet) to control the flow duration in the basin, the basin length (distance between the inlet and the outlet) should be specifically designed to capture 100% of the design particle size; the depth should not be less than 3 ft nor greater than 5 ft for safety reasons and for maximum efficiency (2 ft of sediment storage, 2 ft of capacity).

The basin should be located on the site where it can be maintained on a year-round basis and should be maintained on a schedule to retain the 2 ft of capacity.

Option 2:

Design pursuant to local ordinance for sediment basin design and maintenance, provided that the design efficiency is as protective or more protective of water quality than Option 1.

Option 3:

The use of an equivalent surface area design or equation provided that the design efficiency is as protective or more protective of water quality than Option 1.

B) Typical Sediment/Detention Basin Design Methodology:

Design of a sediment basin requires the designer to have an understanding of the site constraints, knowledge of the local soil (e.g., particle size distribution of potentially contributing soils), drainage area of the basin, and local hydrology. Designers should not assume that a sediment basin for location A is applicable to location B. Therefore, designers can use this factsheet as guidance but will need to apply professional judgment and knowledge of the site to design an effective and efficient sediment basin. The following provides a general overview of typical design methodologies:

Step 1. Hydrologic Design

- Evaluate the site constraints and assess the drainage area for the sediment basin. Designers should consider on- and off-site flows as well as changes in the drainage area associated with site construction/disturbance. To minimize additional construction during the course of the project, the designer should consider identifying the maximum drainage area when calculating the basin dimensions.
- If a local hydrology manual is not available it is recommended to follow standard rational method procedures to estimate discharge. The references section of this factsheet provides a reference to standard hydrology textbooks that can provide standard methodologies. If local rainfall depths are not available, values can be obtained from standard precipitation frequency maps from NOAA (downloaded from <http://www.wrcc.dri.edu/pcpnfreq.html>).

Step 2. Hydraulic Design

- Calculate the surface area required for the sediment basin using Equation 1. In which discharge is estimated for a 10-yr 6-hr event using rational method procedure listed in local hydrology manual and V_s is estimated using Stokes Law presented in Equation 3.

$$V_s = 2.81d^2 \quad (\text{Eq.3})$$

Where

V_s = Settling velocity in feet per second at 68 °F

d = diameter of sediment particle in millimeters (smallest soil grain size determined by wet sieve analysis or fine silt (0.01 mm [or 0.0004 in.]))

- In general the basin outlet design requires an iterative trial and error approach that considered the maximum water surface elevation, the elevation versus volume (stage-storage) relationship, the elevation versus discharge (stage-discharge) relationship, and the estimated inflow hydrograph. To adequately design the basins to settle sediment, the outlet configuration and associated outflow rates can be estimated by numerous methodologies. The following provides some guidance for design the basin outlet:
 - An outlet should have more than one orifice.
 - An outlet design typically utilizes multiple horizontal rows of orifices (approximately 3 or more) with at least 2 orifices per row (see Figures 1 and 2 at the end of this fact sheet).
 - Orifices can vary in shape.
 - Select the appropriate orifice diameter and number of perforations per row with the objective of minimizing the number of rows while maximizing the detention time.

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- The diameter of each orifice is typically a maximum of 3-4 inches and a minimum of 0.25-0.5 inches.
- If a rectangular orifice is used, it is recommended to have minimum height of 0.5 inches and a maximum height of 6 inches.
- Rows are typically spaced at three times the diameter center to center vertically with a minimum distance of approximately 4 inches on center and a maximum distance of 1 foot on center.
- To estimate the outflow rate, each row is calculated separately based on the flow through a single orifice then multiplied by the number of orifices in the row. This step is repeated for each of the rows. Once all of the orifices are estimated, the total outflow rate versus elevation (stage-discharge curve) is developed to evaluate the detention time within the basin.
- Flow through a single orifice can be estimated using an Equation 4:

$$Q = BC' A(2gH)^{0.5} \quad (\text{Eq.4})$$

Where

Q = Discharge in ft³/s

C' = Orifice coefficient (unitless)

A = Area of the orifice (ft²)

g = acceleration due to gravity (ft³/s)

H = Head above the orifice (ft)

B = Anticipated Blockage or clogging factor (unitless), It is dependent on anticipated sediment and debris load, trash rack configuration etc, so the value is dependent on design engineers professional judgment and/or local requirements (B is never greater than 1 and a value of 0.5 is generally used)

- Care must be taken in the selection of orifice coefficient ("C'"); 0.60 is most often recommended and used. However, based on actual tests, Young and Graziano (1989), "Outlet Hydraulics of Extended Detention Facilities for Northern Virginia Planning District Commission", recommends the following:
 - C' = 0.66 for thin materials; where the thickness is equal to or less than the orifice diameter, or
 - C' = 0.80 when the material is thicker than the orifice diameter
- If different sizes of orifices are used along the riser then they have to be sized such that not more than 50 percent of the design storm event drains in one-third of the drawdown time (to provide adequate settling time for events smaller than the design storm event) and the entire volume drains within 96 hours or as regulated by the local vector control agency. If a basin fails to drain within 96 hours, the basin must be pumped dry.

Sediment Basin

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- Because basins are not maintained for infiltration, water loss by infiltration should be disregarded when designing the hydraulic capacity of the outlet structure.
- Floating Outlet Skimmer: The floating skimmer (see Figure 3 at the end of this fact sheet is an alternative outlet configuration (patented) that drains water from upper portion of the water column. This configuration has been used for temporary and permanent basins and can improve basin performance by eliminating bottom orifices which have the potential of discharging solids. Some design considerations for this alternative outlet device includes the addition of a sand filter or perforated under drain at the low point in the basin and near the floating skimmer. These secondary drains allow the basin to fully drain. More detailed guidelines for sizing the skimmer can be downloaded from <http://www.faireclothskimmer.com/>.
- Hold and Release Valve: An ideal sediment/detention basin would hold all flows to the design storm level for sufficient time to settle solids, and then slowly release the storm water. Implementing a reliable valve system for releasing detention basins is critical to eliminate the potential for flooding in such a system. Some variations of hold and release valves include manual valves, bladder devices or electrically operated valves. When a precipitation event is forecast, the valve would be close for the duration of the storm and appropriate settling time. When the settling duration is met (approximately 24 or 48 hours), the valve would be opened and allow the stormwater to be discharged at a rate that does not resuspend settled solids and in a non-erosive manner. If this type of system is used the valve should be designed to empty the entire basin within 96 hours or as stipulated by local vector control regulations.

Step 3. Evaluate the Capacity of the Sediment Basin

- Typically, sediment basins do not perform as designed when they are not properly maintained or the sediment yield to the basin is larger than expected. As part of a good sediment basin design, designers should consider maintenance cycles, estimated soil loss and/or sediment yield, and basin sediment storage volume. The two equations below can be used to quantify the amount of soil entering the basin.
- The Revised Universal Soil Loss Equation (RUSLE, Eq.5) can be used to estimate annual soil loss and the Modified Universal Soil Equation (MUSLE, Eq.6) can be used to estimate sediment yield from a single storm event.

$$A = R \times K \times LS \times C \times P \quad (\text{Eq.5})$$

$$Y = 95(Q \times q_p)^{0.56} \times K \times LS \times C \times P \quad (\text{Eq.6})$$

Where:

A = annual soil loss, tons/acre-year

R = rainfall erosion index, in 100 ft.tons/acre.in/hr

K = soil erodibility factor, tons/acre per unit of R

LS = slope length and steepness factor (unitless)

Sediment Basin

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C = vegetative cover factor (unitless)

P = erosion control practice factor (unitless)

\bar{Y} = single storm sediment yield in tons

Q = runoff volume in acre-feet

q_p = peak flow in cfs

- Detailed descriptions and methodologies for estimating the soil loss can be obtained from standard hydrology text books (See References section).
- Determination of the appropriate equation should consider construction duration and local environmental factors (soils, hydrology, etc.). For example, if a basin is planned for a project duration of 1 year and the designer specifies one maintenance cycle, RUSLE could be used to estimate the soil loss and thereby the designer could indicate that the sediment storage volume would be half of the soil loss value estimated. As an example for use of MUSLE, a project may have a short construction duration thereby requiring fewer maintenance cycles and a reduced sediment storage volume. MUSLE would be used to estimate the anticipated soil loss based on a specific storm event to evaluate the sediment storage volume and appropriate maintenance frequency.
- The soil loss estimates are an essential step in the design and it is essential that the designer provide construction contractors with enough information to understand maintenance frequency and/or depths within the basin that would trigger maintenance. Providing maintenance methods, frequency and specification should be included in design bid documents such as the SWPPP Site Map.
- Once the designer has quantified the amount of soil entering the basin, the depth required for sediment storage can be determined by dividing the estimated sediment loss by the surface area of the basin.

Step 4. Other Design Considerations

- Consider designing the volume of the settling zone for the total storm volume associated with the 2-year event or other appropriate design storms specified by the local agency. This volume can be used as a guide for sizing the basin without iterative routing calculations. The depth of the settling zone can be estimated by dividing the estimated 2-yr storm volume by the surface area of the basin.
- The basin volume consists of two zones:
 - A sediment storage zone at least 1 ft deep.
 - A settling zone at least 2 ft deep.
 - The basin depth must be no less than 3 ft (not including freeboard).
- Proper hydraulic design of the outlet is critical to achieving the desired performance of the basin. The outlet should be designed to drain the basin within 24 to 96 hours (also referred

Sediment Basin

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to as “drawdown time”). The 24-hour limit is specified to provide adequate settling time; the 96-hour limit is specified to mitigate vector control concerns.

- Confirmation of the basin performance can be evaluated by routing the design storm (10-yr 6-hr, or as directed by local regulations) through the basin based on the basin volume (stage-storage curve) and the outlet design (stage-discharge curve based on the orifice configuration or equivalent outlet design).
- Sediment basins, regardless of size and storage volume, should include features to accommodate overflow or bypass flows that exceed the design storm event.
 - Include an emergency spillway to accommodate flows not carried by the principal spillway. The spillway should consist of an open channel (earthen or vegetated) over undisturbed material (not fill) or constructed of a non-erodible riprap (or equivalent protection) on fill slopes.
 - The spillway control section, which is a level portion of the spillway channel at the highest elevation in the channel, should be a minimum of 20 ft in length.
- Rock, vegetation or appropriate erosion control should be used to protect the basin inlet, outlet, and slopes against erosion.
- The total depth of the sediment basin should include the depth required for sediment storage, depth required for settling zone and freeboard of at least 1 foot or as regulated by local flood control agency for a flood event specified by the local agency.
- The basin alignment should be designed such that the length of the basin is more than twice the width of the basin; the length should be determined by measuring the distance between the inlet and the outlet. If the site topography does not allow for this configuration baffles should be installed so that the ratio is satisfied. If a basin has more than one inflow point, any inflow point that conveys more than 30 percent of the total peak inflow rate has to meet the required length to width ratio.
- An alternative basin sizing method proposed by Fifield (2004) can be consulted to estimate an alternative length to width ratio and basin configuration. These methods can be considered as part of Option 3 which allows for alternative designs that are protective or more protective of water quality.
- Baffles (see Figure 4 at the end of this fact sheet) can be considered at project sites where the existing topography or site constraints limit the length to width ratio. Baffles should be constructed of earthen berms or other structural material within the basin to divert flow in the basin, thus increasing the effective flow length from the basin inlet to the outlet riser. Baffles also reduce the change of short circuiting and allows for settling throughout the basin.
- Baffles are typically constructed from the invert of the basin to the crest of the emergency spillway (i.e., design event flows are meant to flow around the baffles and flows greater than the design event would flow over the baffles to the emergency spillway).

Sediment Basin

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- Use of other materials for construction of basin baffles (such as silt fence) may not be appropriate based on the material specifications and will require frequent maintenance (maintain after every storm event). Maintenance may not be feasible when required due to flooded conditions resulting from frequent (i.e., back to back) storm events. Use of alternative baffle materials should not deviate from the intended purpose of the material, as described by the manufacturer.
- Sediment basins are best used in conjunction with erosion controls.
- Basins with an impounding levee greater than 4.5 ft tall, measured from the lowest point to the impounding area to the highest point of the levee, and basins capable of impounding more than 35,000 ft³, should be designed by a Registered Civil Engineer. The design should include maintenance requirements, including sediment and vegetation removal, to ensure continuous function of the basin outlet and bypass structures.
- A forebay, constructed upstream of the basin may be provided to remove debris and larger particles.
- The outflow from the sediment basin should be provided with velocity dissipation devices (see BMP EC-10) to prevent erosion and scouring of the embankment and channel.
- The principal outlet should consist of a corrugated metal, high density polyethylene (HDPE), or reinforced concrete riser pipe with dewatering holes and an anti-vortex device and trash rack attached to the top of the riser, to prevent floating debris from flowing out of the basin or obstructing the system. This principal structure should be designed to accommodate the inflow design storm.
- A rock pile or rock-filled gabions can serve as alternatives to the debris screen, although the designer should be aware of the potential for extra maintenance involved should the pore spaces in the rock pile clog.
- The outlet structure should be placed on a firm, smooth foundation with the base securely anchored with concrete or other means to prevent floatation.
- Attach riser pipe (watertight connection) to a horizontal pipe (barrel). Provide anti-seep collars on the barrel.
- Cleanout level should be clearly marked on the riser pipe.

Installation

- Securely anchor and install an anti-seep collar on the outlet pipe/riser and provide an emergency spillway for passing major floods (see local flood control agency).
- Areas under embankments must be cleared and stripped of vegetation.
- Chain link fencing should be provided around each sediment basin to prevent unauthorized entry to the basin or if safety is a concern.

