



CHANGE OF INFORMATION (COI) EXHIBIT

Per

CALIFORNIA 2009-0009-DWQ,

Amended By 2010-0014-DWQ and 2012-0006-DWQ

For

GOLF COURSE REVITALIZATION PROJECT ORANGE COUNTY

Project Overview	
WDID Number:	8 30C375232
Risk Level:	Risk Level 2
Construction Commencement Date:	02/01/2016
Project Completion Date:	06/30/2016
<i>Revised Completion Date:</i>	<i>11/30/2016</i>
Latitude:	33.66561 N
Longitude:	-117.88788 W
Total Site Size:	130 Acres
Total Area Disturbed:	130 Acres

Project Schedule

The project duration was initially estimated to be from February 1, 2016 to June 30, 2016. The revised project completion date is being extended to November 30, 2016.

A revision to the Risk Assessment was performed to determine the updated project Risk Level. Project location and schedule information were used to determine the updated R-factor. The K-factor and LS-factor are not being changed.

- The revised R-Factor was calculated using the EPA's Construction Rainfall Erosivity Factor Calculator. **R= 22.26**
- The project-specific K factor was obtained using the SMARTS risk calculator. **K = 0.32**
- The project LS-factor was calculated using the SMARTS risk calculator. **LS = 1.22**

The revised project erosion estimate ($R \times K \times LS$) for the all the segments is **8.69** tons per acre which translates to a "Low" Site Sediment Risk Factor.

This project is located in the Santa Ana River Watershed. Currently the site drains to Santa Ana Delhi Channel Reach 1, which is 303(d) listed as impaired for Indicator Bacteria. This waterbody further drains into Upper and Lower Newport Bay before ultimately discharging into the Pacific Ocean. Upper Newport bay is listed as requiring a TMDL for sedimentation/siltation, therefore it has a "High" Receiving Water Risk.

The combination of a "Low" Site Sediment Risk Factor and a "High" Receiving Water Risk results in a Risk Level 2 project. The Risk Determination worksheet is included at the end of this COI.

Appendix A includes the revised Risk Assessment.

Appendix A

Revised Risk Assessment

Sediment Risk Factor Worksheet		Entry
A) R Factor		
<p>Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.</p> <p>http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm</p>		
R Factor Value		22.26
B) K Factor (weighted average, by area, for all site soils)		
<p>The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.</p> <p>Site-specific K factor guidance</p>		
K Factor Value		0.32
C) LS Factor (weighted average, by area, for all slopes)		
<p>The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.</p> <p>LS Table</p>		
LS Factor Value		1.22
Watershed Erosion Estimate (=R _x K _x LS) in tons/acre		8.690
Site Sediment Risk Factor Low Sediment Risk: < 15 tons/acre Medium Sediment Risk: >=15 and <75 tons/acre High Sediment Risk: >= 75 tons/acre		Low

Receiving Water (RW) Risk Factor Worksheet		Entry	Score
A. Watershed Characteristics		yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment ?:		Yes	High
http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml			
<u>OR</u>			
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)		Yes	High
http://www.waterboards.ca.gov/waterboards_map.shtml			

Combined Risk Level Matrix				
		<u>Sediment Risk</u>		
		Low	Medium	High
<u>Receiving Water Risk</u>	Low	Level 1	Level 2	
	High	Level 2		Level 3

Project Sediment Risk: **Low**
 Project RW Risk: **High**
 Project Combined Risk: **Level 2**



National Pollutant Discharge Elimination System (NPDES)

Rainfall Erosivity Factor Calculator for Small Construction Sites

EPA's stormwater regulations allow NPDES permitting authorities to waive NPDES permitting requirements for stormwater discharges from small construction sites if:

- the construction site disturbs less than five acres, and
- the rainfall erosivity factor ("R" in the revised universal soil loss equation, or RUSLE) value is less than five during the period of construction activity.

If your small construction project is located in an area where EPA is the permitting authority and your R factor is less than five, you qualify for a low erosivity waiver (LEW) from NPDES stormwater permitting. LEW certifications are submitted through the electronic Notice of Intent (eNOI) system. Several states that are authorized to implement the NPDES permitting program also accept LEWs. Check with your state NPDES permitting authority for more information.

- List of states, Indian country, and territories where EPA's 2012 Construction General Permit (CGP) and Multi-Sector General Permit (MSGP) Apply
- EPA's 2012 CGP eNOI System

The period during which small construction sites qualify for the waiver generally occurs during a relatively short time in arid and semi-arid areas. If your small construction project does not qualify for a waiver, then NPDES stormwater permit coverage is required.

To use the Rainfall Erosivity Factor Calculator to determine your eligibility for the LEW, you will need your project's location (either latitude/longitude or address) and the estimated start and end dates of construction. The period of construction activity begins at initial earth disturbance and ends with final stabilization.

- Construction Rainfall Erosivity Waiver Fact Sheet
- Appendix C of the 2012 CGP – Small Construction Waivers and Instructions

For questions or comments, email EPA's 2012 CGP staff at cgp@epa.gov.

Facility Information

- Start Date: 02/01/2016
- End Date: 11/30/2016
- Latitude: 33.6656
- Longitude: -117.8878

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **22.26** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF **02/01/2016 - 11/30/2016**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do NOT qualify for a waiver from NPDES permitting requirements.**

[Start Over](#)