Sediment Basin

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Costs

The cost of a sediment basin is highly variable and is dependent of the site configuration. To decrease basin construction costs, designers should consider using existing site features such as berms or depressed area to site the sediment basin. Designers should also consider potential savings associated with designing the basin to minimize the number of maintenance cycles and siting the basin in a location where a permanent BMP (e.g., extended detention basin) is required for the project site.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level and as required by local requirements. It is recommended that at a minimum, basins be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Examine basin banks for seepage and structural soundness.
- Check inlet and outlet structures and spillway for any damage or obstructions. Repair damage and remove obstructions as needed.
- Check inlet and outlet area for erosion and stabilize if required.
- Check fencing for damage and repair as needed.
- Sediment that accumulates in the basin must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-half the designated sediment storage volume. Sediment removed during maintenance should be managed properly. The sediment should be appropriately evaluated and used or disposed of accordingly. Options include: incorporating sediment into earthwork on the site (only if there is no risk that sediment is contaminated); or off-site export/disposal at an appropriate location (e.g., sediment characterization and disposal to an appropriate landfill).
- Remove standing water from basin within 96 hours after accumulation.
- If the basin does not drain adequately (e.g., due to storms that are more frequent or larger than the design storm or other unforeseen site conditions), dewatering should be conducted in accordance with appropriate dewatering BMPs (see NS-2) and in accordance with local permits as applicable.
- To minimize vector production:
 - Remove accumulation of live and dead floating vegetation in basins during every inspection.
 - Remove excessive emergent and perimeter vegetation as needed or as advised by local or state vector control agencies.

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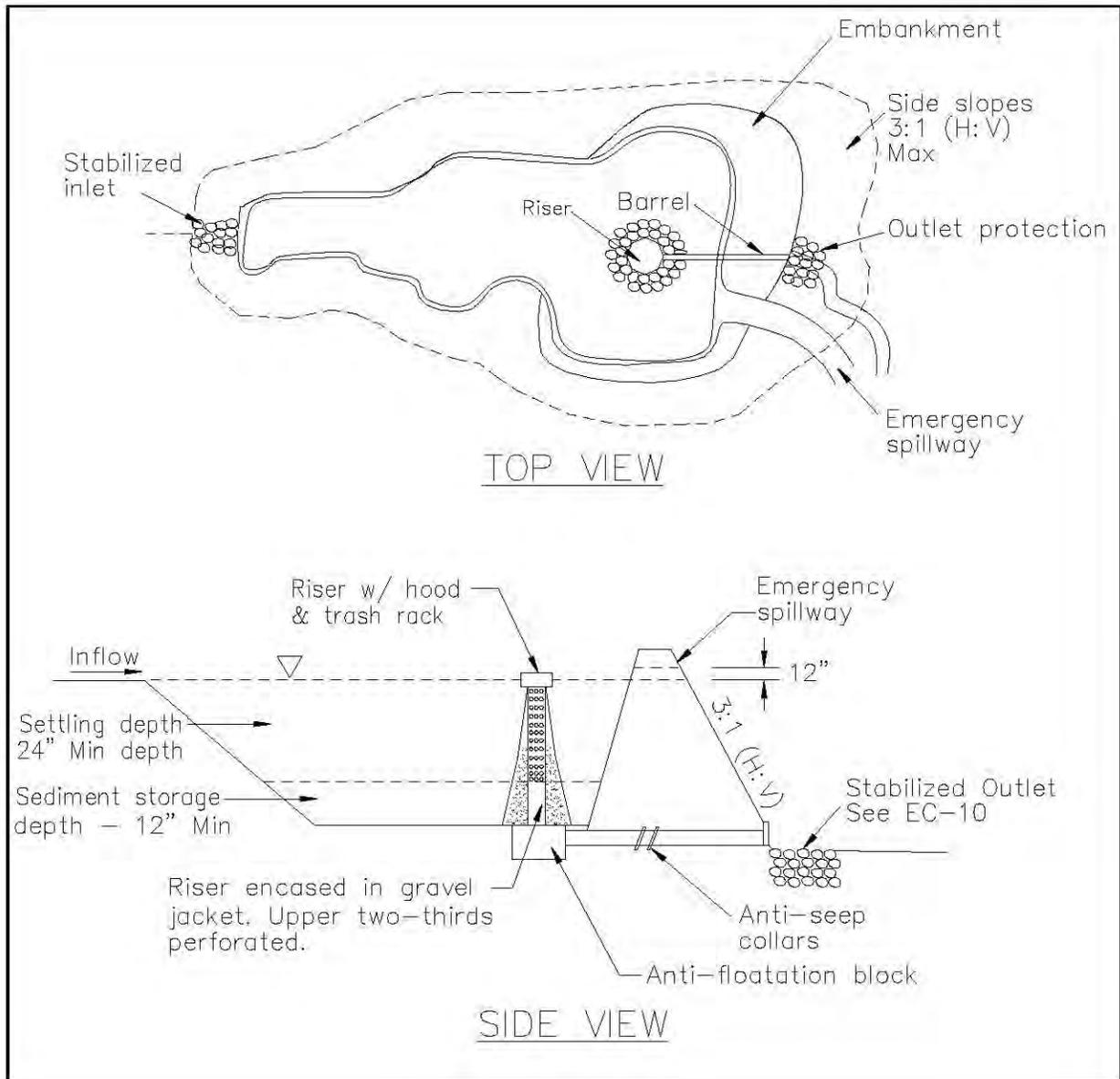
Sediment Basin

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Sediment Basin

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**FIGURE 1: TYPICAL TEMPORARY SEDIMENT BASIN
MULTIPLE ORIFICE DESIGN
NOT TO SCALE**

Sediment Basin

SE-2

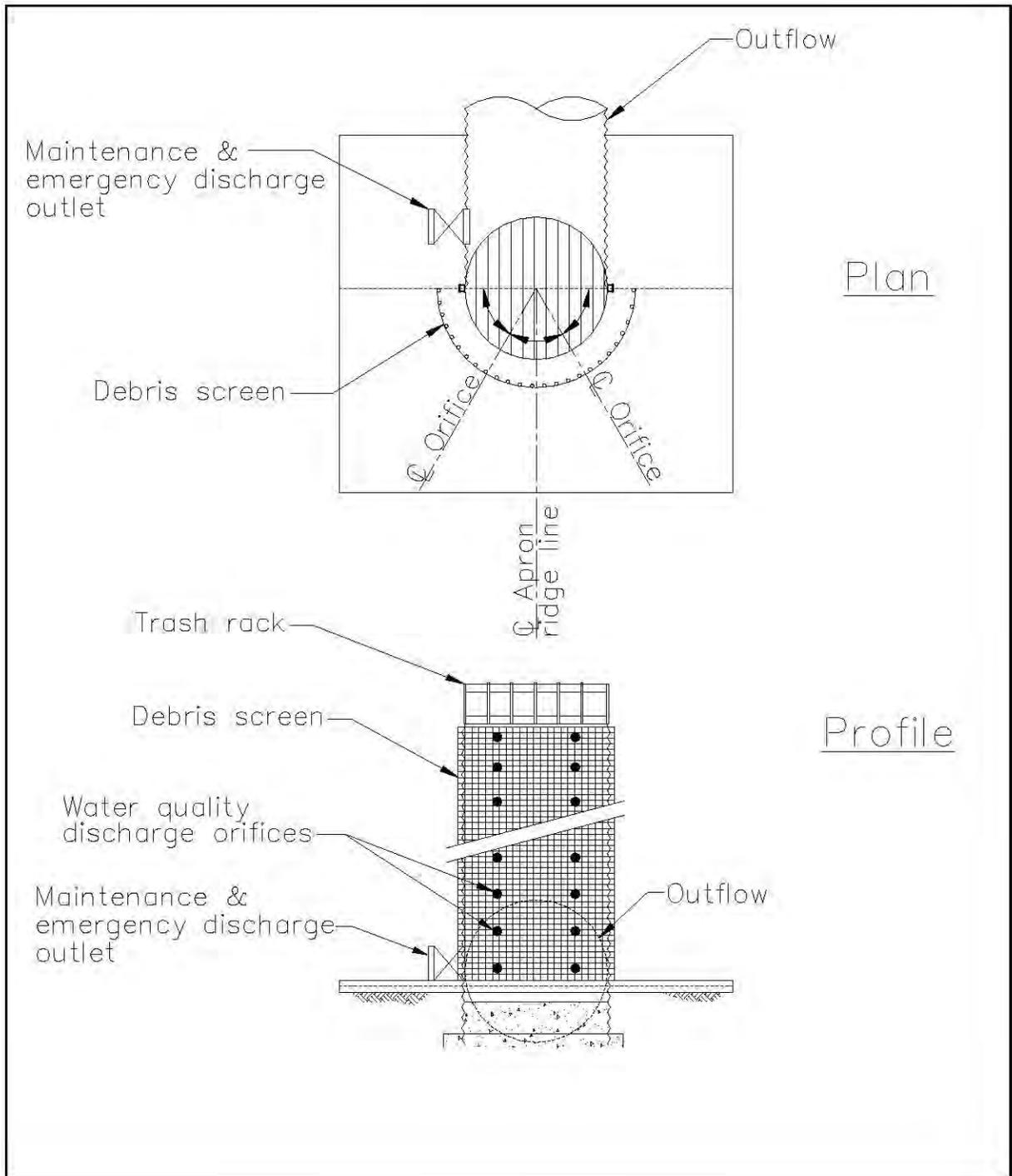


FIGURE 2: MULTIPLE ORIFICE OUTLET RISER
NOT TO SCALE

Sediment Basin

SE-2

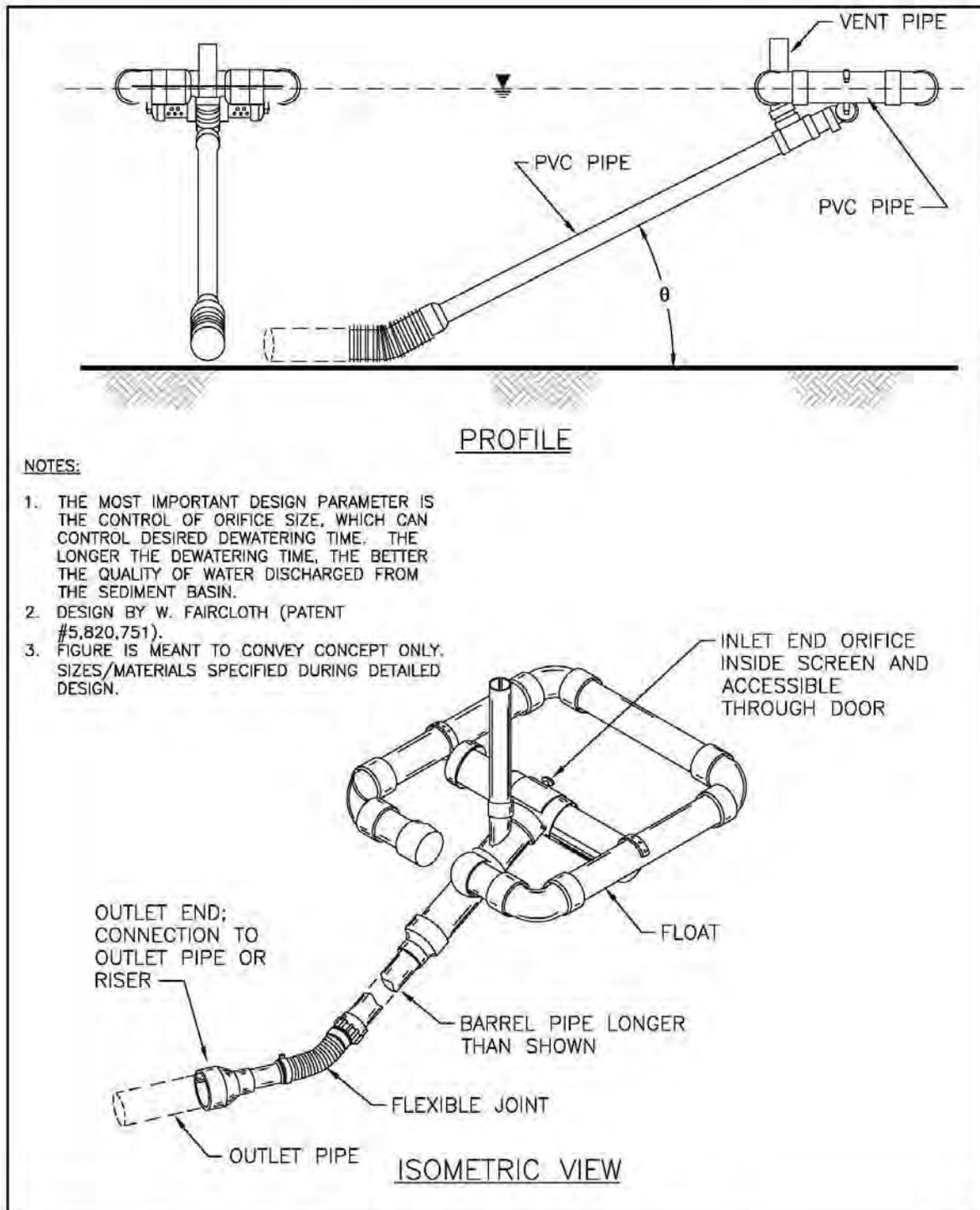
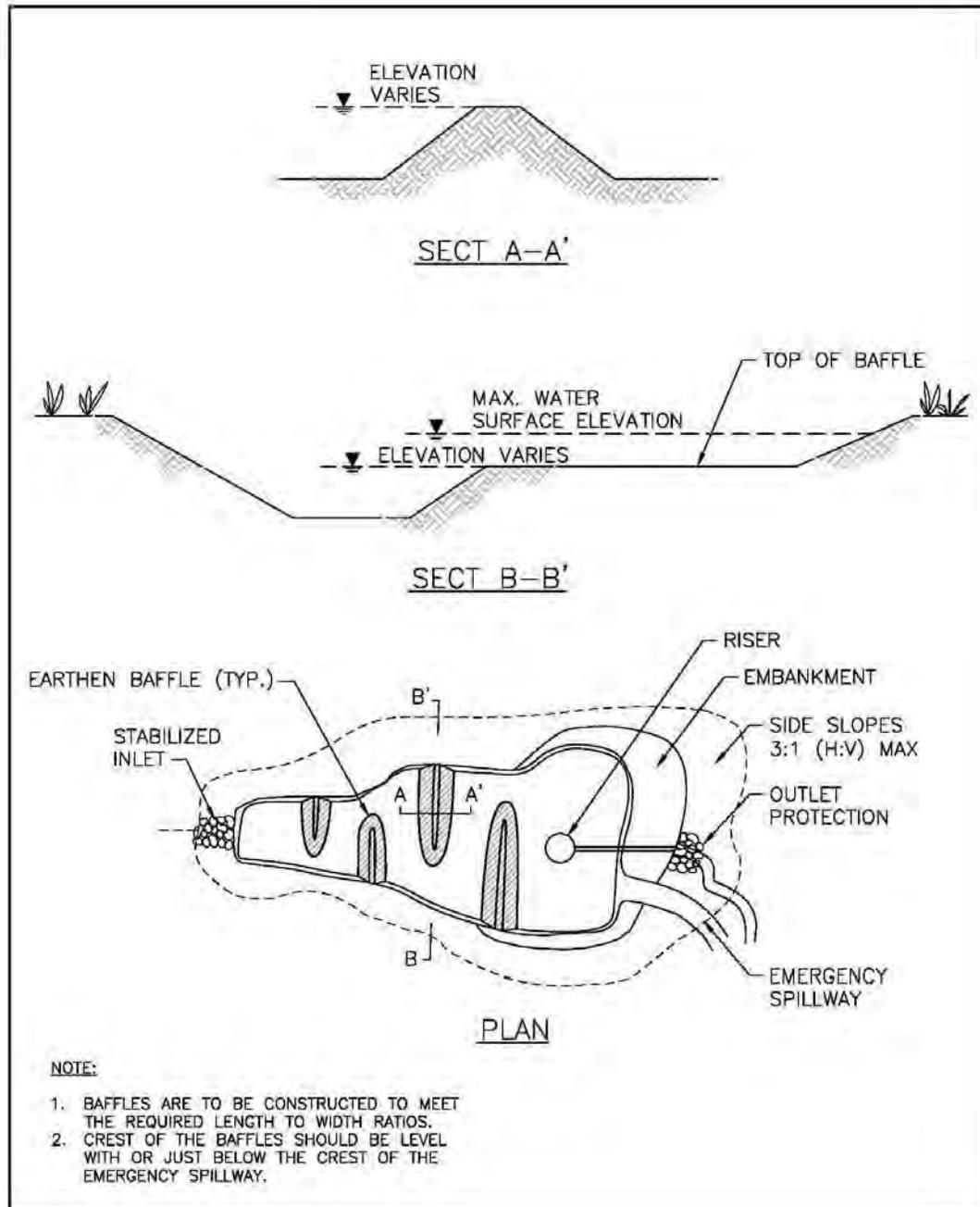


FIGURE 3: TYPICAL SKIMMER
NOT TO SCALE

Sediment Basin

SE-2



**FIGURE 4: TYPICAL TEMPORARY SEDIMENT BASIN
WITH BAFFLES
NOT TO SCALE**

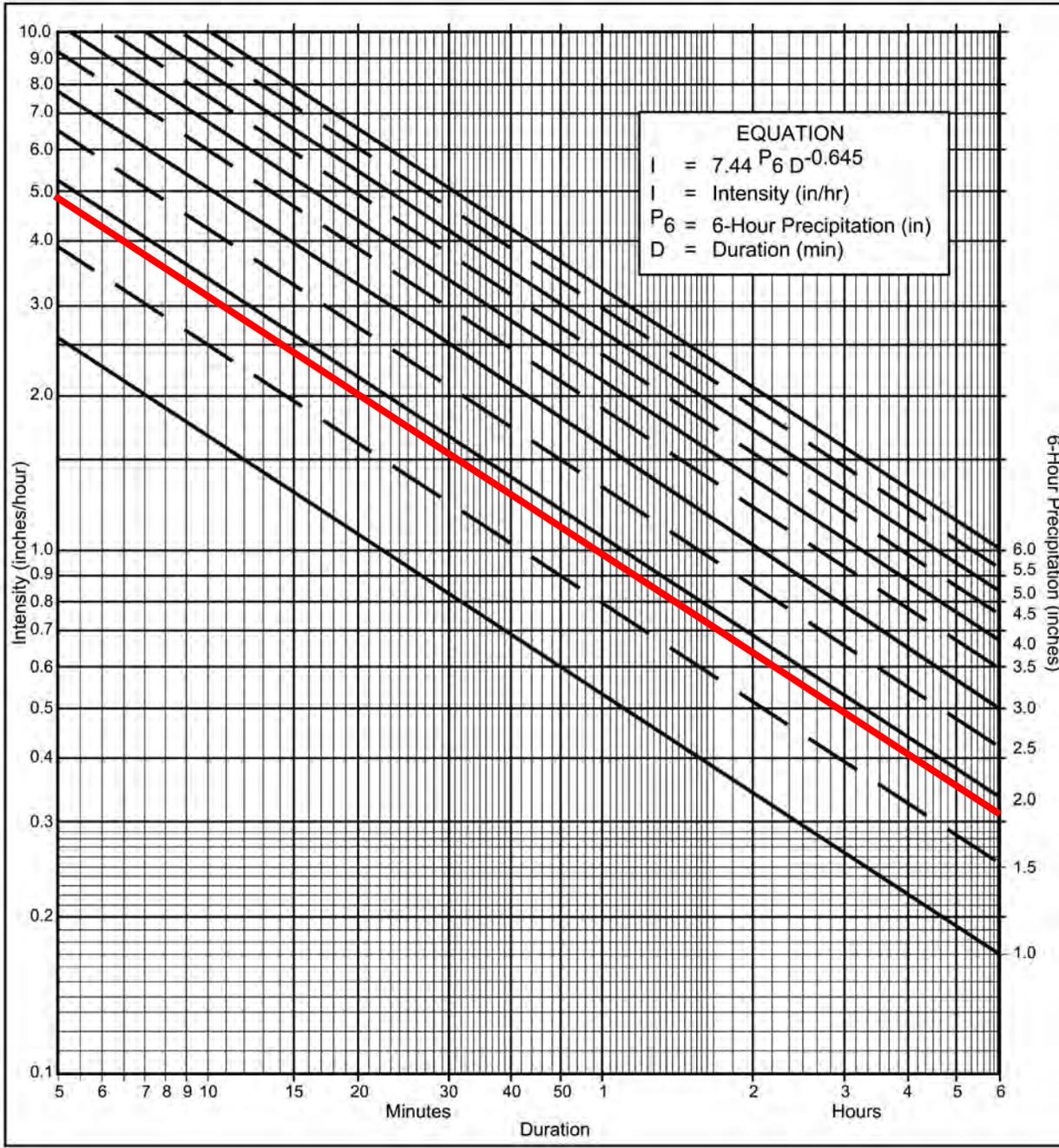
**Table 3-1
RUNOFF COEFFICIENTS FOR URBAN AREAS**

| Land Use | | Runoff Coefficient "C" | | | | |
|---------------------------------------|--------------------------------|------------------------|-----------|------|------|------|
| | | % IMPER. | Soil Type | | | |
| NRCS Elements | County Elements | | | A | B | C |
| Undisturbed Natural Terrain (Natural) | Permanent Open Space | 0* | 0.20 | 0.25 | 0.30 | 0.35 |
| Low Density Residential (LDR) | Residential, 1.0 DU/A or less | 10 | 0.27 | 0.32 | 0.36 | 0.41 |
| Low Density Residential (LDR) | Residential, 2.0 DU/A or less | 20 | 0.34 | 0.38 | 0.42 | 0.46 |
| Low Density Residential (LDR) | Residential, 2.9 DU/A or less | 25 | 0.38 | 0.41 | 0.45 | 0.49 |
| Medium Density Residential (MDR) | Residential, 4.3 DU/A or less | 30 | 0.41 | 0.45 | 0.48 | 0.52 |
| Medium Density Residential (MDR) | Residential, 7.3 DU/A or less | 40 | 0.48 | 0.51 | 0.54 | 0.57 |
| Medium Density Residential (MDR) | Residential, 10.9 DU/A or less | 45 | 0.52 | 0.54 | 0.57 | 0.60 |
| Medium Density Residential (MDR) | Residential, 14.5 DU/A or less | 50 | 0.55 | 0.58 | 0.60 | 0.63 |
| High Density Residential (HDR) | Residential, 24.0 DU/A or less | 65 | 0.66 | 0.67 | 0.69 | 0.71 |
| High Density Residential (HDR) | Residential, 43.0 DU/A or less | 80 | 0.76 | 0.77 | 0.78 | 0.79 |
| Commercial/Industrial (N. Com) | Neighborhood Commercial | 80 | 0.76 | 0.77 | 0.78 | 0.79 |
| Commercial/Industrial (G. Com) | General Commercial | 85 | 0.80 | 0.80 | 0.81 | 0.82 |
| Commercial/Industrial (O.P. Com) | Office Professional/Commercial | 90 | 0.83 | 0.84 | 0.84 | 0.85 |
| Commercial/Industrial (Limited I.) | Limited Industrial | 90 | 0.83 | 0.84 | 0.84 | 0.85 |
| Commercial/Industrial (General I.) | General Industrial | 95 | 0.87 | 0.87 | 0.87 | 0.87 |

*The values associated with 0% impervious may be used for direct calculation of the runoff coefficient as described in Section 3.1.2 (representing the pervious runoff coefficient, C_p , for the soil type), or for areas that will remain undisturbed in perpetuity. Justification must be given that the area will remain natural forever (e.g., the area is located in Cleveland National Forest).

DU/A = dwelling units per acre

NRCS = National Resources Conservation Service



Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

- (a) Selected frequency 10 year
- (b) $P_6 = 1.8$ in., $P_{24} = 3.2$, $\frac{P_6}{P_{24}} = 56$ %⁽²⁾
- (c) Adjusted $P_6^{(2)} = 1.8$ in.
- (d) $t_x =$ _____ min.
- (e) $I =$ _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

| P6 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 5 | 2.63 | 3.95 | 5.27 | 6.59 | 7.90 | 9.22 | 10.54 | 11.86 | 13.17 | 14.49 | 15.81 |
| 7 | 2.12 | 3.18 | 4.24 | 5.30 | 6.36 | 7.42 | 8.48 | 9.54 | 10.60 | 11.66 | 12.72 |
| 10 | 1.68 | 2.53 | 3.37 | 4.21 | 5.05 | 5.90 | 6.74 | 7.58 | 8.42 | 9.27 | 10.11 |
| 15 | 1.30 | 1.95 | 2.59 | 3.24 | 3.89 | 4.54 | 5.19 | 5.84 | 6.49 | 7.13 | 7.78 |
| 20 | 1.08 | 1.62 | 2.15 | 2.69 | 3.23 | 3.77 | 4.31 | 4.85 | 5.39 | 5.93 | 6.46 |
| 25 | 0.93 | 1.40 | 1.87 | 2.33 | 2.80 | 3.27 | 3.73 | 4.20 | 4.67 | 5.13 | 5.60 |
| 30 | 0.83 | 1.24 | 1.66 | 2.07 | 2.49 | 2.90 | 3.32 | 3.73 | 4.15 | 4.56 | 4.98 |
| 40 | 0.69 | 1.03 | 1.38 | 1.72 | 2.07 | 2.41 | 2.76 | 3.10 | 3.45 | 3.79 | 4.13 |
| 50 | 0.60 | 0.90 | 1.19 | 1.49 | 1.79 | 2.09 | 2.39 | 2.69 | 2.98 | 3.28 | 3.58 |
| 60 | 0.53 | 0.80 | 1.06 | 1.33 | 1.59 | 1.86 | 2.12 | 2.39 | 2.65 | 2.92 | 3.18 |
| 90 | 0.41 | 0.61 | 0.82 | 1.02 | 1.23 | 1.43 | 1.63 | 1.84 | 2.04 | 2.25 | 2.45 |
| 120 | 0.34 | 0.51 | 0.68 | 0.85 | 1.02 | 1.19 | 1.36 | 1.53 | 1.70 | 1.87 | 2.04 |
| 150 | 0.29 | 0.44 | 0.59 | 0.73 | 0.88 | 1.03 | 1.18 | 1.32 | 1.47 | 1.62 | 1.76 |
| 180 | 0.26 | 0.39 | 0.52 | 0.65 | 0.78 | 0.91 | 1.04 | 1.18 | 1.31 | 1.44 | 1.57 |
| 240 | 0.22 | 0.33 | 0.43 | 0.54 | 0.65 | 0.76 | 0.87 | 0.98 | 1.08 | 1.19 | 1.30 |
| 300 | 0.19 | 0.28 | 0.38 | 0.47 | 0.56 | 0.66 | 0.75 | 0.85 | 0.94 | 1.03 | 1.13 |
| 360 | 0.17 | 0.25 | 0.33 | 0.42 | 0.50 | 0.58 | 0.67 | 0.75 | 0.84 | 0.92 | 1.00 |

Intensity-Duration Design Chart - Template

FIGURE

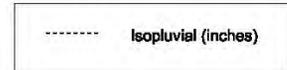
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County of San Diego Hydrology Manual

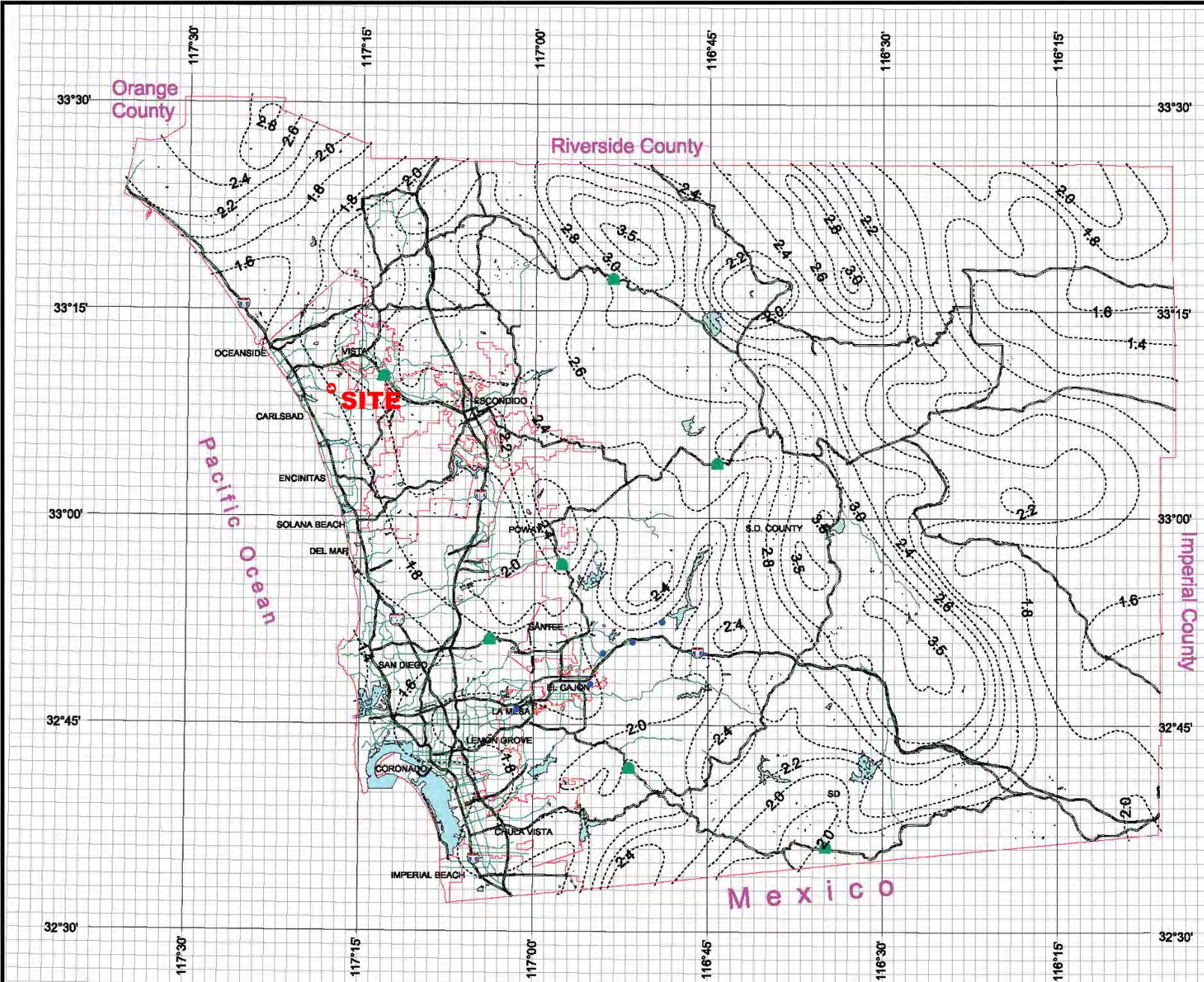


Rainfall Isopleths

10 Year Rainfall Event - 6 Hours



P6 = 1.8"





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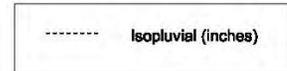



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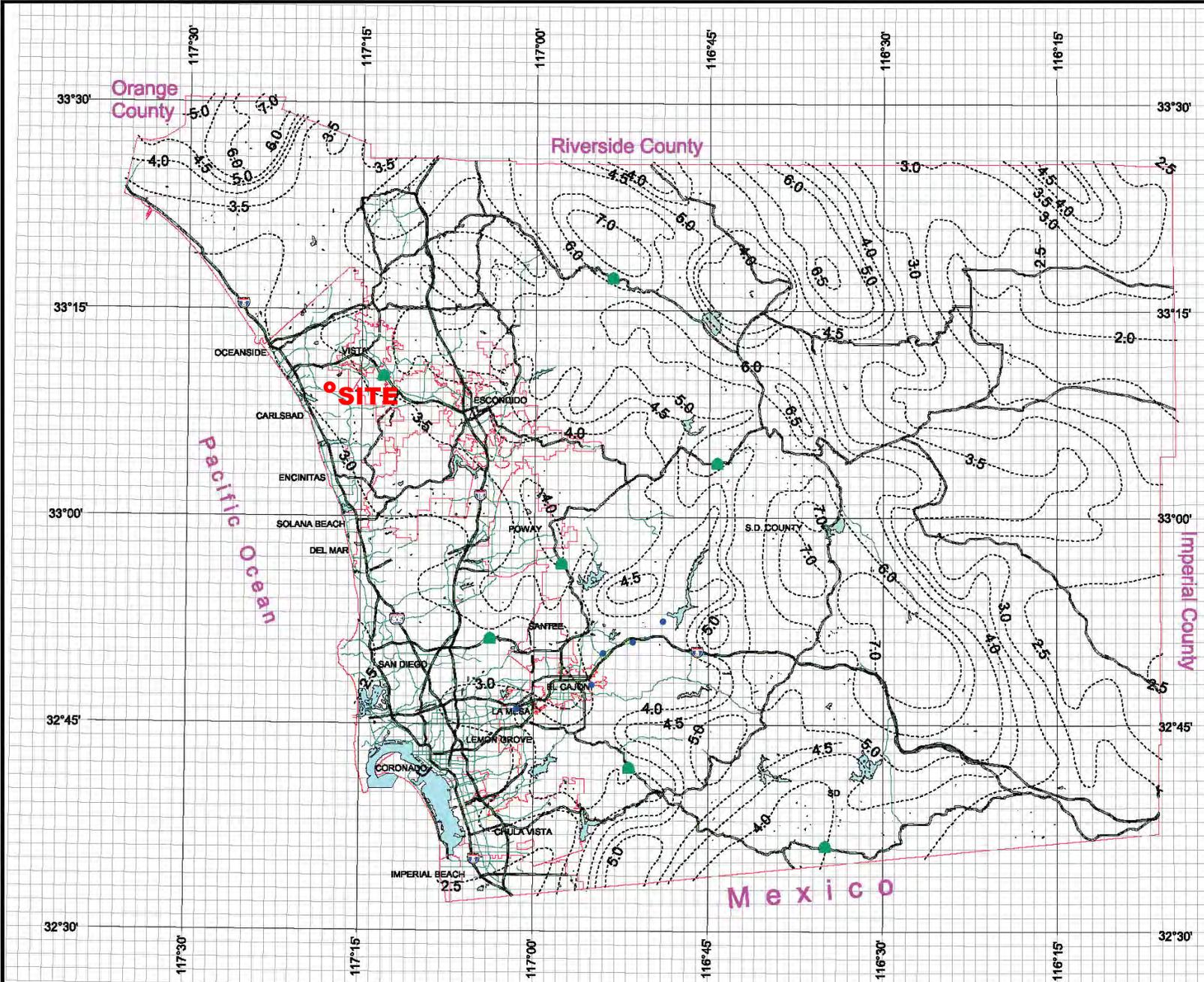


Rainfall Isophivials

10 Year Rainfall Event - 24 Hours



P24 = 3.2"



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3 0 3 Miles

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

-  Cities

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:12,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
 Survey Area Data: Version 6, Dec 17, 2007

Date(s) aerial images were photographed: 6/7/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

| San Diego County Area, California (CA638) | | | |
|---|---|--------------|----------------|
| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
| AtC | Altamont clay, 5 to 9 percent slopes | 15.0 | 2.3% |
| AtE | Altamont clay, 15 to 30 percent slopes | 24.7 | 3.8% |
| DaC | Diablo clay, 2 to 9 percent slopes | 10.3 | 1.6% |
| DaE2 | Diablo clay, 15 to 30 percent slopes, eroded | 34.6 | 5.3% |
| FxE | Friant rocky fine sandy loam, 9 to 30 percent slopes | 21.9 | 3.4% |
| GaF | Gaviota fine sandy loam, 30 to 50 percent slopes | 6.5 | 1.0% |
| LeC | Las Flores loamy fine sand, 2 to 9 percent slopes | 56.5 | 8.6% |
| LeC2 | Las Flores loamy fine sand, 5 to 9 percent slopes, eroded | 75.2 | 11.5% |
| LeD2 | Las Flores loamy fine sand, 9 to 15 percent slopes, eroded | 76.8 | 11.8% |
| LeE2 | Las Flores loamy fine sand, 15 to 30 percent slopes, eroded | 76.5 | 11.7% |
| LeE3 | Las Flores loamy fine sand, 9 to 30 percent slopes, severely eroded | 65.0 | 10.0% |
| MIC | Marina loamy coarse sand, 2 to 9 percent slopes | 1.1 | 0.2% |
| Rm | Riverwash | 10.7 | 1.6% |
| SbC | Salinas clay loam, 2 to 9 percent slopes | 164.1 | 25.1% |
| TuB | Tujunga sand, 0 to 5 percent slopes | 1.5 | 0.2% |
| VaB | Visalia sandy loam, 2 to 5 percent slopes | 12.3 | 1.9% |
| Totals for Area of Interest | | 652.6 | 100.0% |

EDMUND G. BROWN JR.
GOVERNORMATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

California Regional Water Quality Control Board, San Diego Region

March 12, 2015

NOTICE OF VIOLATION No. R9-2015-0050

Steve Sarkozy
City Manager
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad, CA 92008-1949
Steve.sarkozy@carlsbadca.gov

City of Carlsbad

El Camino Real Road Widening Project
PIN No. SM-832587:lwals

Violations of

**Order No. 2009-0009-DWQ,
Construction General Permit**

City of Carlsbad is hereby notified that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) reserves the right to take any enforcement action authorized by law for the violations described herein.

The City of Carlsbad is in violation of State Water Resources Control Board (State Water Board) Order No. 2009-0009-DWQ, NPDES No. CAS000002, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit).

A. Summary of Violations

Construction General Permit Violations

1. Failure to Comply with Effluent Limitations for Construction Activities:

- a. Pursuant to Provision V.A.2 of State Water Board Order No. 2009-0009-DWQ:** Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants.

- b. Pursuant to Provision X and Section A.1.b of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Dischargers shall minimize or prevent pollutants in storm water and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
- c. Observation:** On March 2, 2014, the San Diego Water Board inspector observed a major discharge of sediment laden water to the MS4. See Attachment1 – Photos 1 and 2. The discharge of sediment laden water from the site is evidence that the City failed to use proper controls, structures, and management practices at the site that achieves best conventional treatment (BCT) for conventional pollutants. During the March 2, 2015 site inspection, the San Diego Water Board inspector observed a lack of effective erosion controls and runoff controls required by the CGP. Soil stabilization (e.g. soil tackifiers, hydroseed, etc.) technologies were not deployed in conjunction with runoff controls at the site. Without soil stabilization BMPs, in place, in addition to runoff controls the site did not meet BCT. See Attachment 1 – San Diego Water Board Facility Inspection Report dated March 2, 2015 Photos 1 through 16.

2. Failure to Implement Adequate Erosion Controls for Active and Inactive Areas:

- a. Pursuant to Provision X and Section D.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots.
- b. Pursuant to Provision X and Section E.3 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active construction. Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
- c. Observation:** During the March 2, 2015 inspection, the San Diego Water Board inspector observed a lack of erosion controls on active portions of the site which caused significant erosion and a discharge of sediment laden water to the MS4. Erosion controls/soil stabilization controls were not deployed on active areas of the site to stabilize the soil surface and prevent soil particles from being detached by rainfall, flowing water, or wind. See Attachment 1 – Photos 3 and 4. Further the inactive areas of the site, or those areas that could be scheduled to be inactive, were also observed to lack soil cover or other BMPs that could prevent erosion. See Attachment 1 – Photos 13 through 16. The portion of the site located west of El Camino Real lacked soil cover for soil stabilization or runoff controls for erosion control. SWPPP page 16 notes that providing effective soil cover for inactive areas and finished slopes, open space, utility backfill, and completed lots is “Not applicable to the project.” The SWPPP is inaccurate. Provision X and Section D.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ requires the City of Carlsbad to provide effective soil cover for inactive areas.

3. Failure to Implement Adequate Sediment Controls:

- a. **Pursuant to Provision X and Section E.1 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
- b. **Pursuant to Provision X and Section E.2 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.
- c. **Pursuant to Provision X and Section E.4 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with Table 1 in Attachment D to Order No. 2009-0009-DWQ.
- d. **Observation:** During the March 2, 2015 inspection, the San Diego Water Board inspector observed a lack of effective perimeter controls (see Attachment - Photo 12) and inlet protection (see Attachment - Photos 9 and 16) in place at the site. Run-on to the site inundated the sites perimeter controls causing significant erosion resulting in a significant discharge of sediment from the site to an unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon. Further, the San Diego Water Board inspector observed a lack of erosion control BMPs in conjunction with sediment control BMPs throughout the site. Erosion controls BMPs include both runoff controls and soil stabilization controls. Order 2009-0009-DWQ defines erosion control BMPs as vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc. placed to stabilized areas of disturbed soils, to reduce loss of soil due to the action of water or wind, and prevent water pollution." CASQA Construction BMP Guidance Manual defines erosion control as "any source control practice that protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind. See Attachment 1 - Photos 3 through 6, 9, 11, and 13 through 15.

A sediment basin bermed with sand bags was in place at the downgradient end of the site located east of El Camino Real. Sediment basins are to be designed pursuant to CASQA Construction Stormwater BMP Handbook. The sediment basin on site was not present prior to the rain event and the one constructed on March 2, 2015 after the rain event was not designed in compliance with the CASQA Handbook. For before rain event see Photos at 0745 in Attachment 2 - March 2, 2015 City of Carlsbad El Camino Real Road Widening Project Incident Summary Report, Job 3957, WDID# 937C371534. For after rain event, see Attachment 1 - Photos 7 and 8.

Linear sediment controls were not present on all slopes along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with the sheet flow lengths stipulated in Table 1 of Attachment D in Order No. 2009-0009-DWQ. See Attachment 1 - Photos 3 through 6, 11, and 13 through 16.

4. Failure to Implement Adequate Run-on and Runoff Controls:

- a. **Pursuant to Provision X and Section F.1 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Risk Level 2 shall effectively manage all run-on, all runoff within the site and all runoff that discharges from the site. Run-on from offsite shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in the CGP.
- b. **Observation:** During the March 2, 2015 inspection, the San Diego Water Board inspector observed areas of the site unprotected and under protected from run-on. The portion of the site located east of El Camino Real was inadequately protected from run-on (see Attachment 1 - Photo 12) and the portion of the site located west of El Camino Real was not protected from run-on (see Attachment 1 - Photos 13 through 15). A lack of effective run-on protection caused excessive erosion throughout the site. Lack of proper run-on controls contributed to a significant discharge of sediment and sediment laden water to the unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon. See Attachment 1 - Photos 12 through 15.

5. Failure to Implement Repair or Design Changes to BMPs:

- a. **Pursuant to Provision X and Section G.3 of Attachment D of State Water Board Order No. 2009-0009-DWQ:** Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
- b. **Observation:** The City of Carlsbad's February 27, 2015 Daily Inspection Report (See Attachment 3) noted Los Angeles Engineering stopped work and began installing storm water BMPs at 1330 hours on February 27th, 2015 (i.e. less than 24 hours prior to an event with a greater than 50% chance of rain). The City did not implement the needed BMPs changes and upgrades prior to the rain event. During the March 2, 2015 inspection, the San Diego Water Board inspector observed a continued lack of perimeter, erosion, sedimentation, combination of erosion and sedimentation, and inlet protection throughout the site which contributed to a discharge of sediment and sediment laden water to the unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon. See Attachment 1 - Photos 3 through 6, 11, and 13 through 16. Further, the lack of perimeter, erosion, sedimentation, combination of erosion and sedimentation, and inlet protection throughout the site is documented in photos taken at 0745, 0930, and 1030 by the City of Carlsbad. These photos were taken on March 2, 2015 prior to the San Diego Water Board inspector arriving onsite. The City's photo documentation is evidence the site did not have in place adequate BMPs prior to the rain event as required by Order 2009-0009-DWQ. See Attachment 2 - March 2, 2015 City of Carlsbad El Camino Real Road Widening Project Incident Summary Report, Job 3957, WDID# 937C371534.

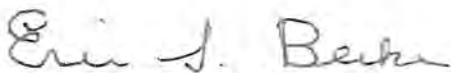
B. Summary of Potential Enforcement Options

These violations may subject you to additional enforcement by the San Diego Water Board or State Water Resources Control Board, including a potential civil liability assessment of \$10,000 per day of violation (Water Code section 13385) and/or any of the following enforcement actions:

| Other Potential Enforcement Options | Applicable Water Code Section |
|-------------------------------------|-------------------------------|
| Technical or Investigative Order | Sections 13267 or 13383 |
| Cleanup and Abatement Order | Section 13304 |
| Cease and Desist Order | Sections 13301-13303 |
| Time Schedule Order | Sections 13300, 13308 |

In addition, the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, referring the matter to the State Attorney General for injunctive relief, and referral to the municipal or District Attorney for criminal prosecution.

In the subject line of any response, please include the information located in the heading of this letter: "in reply refer to." Questions pertaining to this Notice of Violation should be directed to Laurie Walsh at (619) 521-3373 or Laurie.Walsh@waterboards.ca.gov.



Eric S. Becker, P.E.
Senior Water Resource Control Engineer
Storm Water Management

ESB:law

- Attachment 1: San Diego Water Board Facility Inspection Report dated March 2, 2015
- Attachment 2: March 2, 2015 City of Carlsbad El Camino Real Road Widening Project Incident Summary Report, Job 3957, WDID# 937C371534
- Attachment 3: February 27, 2015 City of Carlsbad Daily Inspection Report

cc: Patrick Vaughan, City of Carlsbad, Patrick.vaughan@carlsbadca.gov
Shawnetta Grandberry, City of Carlsbad, Shawnetta.grandberry@carlsbadca.gov
Elaine Lukey, City of Carlsbad, Elaine.lukey@carlsbadca.gov

| Tech Staff Info & Use | |
|-----------------------|---|
| Order No. | 2009-0009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-832587 |
| WDID | 9 37C371534 |
| Inspection ID | 2024994 |
| Violations ID | 85642, 85643, 85644, 85645, 85646, 85647, 85648, 85649 |
| Enforcement ID | 418480 |

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SAN DIEGO REGION
WATERSHED PROTECTION PROGRAM**

FACILITY INSPECTION REPORT

FACILITY: El Camino Real Road Widening

INSPECTION DATE/TIME: 03/02/2015; 11:30

WDID/FILE NO.: 9 37C371534

REPRESENTATIVE(S) PRESENT DURING INSPECTION:

| | |
|--|---|
| NAME: <u>Laurie Walsh, PE, WRCEngineer</u> | AFFILIATION: <u>San Diego Water Board</u> |
| NAME: <u>Shawnetta Grandberry, Senior Construction Inspector</u> | AFFILIATION: <u>City of Carlsbad</u> |
| NAME: <u>Tim Loveridge, Inspector</u> | AFFILIATION: <u>City of Carlsbad</u> |
| NAME: <u>Todd Peterson, Superintendent</u> | AFFILIATION: <u>Los Angeles Engineering</u> |
| NAME: <u>Dave Carlin, Associate Engineer, PE</u> | AFFILIATION: <u>Kleinfelder</u> |

Patrick Vaughan
NAME OF OWNER, AGENCY OR PARTY RESPONSIBLE FOR DISCHARGE

El Camino Real Road Widening Project
FACILITY OR DEVELOPER NAME (if different from owner)

1635 Faraday Avenue, Carlsbad CA 92008
OWNER MAILING ADDRESS

4501 El Camino Real
Carlsbad, CA 92008
FACILITY ADDRESS

Patrick Vaughan (760) 602-2780
OWNER CONTACT NAME AND PHONE #

Patrick Vaughan (760) 602-2780
FACILITY OR DEVELOPER CONTACT NAME AND PHONE #

APPLICABLE WATER QUALITY LICENSING REQUIREMENTS:

- | | |
|---|---|
| <input type="checkbox"/> MS4 URBAN RUNOFF REQUIREMENTS | <input type="checkbox"/> GENERAL OR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS OR NPDES |
| <input checked="" type="checkbox"/> CONSTRUCTION GENERAL PERMIT | <input type="checkbox"/> GENERAL OR INDIVIDUAL WAIVER OF WASTE DISCHARGE REQUIREMENTS |
| <input type="checkbox"/> CALTRANS GENERAL PERMIT | <input type="checkbox"/> SECTION 401 WATER QUALITY CERTIFICATION |
| <input type="checkbox"/> INDUSTRIAL GENERAL PERMIT | <input type="checkbox"/> CWC SECTION 13264 |

INSPECTION TYPE (Check One):

- "A" TYPE COMPLIANCE--COMPREHENSIVE INSPECTION IN WHICH SAMPLES ARE TAKEN. (EPA TYPE S)
- "B" TYPE COMPLIANCE--A ROUTINE NONSAMPLING INSPECTION. (EPA TYPE C)
- NONCOMPLIANCE FOLLOW-UP--INSPECTION MADE TO VERIFY CORRECTION OF A PREVIOUSLY IDENTIFIED VIOLATION.
- ENFORCEMENT FOLLOW-UP--INSPECTION MADE TO VERIFY THAT CONDITIONS OF AN ENFORCEMENT ACTION ARE BEING MET.
- COMPLAINT--INSPECTION MADE IN RESPONSE TO A COMPLAINT.
- PRE-REQUIREMENT--INSPECTION MADE TO GATHER INFO. RELATIVE TO PREPARING, MODIFYING, OR RESCINDING REQUIREMENTS.
- NO EXPOSURE CERTIFICATION (NEC) - VERIFICATION THAT THERE IS NO EXPOSURE OF INDUSTRIAL ACTIVITIES TO STORM WATER.
- NOTICE OF TERMINATION REQUEST FOR INDUSTRIAL FACILITIES OR CONSTRUCTION SITES - VERIFICATION THAT THE FACILITY OR CONSTRUCTION SITE IS NOT SUBJECT TO PERMIT REQUIREMENTS.
- COMPLIANCE ASSISTANCE INSPECTION-OUTREACH INSPECTION DUE TO DISCHARGER'S REQUEST FOR COMPLIANCE ASSISTANCE.

INSPECTION FINDINGS:

Y WERE VIOLATIONS NOTED DURING THIS INSPECTION? (YES/NO/PENDING SAMPLE RESULTS)

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015

I. COMPLIANCE HISTORY / PURPOSE OF INSPECTION

On March 2, 2015 San Diego Water Board inspector Laurie Walsh performed an inspection of the El Camino Real Road Widening Construction Project (site). The 15.6 acre site is a Risk Level 2 construction project that has been entirely disturbed during the grading phase. Construction began in November 2014. This site is located in the Carlsbad Watershed (904.00 HU) adjacent to El Camino Real between Chestnut and Tamarack. The site drains to an unnamed tributary to Aqua Hedionda Creek, a water of the U.S. and tributary to the Aqua Hedionda Lagoon. During the inspection, it was documented that the site failed to install sufficient storm water best management practices (BMPs) which resulted in significant erosion. The site had ineffective storm water BMPs including lack of soil stabilization controls, inadequate perimeter controls, inadequate run-on controls, inadequate sedimentation controls, and a lack of inlet protection.

On March 2, 2015, at approximately 0700 hours, Laurie Walsh witnessed a significant discharge of sediment laden water from the site (see Photos 1 through 3). In response to discovering the discharge, Ms. Walsh conducted a non-sampling site inspection at approximately 1130 hours that same day, per Order 2009-0009-DWQ Construction General Permit (CGP) and ultimately issued Notice of Violation No. R9-2015-0050 for multiple violations of CGP Order No. 2009-0009-DWQ.

The QSP for the site is Brad Holmes. Mr. Holmes was not present during this site inspection. Ms. Grandberry and Mr. Loveridge with the City of Carlsbad (City of Carlsbad is the LRP); Mr. Peterson with Los Angeles Engineering, and Mr. Carlin with Kleinfelder was present during this inspection. During this inspection focus was on the lack of erosion controls (i.e. soil stabilization controls **and** (emphasis added) erosion controls) throughout the site, ineffective run-on controls, and the significant discharge that occurred as a result of the lack of soil stabilization and adequate run-on controls the morning of March 2, 2015. The SWPPP was located at the storage yard which is located off Tamarack. The inspection did include review of the SWPPP prior to and after the field visit.

II. FINDINGS

1. A lack of controls, structures, and management practices to achieve Best Conventional Pollutant Control Technology (BCT) for conventional pollutants was observed throughout the site during this inspection.
2. The site lacked soil cover technologies to prevent erosion on both inactive and active portions of the site.
3. At the time of this inspection, sedimentation basins were constructed but not designed in accordance with the method provided in the CASQA Construction BMP Guidance Handbook. Consequently, sedimentation basins failed resulting in discharge of sediment laden water to unnamed tributary to Agua Hedionda Creek and Aqua Hedionda Lagoon.

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015

4. Areas of the site under active construction lacked adequate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs.
5. All slopes lacked linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slope to comply with sheet flow lengths in accordance with Table 1 in Attachment D or Order No. 2009-0009-DWQ.
6. A lack of adequate perimeter control and run-on control was observed during this inspection. Failure to provide adequate perimeter controls and run-on controls contributed to a significant discharge of sediment from the site and caused or contributed to hydromodification in the unnamed tributary to Agua Hedionda Creek.
7. Unauthorized discharge of sediment and sediment-laden water was documented through photos taken during this inspection. (See Photos 1 through 16)

III. COMMENTS AND RECOMMENDATIONS

Comments

1. There is evidence that erosion controls were not adequately implemented throughout the site contributing to discharges of sediment and sediment-laden storm water from the site.
2. There is evidence that sediment controls were not adequately implemented which contributed to discharges of sediment from the site.
3. There is evidence that erosion in combination with sediment control BMPs were not adequately implemented to minimize or prevent the discharge of sediment in storm water from the site to an unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon.
4. There is evidence that the site has not implemented BMPs to meet Best Conventional Treatment (BCT) Technology Based Effluent Limitations under Section V.A.2 of the CGP, as required for all construction sites, which resulted in the unauthorized discharges of sediment and sediment-laden water from the site observed or documented on March 2, 2015.

| | | |
|---|--------------------------------------|--------------------|
| CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD-SAN DIEGO REGION | | Page 4 of 7 |
| Facility: | El Camino Real Road Widening Project | |
| Inspection Date: | 03/02/2015 | |

Recommendations

1. Issue a Notice of Violation to City of Carlsbad for discharges of sediment and sediment-laden water from the site, failure to implement adequate BMPs, and failure to implement Risk Level 2 requirements of CGP.
2. Refer the site to the Compliance Assurance Unit to determine whether or not issuing formal enforcement action may be appropriate.

IV. SIGNATURE SECTION

| | | |
|------------------------|--|-----------------|
| Laurie Walsh, PE |  | 3/02/2015 |
| STAFF INSPECTOR | SIGNATURE | INSPECTION DATE |
| Eric Becker, PE |  | 3/12/15 |
| REVIEWED BY SUPERVISOR | SIGNATURE | DATE |

SMARTS:

| Tech Staff Info & Use | |
|-----------------------|---|
| Order No. | 2009-00009-DWQ |
| NPDES No. | CAS000002 |
| Place ID | SM-832587 |
| WDID | 9 37C371534 |
| Inspection ID | 2024994 |
| Violations IDs | 85642, 85643, 85644, 85645, 85646, 85647, 85648, 85649 |
| Enforcement ID | 418480 |

Attachment No. 1 – March 2, 2015 City of Carlsbad El Camino Real Road Widening Project Incident Summary Report, Job 3957, WDID# 937C371534

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015



Photo 1: Mobilized sediment in storm water discharged from El Camino Real Road Widening Project. Sediment laden water flows along El Camino Real and across Tamarak. (view is north along El Camino Real at 0700 hours). Discharge from site boundary see Attachment No. 1 - 3-02-15 City of Carlsbad Incident Summary Photo at 0745 and 0930



Photo 2: Evidence showing significant amount of sediment discharged from the site as seen in sediment laden spray from vehicles. This discharge flows downstream of Photo 1 and Photo 2 draining into Agua Hedionda Creek and Agua Hedionda Lagoon. (view is west along Tamarak with El Camino Real as the cross street at 0700 hours).



Photo 3: Project site located east of El Camino Real. Slopes unprotected from erosion. Soil stabilizer(s) not in place. Linear sediment controls not in place. (view is east along El Camino Real at the north end of the site at 1130 hours).



Photo 4: Evidence of significant erosion on steep slopes as the result of slopes being unprotected from erosion, of soil stabilizer(s) not being used, and failure to install linear sediment controls. (view is east along El Camino Real at the north end of the site at 1130 hours).

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015



Photo 5: Project site slopes unprotected from erosion. Soil stabilizer(s) not in place. Linear sediment controls not in place. Silt fence and gravel bag berms installed after rain event (See Attachment No. 1 - 3-02-15 City of Carlsbad Incident Summary Photo at 0745 and 0930 – silt fence not installed) (view is east perpendicular to El Camino Real at the south end of the site at 1130 hours).



Photo 6: Check dams installed after rain event. Evidence of sediment discharged on the sidewalk. Discharge the result of lack of, insufficient amount, and ineffective installation of check dams and no silt fence prior to rain event. See Attachment No. 1 - 3-02-15 City of Carlsbad Incident Summary Photo at 0745 and 0930.



Photo 7 Sedimentation basin constructed after rain event. See Attachment No. 1 - 3-02-15 City of Carlsbad Incident Summary Photo at 0745 and 0930 – sedimentation basin not installed) Sedimentation basin not designed in accordance with CASQA Construction BMP Guidance Handbook as required by CGP.



Photo 8: Sedimentation basin is extremely shallow and not designed in accordance with CASQA Construction BMP Guidance Handbook as required by CGP.

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015



Photo 9 Lack of perimeter controls, inadequate run-on controls, lack of erosion in conjunction with sedimentation controls, and lack of soil stabilization controls resulted in a discharge of sediment and sediment laden water from the site. Discharge of sediment beyond the gravel bag dike and sediment deposited as seen in Photo 10 is evidence that sediment was discharged from the site to the unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon. (view is at south end of the site at the discharge point looking north).



Photo 10 Discharge of sediment traveled along concrete v-ditch shown in Photo 9 to discharge to earthen bottom unnamed tributary as seen here to Agua Hedionda Creek and Agua Hedionda Lagoon. Photo Evidence shows discharge from the site caused or contributed to hydromodification in this receiving water. This project is also required to comply with San Diego Water Board Water Quality Certification 08C-074. (view south of the site, in the unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon at the point where the concrete v-ditch discharges into the earth bottom receiving water).



Photo 11 Lack of perimeter controls, inadequate run-on controls, lack of erosion in conjunction with sedimentation controls. (view is south of Photo 10 in the unnamed tributary to Agua Hedionda Creek and Agua Hedionda Lagoon).



Photo 12 Ineffective perimeter controls and protection from run-on. Storm water run-on flow pattern seen here. Breached perimeter and run-on controls shown by yellow line. Perimeter controls and run-on protection was reinforced after the rain event (See Attachment No. 1 - 3-02-15 City of Carlsbad Incident Summary Photo at 0745 and 0930)

Facility: El Camino Real Road Widening Project
Inspection Date: 03/02/2015



Photo 13 Lack of perimeter controls, lack of run-on controls, lack of erosion controls, lack of erosion controls in conjunction with sedimentation controls, and lack of soil stabilization controls. (view at north end of the site located on the west side of El Camino Real looking north).



Photo 14 Lack of perimeter controls, lack of run-on controls, lack of erosion controls, lack of erosion controls in conjunction with sedimentation controls, and lack of soil stabilization controls. (view at north end of the site located on the west side of El Camino Real looking south).



Photo 13 Lack of perimeter controls, lack of run-on controls, lack of erosion controls, lack of erosion controls in conjunction with sedimentation controls, and lack of soil stabilization controls. (view at south end of the site located on the west side of El Camino Real looking south toward inlet structure shown in Photo 16). This photo documents rilling evidence of erosion on this portion of the site due to an overall lack of perimeter controls, erosion and sedimentation controls.



Photo 14 Unprotected inlet. This inlet is located directly down gradient of site shown in Photo 15. Erosion and sedimentation shown in Photos 13-15 are evidence of a discharge of sediment and sediment laden storm water to the MS4.

El Camino Road Widening Project Discharge Incident Investigation Summary

On March 2, 2015, the City of Carlsbad (City) responded to a report of a discharge at the El Camino Real Road Widening (WDID: 9 37C371534) construction site located between Chestnut Avenue and Tamarack Avenue in the City of Carlsbad. The El Camino Real Road Widening project site comprises approximately 15.6 acres located 1.25 miles east of Interstate-5, south of the Carlsbad Village Drive, and north of the Tamarack Avenue. The project is owned and operated by the City of Carlsbad through a contract (CIP 3957) with Los Angeles Engineering (LAE) and Kleinfelder-Simon Wong Engineering (KSWE).

Between 6:49am and 7:45am approximately 0.5 inches of rainfall overwhelmed the BMPs at the north end of the project site. This inundation resulted in the discharge of sediment to the storm drain system. In addition, BMP failures at the southern portion of the site also contributed to the discharge. The surface discharge flowed south from the project site to the storm drain box located at El Camino Real and Tamarack Avenue (see attached map and photos). The storm drain box connects to a pipe flowing south under Tamarack Avenue, which daylight at a natural vegetated swale where the discharge was captured for desiltation prior to entering a concrete ditch located to the west on Kelly Drive. The Kelly Drive ditch flows directly to Agua Hedionda Lagoon. The distance between the project site and Agua Hedionda Lagoon is approximately 1.3 miles. It appears that the majority of the discharge was contained in the natural vegetated swale.

LAE, KSWE, and City inspectors immediately responded by repairing the breach, providing additional BMPs, strategically relocating BMPs, blocking the storm drain inlets, and removing accumulated sediments. This report represents the incident investigation at the time of submission, however further details or clarifications may be added if requested.

March 2, 2015

- 0600** LAE staff met Tim Loveridge, Project Inspector representing KSWE, onsite to assess the existing BMPs for remediation and preparation for the upcoming rain event. Clear water was observed flowing along El Camino Real curb lines and BMPs were determined to be functioning properly with evidence of accumulated sediment behind upper check dams adjacent to the project site. There was steady light rainfall noted.
- 0630** LAE crew finished manually cleaning and preparing previously placed BMPs, removing sediment and resituating gravel bags against curb face (Figure 1).
- 0640** LAE and KWSE staff returned to the storage yard to record rain-gauge readings and procure additional gravel bags.
- 0645** Rain gauge reading was 1.10”.



- 0649** Rainfall intensity increased significantly prompting LAE staff to return to the site to assess BMP effectiveness. Tim Loveridge observed that the existing drainage inlet located at the northeast corner of El Camino Real and Tamarack Avenue was overwhelmed by the increased flow. Sediment laden runoff was observed flowing over the top of the curb, up the adjacent pedestrian walkway, and out into the intersection.
- 0700** The Project Inspector and LAE staff found that the northernmost BMPs intended to prevent run-on from entering the project site had been breached. This flow combined with the slope runoff from behind the K-Rail resulted in a sediment and debris blockage that breached and gave way to the discharge. The sediment and storm water flowed unabated into the northbound number 2 lane of El Camino Real through the lifting holes of the K-Rail. There was no safe access for staff to block the lifting holes or remove the debris, so efforts focused on maintaining the downstream check dams which were also overrun by the volume of water and sediment.
- 0714** Shawnetta Grandberry, Senior Construction Inspector for the City, received a call from Laurie Walsh of the Regional Water Quality Control Board, stating that she had observed a discharge of sediment laden water from the El Camino Real Road Widening Project entering the intersection at El Camino Real and Tamarack Avenue.
- 0720** Dave Carlin, Project Construction Manager for KSWE, arrived on site as the most severe period of rainfall was ending. He began assisting LAE staff in repairing the BMPs.
- 0727** The Senior Construction Inspector contacted Casey Arndt, the Municipal Projects Manager for the City, and Dave Carlin to notify them of the discharge. Dave Carlin stated he was aware of the discharge and that crews were actively working to repair the breach. Dave Carlin also contacted Casey Arndt to inform him of the BMP breach and a resulting discharge. A field meeting was immediately called to determine a course of action.
- 0740** Rainfall at this time had reduced to intermittent sprinkle and crews were able to safely resume work adjacent to traffic. Casey Arndt and Shawnetta Grandberry met Dave Carlin and LAE staff on site to assess BMP management and develop a course of action to remediate the site and prepare for the next forecast event. A list of additional BMPs and corrective actions was developed and required to be installed prior to 1300. LAE began installation of additional BMPs along toe and southerly (low-end) of project. BMPs already in place along both sides of ECR were cleaned and additional gravel-bags were added. Additional check dams were added along the northbound El Camino Real curb line as well as in existing concrete ditch located behind the sidewalk. Between 0730-1130, installation of additional BMPs as described above continued with only intermittent light rainfall with little to no flow observed in the curb line.
- 0745** The rain gauge reading was over 1.60", indicating a total of 0.50" of rain had fallen in approximately one hour.
- 0752** Patrick Vaughan, Engineering Manager for the City's Construction Management and Inspection Division, was notified and updated on the incident investigation.
- 0808** Patrick Vaughan arrived onsite for an assessment and briefing.
- 0830** City staff left the project site.

- 1130** Laurie Walsh arrived on site and met with Dave Carlin, Todd Petersen, Superintendent for LAE, and Tim Loveridge. Items specifically noted by Ms. Walsh were inadequacy of upstream run-on protection, lack of required slope protection BMPs (erosion control and runoff control), inadequate perimeter BMPs around the site, and the need for additional layering of previously placed check dams.
- 1140** Shawnetta Grandberry arrived onsite to meet with Ms. Walsh. Ms. Walsh again relayed her recommended corrective actions. In addition, during the field meeting Ms. Walsh stated her intention to issue a NOV to the project for the discharge.
- 1300** The final rain event of the day moved in and crews continued cleaning and maintaining the BMPs. No evidence of further sediment runoff was observed during this period.
- 1530** Work crews finished refreshing and installing the required BMPs. Additional fiber rolls were placed on the excavated slope benches and gravel bags were added to run-on protection and check dam locations. Check dams along the westerly side of El Camino Real were reinstalled and supplemented. A street sweeper went along entire project footprint to remove all accumulated sediment and clear the curb lines. Prior to end of shift LAE and KWSE staff met to discuss planned operations to further prevent the discharge of sediments from the site.

March 3, 2015

LAE called off all production work and scheduled staff to perform slope-protection, BMP installation repair/replace of BMPs, and reestablish the BMP stockpile per City direction.

March 4, 2015

Production work returned to scheduled activities. City staff met with LAE and KSWE to discuss the incident. The site continues to be monitored by the City, LAE, and KSWE. The SWPPP has been reviewed and contractor has ensured the City that all BMPs have been implemented and will be maintained throughout the duration of the project. The area of primary concern is the engineered cut/fill slope where several BMPs have been placed in a manner that they can be quickly removed/replaced to facilitate the work. The backfill operation will continue with all required BMPs stockpiled directly adjacent to the work-site. In advance of any predicted rain events stockpiles will be inspected and verified for deployment. The City is awaiting a response from the Native American monitors to determine if temporary backfill behind the westerly curb line of ECR can be performed. LAE and KWSE added additional fiber-roll to manage any potential flow from the surrounding private lots.

March 5, 2015

The contractor and the City were proactive and expeditious in their response, implementing corrective actions as soon as the breached was discovered. The City will work closely with the contractor to reduce, eliminate, and prevent reoccurrence of non-storm discharges from this construction site. As a City sponsored project, compliance with the JURMP, Municipal Code, Municipal Permit, and Construction General Permit is of the highest priority.

Prepared by: Shawnetta Grandberry, Senior Construction Inspector, City of Carlsbad
Dave Carlin, Project Construction Manager, Kleinfelder-Simon Wong Engineering

Date: March 5, 2015

| | | | |
|------------------|--|----------------------------------|--|
| Job Title | El Camino Real Road Widening – Incident Summary Photos 03-02-15 | | |
| Job No | 3957 | Attachment 5 to NOV R9-2015-0056 | |
| WDID# | 9 37C371534 | | |



| | | | |
|---|------|-----|---------------|
| Time: | 0740 | By: | S. Grandberry |
| Discharge flowing south on ECR from the project site. | | | |

| | | | |
|---|------|-----|---------------|
| Time: | 0740 | By: | S. Grandberry |
| Discharge flowing over and around chevrons on of ECR. | | | |



| | | | |
|---|------|----|---------------|
| Time | 0745 | By | S. Grandberry |
| Ineffective BMP placement resulted in several breaches throughout the site. | | | |

| | | | |
|--|------|----|---------------|
| Time | 0745 | By | S. Grandberry |
| Lack of BMP stockpiles throughout the site resulted in relocation of BMPs to breached areas. | | | |



| | | | |
|---|------|-----|-----------|
| Time | 0930 | By: | D. Carlin |
| Northernmost run-on protection where rainfall overwhelmed diversion and flowed behind K-Rail resulting in primary sediment discharge. | | | |

| | | | |
|---|-----|------|-----------|
| Time: | 930 | By : | D. Carlin |
| Sediment accumulated behind K-rail from slope erosion. Resulted in sediment flowing out of K-rail lifting holes onto ECR. | | | |

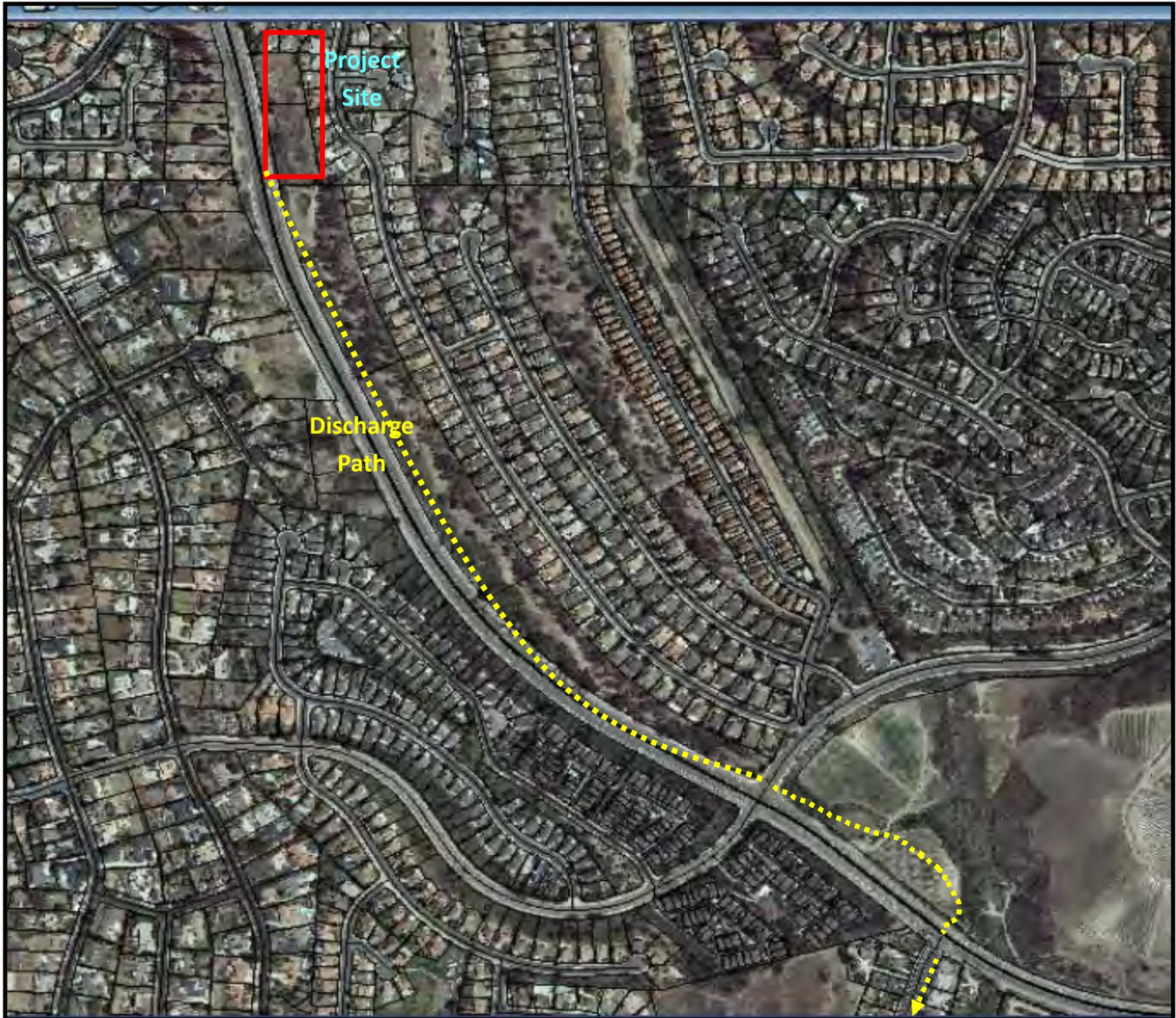


| | | | |
|---|------|-----|-----------|
| Time: | 1030 | By: | D. Carlin |
| View of area behind ECR curb line just south of Chestnut. BMP's intact, prior to being supplemented. No runoff identified from this area. | | | |



| | | | |
|--|------|------|-----------|
| Time: | 1500 | By : | D. Carlin |
| View of project site near end of shift as crew began installation slope protection BMPs. | | | |

El Camino Real Road Widening Project Site Map



CITY OF CARLSBAD
SAN DIGO COUNTY CALIFORNIA

CONTRACT NO. 3957, 3643, 6302, 6303
EL CAMINO REAL ROAD
WIDENING, TAMARACK TO
CHESTNUT AVE.
CITY OF CARLSBAD

Report No. **46 - EW**
Shift Date **27-Feb-15**
 NIGHTWORK **FRIDAY**
Shift Hours Start **7:00** Stop **3:30**

Deviations from the Plans/Specifications in this Report

INSPECTORS DAILY REPORT

Earthwork

Description and Location of the Operation: Page 1 of 1

LAE continued to place the slope fill from sta. 531+00 to 532+50. The ends of the grid that were placed previously on both ends of the fill were exposed and the grid was overlapped at the tie-ins. The contractor used the 870 loader to wheel roll the backfill material for compaction. The labors picked the debris out of the backfill as they placed the 1' lifts.
Steve with SCS was onsite to do the required compaction testing and observe the placement of the grid material.

The contractor stopped work at 1:30 to start implementing the BMPs before the forecasted rain on SAT. The contractor placed additional fiber rolls around the stockpiles of debris and in the flow line going through the Tamarack yard. LAE also covered the diesel tank, trash dumpster and stockpiles of 3/4" rock in the yard.

Significant Conversations:

Talked to Todd with LAE about the required BMP's at the Tamarack yard. Todd with LAE and I talked about the necessary BMP's through out the jobsite and when to get started on the SWPPP work. Todd ask me to let him do his job that he would ensure the SWPPP would be taken care of, the SWPPP was in his contract to do and if we were not confident with his work, take the SWPPP out of the contract and have someone else do the work.

Miscellaneous Notes:

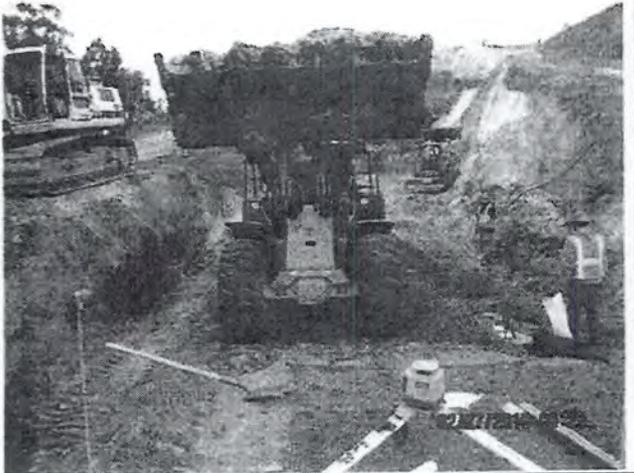
The ASM monitor was onsite to observe the excavation.
Richard with SSS was onsite from time to time during the day.

| WEATHER | | | Item #6 | | Item #3 | | | | | | PRIME: LAE | | | | |
|-----------|---------|-------------------------------------|-------------------------|-------|--------------------|-------|----|----|----|----|------------|----|-------------------|------------|---------|
| AM: Clear | | | Unclassified excavation | SWPPP | EQMNT IDLE OR DOWN | SUB1: | | | | | | | | | |
| PM: Clear | | | | | | SUB2: | | | | | | | | | |
| REMARKS: | | | | | | SUB3: | | | | | | | | | |
| | | | SUB4: | | | | | | | | | | | | |
| | | | SUB5: | | | | | | | | | | | | |
| | | | SUB6: | | | | | | | | | | | | |
| EQPT. ID | NO. MEN | DESCRIPTION (Of Equipment or Labor) | ST | OT | ST | OT | ST | OT | ST | OT | ST | OT | NAME | CLASS | CON/SUB |
| N/A | 1 | DODGE RAM 4500 12-20 | 6.0 | | 2.0 | | | | | | | | Todd Peterson | Supematant | Prime |
| N/A | 1 | Labor | 6.0 | | 2.0 | | | | | | | | Jesse Gusman | Labor | Prime |
| LA-45 | 1 | FORD F450 Flatbed 12-20 | 6.0 | | 2.0 | | | | | | | | Balthazar Morales | Labor | Prime |
| 311 | 1 | Cat D-5 K dozer | 6.0 | | 2.0 | | | | | | | | Julio Lopez | Operator | Prime |
| Rental | 1 | Hyundia Loader 789 | 6.0 | | 2.0 | | | | | | | | Nick Guagliardo | Operator | Prime |
| SL-25 | 1 | JD 210 LE skip loader | 6.0 | | 2.0 | | | | | | | | Jose Vantura | Labor | Prime |
| WT-5 | 1 | 2000 gal. water truck | 6.0 | | 2.0 | | | | | | | | Khristian Guterez | Labor | Prime |
| LA-45 | | CHEVY 2500 Truck 06-12 | 8.0 | | | | | | | | | | | | Prime |
| LA-15 | | CHEVY 2500 Truck 06-12 | 8.0 | | | | | | | | | | | | Prime |

Inspector Hrs. **REG: 8.0**
OT:
INTERMITTENT INSPECTION

Tim Loveridge
Tim Loveridge

INSPECTOR
Title

| | | | |
|--|--|---|---------------------|
| Job Title | | El Camino Real Widening – Tamarack Ave to Chestnut Ave | |
| Job No | | 3957 | |
| Construction MGR | | Dave Carlin, PE (Kleinfelder- SWE) | |
|  | |  | |
| Date: | | By: | <i>T. Loveridge</i> |
| 2-27-15 | | | |
| Exposed grid for tie-in. | | Loader wheel rolling the backfill. | |
|  | |  | |
| Date: | | By: | <i>T. Loveridge</i> |
| 2-27-15 | | | |
| Steve with SCS taking compaction test over the grid. | | Additional fiber rolls installed in the Tamarack yard. | |

Walsh, Laurie@Waterboards

From: Walsh, Laurie@Waterboards
Sent: Thursday, March 19, 2015 4:21 PM
To: Jay Jordan (Jay.Jordan@carlsbadca.gov)
Cc: Shawnetta Grandberry (Shawnetta.Grandberry@carlsbadca.gov); ebecker@waterboards.ca.gov; Elaine Lukey (Elaine.Lukey@carlsbadca.gov)
Subject: CORRECTION TO Email RE: February 26, 2015 San Diego Water Board Construction Site at Buena Vista Way and James Dr. Inspection Photos and Request for Documentation

Mr. Jordan,

Please note the following corrections to my email below.

Laurie Walsh, PE
San Diego Water Board

2375 Northside Drive, Suite 100
San Diego, CA 92108
Direct Phone: 619-521-3373
Main Line: 619-516-1990
Fax No. (619) 516-1994
Email: Laurie.Walsh@waterboards.ca.gov

 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
www.waterboards.ca.gov/sandiego/

From: Walsh, Laurie@Waterboards
Sent: Wednesday, March 18, 2015 2:46 PM
To: Jay Jordan (Jay.Jordan@carlsbadca.gov)
Cc: Shawnetta Grandberry (Shawnetta.Grandberry@carlsbadca.gov); ebecker@waterboards.ca.gov; Elaine Lukey (Elaine.Lukey@carlsbadca.gov)
Subject: ~~February 26, 2015~~ **March 2, 2015** San Diego Water Board Construction Site at Buena Vista Way and James Dr. Inspection Photos and Request for Documentation

Mr. Jordan (City of Carlsbad Public Works Inspector),

During inspection of many construction sites throughout the City of Carlsbad on ~~February 26, 2015~~ **March 2, 2015**, I inspected the construction site on the corner of Buena Vista Way and James Dr. You may recall as you made contact with me while in the field that day. Although you did not stay with me during my entire visit to this site, I wanted to bring to your attention my findings.

I looked up the site on the Storm Water Multiple Application and Report Tracking System (SMARTS) and noted it was not in the SMARTS system. As such, I assessed compliance based on the requirements in Order R9-2007-0001 for construction sites. As noted below, I am requesting the City submit documentation used during their assessment that this site is not subject to the Construction General Permit.

Attached are some photos taken during the inspection that show examples of areas that need to be addressed to demonstrate that the site is in compliance with Order R9-2007-0001.

Of particular importance, this site discharges to Buena Vista Lagoon a 303d listed water body for sediment, therefore it is expected that this site be a high priority for the City. Proper installation and maintenance of all erosion and sediment control BMPs are necessary to prevent discharges of sediment and sediment laden water from the site to the Maximum Extent Practicable (MEP).

Violations Noted Include the Following:

- 1) Failure to require proper implementation of sediment control BMPs per Order No. R9-2007-0001 Provision D.2.c(1)(a)x and Provision D.2.c(1)(b)ii and Provision D.2.c(4) Fiber rolls are to be staked in. The fiber rolls shown in Photo 1 are not properly installed.
- 2) Failure to require good housekeeping practices per Order No. R9-2007-0001 Provision D.2.c(3) and maintenance of erosion and sediment control BMPs per Provision D.2.c(1)(a)x and Provision D.2.c(4). Photo 2 shows dilapidated silt fence and debris in the street as well as improper installation of fiber rolls around the storm drain inlet that is reportedly already connected to the MS4. The inlet was inundated with sediment laden water at the time of this inspection.
- 3) Failure to require proper perimeter control BMPs per Order No. R9-2007-0001 Provision D.2.c(1)(b)ii; Provision D.2.c(3) and Provision D.2.c(4). Photo 3 shows sediment on the exterior of the fiber roll indicating a discharge of sediment and sediment laden water from the site at an earlier point in the rain event. Photo 4 shows a small sump pump on the site apparently dewatering the low trench filled with sediment laden water and photo 2 shows the pipe draped over the silt fence with evidence of silt on the street just outside of the silt fence.

Please send me the following by the end of next week (**March 26, 2015**) to demonstrate that the site has been brought into compliance with the requirements of Order R9-2007-0001:

1. Documentation that this site is not subject to the requirements of the CGP as required by Provision D.2.a(2)(c) of Order R9-2007-0001.
2. Photos that show proper implementation and installation of sediment controls (see Photos 1 -4).
3. Photos that show good housekeeping site-wide (see Photo 2 and 3).
4. Photos that show adequate and effective perimeter control BMPs have been implemented to prevent sediment discharges from the site and to effectively manage run-on and runoff from the site (see Photos 1-4).

Please send any written correspondence in response to this email to SanDiego@waterboards.ca.gov. These electronic documents must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must also include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: **PIN: CW-213271:lwalsh**.

Please respond to this email to confirm you received it.

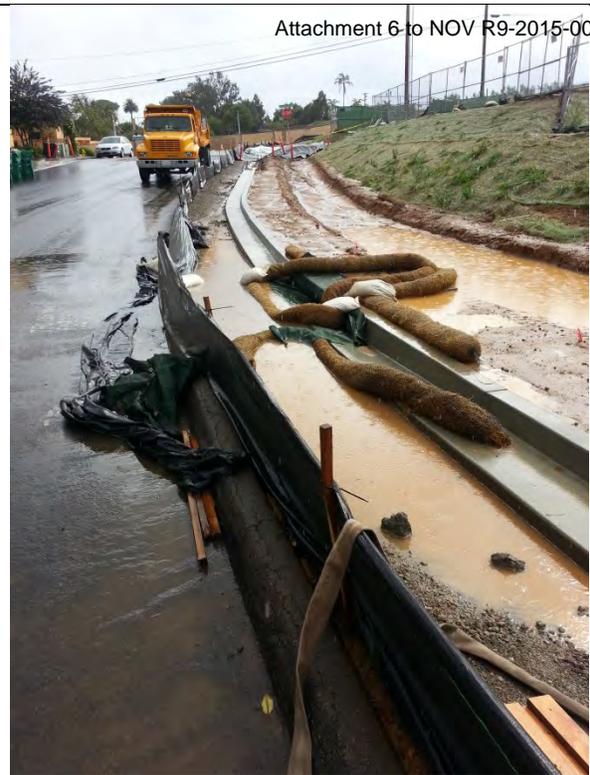
Laurie Walsh, PE
San Diego Water Board

2375 Northside Drive, Suite 100
San Diego, CA 92108
Direct Phone: 619-521-3373
Main Line: 619-516-1990
Fax No. (619) 516-1994
Email: Laurie.Walsh@waterboards.ca.gov

 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
www.waterboards.ca.gov/sandiego/



Buena Vista and James Dr. Photo 1



Buena Vista and James Dr. Photo 2



Buena Vista and James Dr. Photo 3



Buena Vista and James Dr. Photo 4

Walsh, Laurie@Waterboards

From: Walsh, Laurie@Waterboards
Sent: Friday, March 27, 2015 2:38 PM
To: shawnetta.grandberry@carlsbadca.gov
Cc: casey.arndt@carlsbadca.gov; Becker, Eric@Waterboards
Subject: Inspection of Construction Site at Valley Street and Oak Ave WDID 937C370161
Attachments: Valley and Oak photo sheet- 2015-0302 ans 0326.pdf

Ms. Grandberry ,

During inspection of many construction sites throughout the City of Carlsbad on March 2, 2015, I inspected the construction site on the corner of Valley Street and Oak Ave in Carlsbad. I wanted to bring to your attention my findings.

I looked up the site on the Storm Water Multiple Application and Report Tracking System (SMARTS) and noted that the QSD determined the site to be a Risk Level 2 site. Further, I noted that this site drains to Buena Vista Lagoon, a 303d listed water body impaired for sediment. As such, I assessed compliance based on the requirements in Order R9-2007-0001 for construction sites.

Attached are some photos taken during the inspection that show examples of areas with deficiencies that need to be addressed to demonstrate that the site is in compliance with Order R9-2007-0001 and noted violations present during the inspection. Also included are photos taken on March 26, 2015 documenting inadequate and ineffective perimeter control at the site along Oak Ave, lack of erosion and sediment controls within the site, and evidence of non-storm water discharges to the MS4.

Of particular importance is the fact that this site discharges to Buena Vista Lagoon a 303d listed water body impaired for sediment, therefore it is expected that this site be a high priority for the City. Proper installation and maintenance of all perimeter controls, soil stabilization, erosion and sediment control BMPs, and good housekeeping (reduction of tracking and cleanliness of stormdrain inlets) are of great importance to prevent discharges of sediment and sediment laden water from the site **to a water body impaired for sediment**. The lack of controls and poor housekeeping are evidence that that City has not effectively required implementation of not only the minimum BMP controls, but the additional controls required by Order R9-2007-0001 for high priority sites.

Violations of Order R9-2007-0001 noted include the following:

- 1) The Site SWPPP in Table 3.1 identifies Hydroseeding and Soil Binders to be use as “site stabilizers” beginning at the start of construction. See Photos 1, 2 4, and 9. Photo 9 shows significant erosion occurring on site and a failure to implement or require implementation of soil stabilization BMPs, erosion control BMPs, and a combination of erosion control and sedimentation control BMPs. Failure to require erosion prevention, sediment controls, and slope stabilization on inactive slopes during the

rainy season and active slopes during rain events regardless of the season is a violation of Provision D.2.c(1)(b) of Order R9-2007-0001.

I reinspected the site on March 26, 2015 to evaluate if site erosion and sediment controls were maintained after the rain event or if perimeter controls were refreshed and maintained to accommodate changing site conditions. Photos 10 and 11 show a failure to require implementation of site perimeter controls and site erosion and sediment controls. For a site that discharges to a 303d listed water body impaired for sedimentation, the BMPs on this site are significantly inadequate.

The City is required by Order R9-2007-0001 to require implementation of minimum BMPs to stabilize soil, protect against erosion and sedimentation, as well as any additional controls as necessary seeing because this is a high priority site. If the site does not implement these controls the City is further required to enforce against the site for failing to implement the proper controls.

- 2) Table 3.1 of the Site SWPPP identifies street sweeping as the only sediment control BMP at a Risk Level 2 site that discharges to an impaired water body for sediment. Site Photos 3 through 8 show evidence of a discharge of sediment to the MS4. Photo 9 shows significant erosion occurring on site and a failure to implement soil stabilization BMPs, erosion control BMPs, and a combination of erosion control and sedimentation control BMPs on inactive slopes during the rainy season and active slopes during the rain event. Failure to require proper implementation of minimum BMPs is a violation of Provision D.2.c(1)(a) and failure to require erosion prevention controls, sediment controls, and slope stabilization on all active and inactive slopes is a violation of Provision D.2.c(1)(b) of Order R9-2007-0001.
- 3) Section 3.2.1 of the Site SWPPP states the construction site will implement temporary and final erosion controls during construction to “control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternative methods.” Photos 1,2,4, 9, and 12 show evidence that neither erosion control blankets, check dams, or seeding were used onsite to control erosion. Failure to require erosion prevention, sediment controls, and slope stabilization on all active and inactive slopes is a violation of Provision D.2.c(1)(b) of Order R9-2007-0001.
- 4) Since this site discharges to a 303d listed water body impaired for sedimentation, the City is required to “require the implementation of, additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment as necessary to comply with this Order.” The City failed to require “*additional controls*” at this site to further prevent erosion and protect against discharges of sediment and sediment laden water to Buena Vista Lagoon in violation of Provision D.2.c(4) of Order R9-2007-0001. See Photos 1-15. Photos show evidence that the minimum BMPs were not implemented or required to be implemented, and “additional controls” were not implemented or required to be implemented.
- 5) The site does not demonstrate good housekeeping. During the March 26, 2015 reinspection there is evidence of sediment transport across Oak Ave that have silted up the fiber rolls present in the MS4. Evidence is present showing sediment staining on driveways and the sidewalk. See Photos 14 and 15. The condition of this site is evidence that the City has failed to require consistent good housekeeping practices and/or failed to enforce the requirements of Order R9-2007-0001. Since this site discharges to a 303d listed water body impaired for sediment, “additional controls” should be required and good housekeeping should be strictly enforced.

Please send me the following by the end of next week (**April 3, 2015**) to address the questions:

1. Documentation that this site has applied hydroseeding and or soil binders since the start of construction to implement proper erosion control BMPs per the SWPPP and per the City's minimum required BMPs.
2. Photos that show adequate soil stabilization, effective erosion and sediment control BMPs have been implemented site wide to prevent erosion and sedimentation, as well as prevent dry weather discharges from the site (see Photos 3-8, 10-12, and 14 and 15).
3. The City's inspection and enforcement records for this site since construction began.
4. Documentation including photos that show "additional controls" necessary to comply with Order R9-2007-0001 at this construction site that discharges to Buena Vista Lagoon, a 303d listed water body impaired for sedimentation.

Please send any written correspondence in response to this email to SanDiego@waterboards.ca.gov. These electronic documents must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must also include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: **PIN: CW-213271:lwalsh**.

Please respond to this email to confirm you received it.

Laurie Walsh P.E.

San Diego Water Board

619-521-3373

lwalsh@waterboards.ca.gov

WDID # 37C370161

Risk Level 2 Site

Site Photos on March 2, 2015 and March 26, 2015

March 2, 2015 Site Photos



Photo 1- Construction with without erosion control present on interior slopes. Site discharges to Buena Vista Lagoon a 303d listed water body impaired for sedimentation.



Photo 2 - Construction with without erosion control present on interior slopes. Site discharges to Buena Vista Lagoon a 303d listed water body impaired for sedimentation.



Photo 3- Tracks of sediment shown up and down Oak Ave. Discharge from the site shown by the yellow arrow.

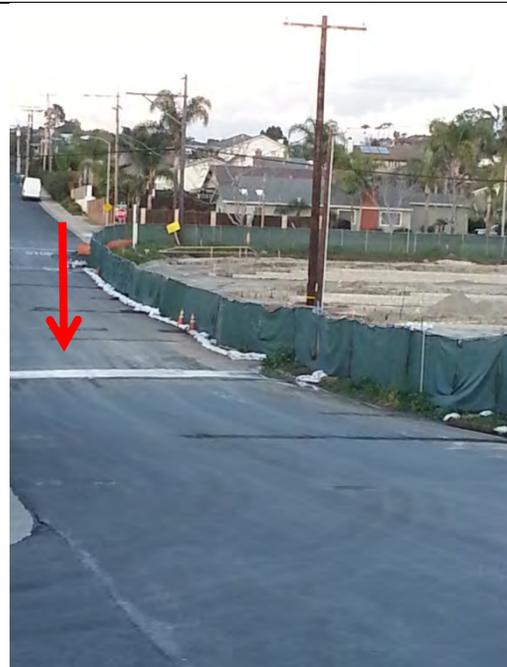


Photo 4 – Evidence of the flow path for discharges from the site to the MS4. Lack of soil stabilization, erosion controls, and sediment controls on the site as seen inside the fence. Stockpiles are not covered and no evidence of sediment or erosion control BMPs

March 2, 2015 Site Photos



Photo 5 - Evidence of sediment discharged from the site. Street stained by sediment discharge and sediment laden water present on street. Fiber rolls are improperly installed.



Photo 6 – Evidence of sediment discharged from the site. Fiber rolls are improperly installed. Proper installation involves trenching in rolls and staking them in.



Photo 7 – Evidence of sediment and sediment laden water discharged from the site to the MS4. Staining of sediment is visible in the photo.



Photo 8 – Evidence of the discharge pathway from the site to the MS4 inlet across the street. Evidence of sediment staining along Oak Ave.

WDID # 37C370161

Risk Level 2 Site

Site Photos on March 2, 2015 and March 26, 2015

March 2, 2015 Site Photo



Photo 9 - Evidence of erosion on site. Large surface gullies present and significant erosion rills on slopes. Soil stabilization BMPs not present on site.

March 26, 2015 Site Photo



Photo 10 – No perimeter controls and no sediment controls. No silt fence present. No fiber rolls present. No vegetation present. Evidence of non-storm water discharge as seen in puddle of water and sediment staining on Oak Ave.

March 26, 2015 Site Photo



Photo 11 – Inadequate and ineffective perimeter controls and sediment controls. Evidence of a failure to require proper installation and proper maintenance of sediment controls. Evidence of non-storm water discharges from the site as seen in the pooled water and sediment staining on Oak Ave.

March 26, 2015 Site Photo



Photo 12 – Sitewide lack of soil stabilization, erosion controls, sedimentation controls. No hydroseed present. No fiber rolls present. No straw mats present. No silt fence present. Evidence of erosion present on interior slopes.

WDID # 37C370161

Risk Level 2 Site

Site Photos on March 2, 2015 and March 26, 2015

March 26, 2015 Site Photo



Photo 13 - Silt fence providing sediment controls and perimeter control along Valley Street side of the project. It is unclear if there is appropriate additional controls are present inside the fence line.

March 26, 2015 Site Photo



Photo 14 – Sediment staining on Oak Ave across the street from the site. Sediment collected near storm drain inlet. Street is wet indicating a presence of water and may have been result of street washing activities. Street still wet at the time this photo taken.

March 26, 2015 Site Photo

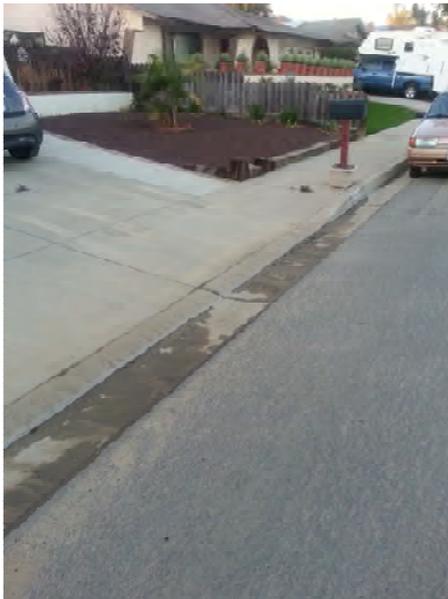


Photo 15 – Wet MS4. Sediment in MS4. Sediment on driveway after car tracked through it. Condition of the MS4 an indication that sediment is not adequately controlled on site.