

# Fall 2009 Got SWPPP?

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## California Construction General Stormwater Permit – Reissued

October 22, 2009

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# Use all information with caution

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- CGP contains many new requirements
- Permit language is subject to interpretation
- Support tools are under development

# Key Changes

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- Risk Determination
- Permit Registration Documents
- Developing SWPPPs
- Implementing SWPPPs
- REAPs
- Minimum BMPs
- Numerics (Effluent Limits and Action Levels)
- Monitoring
- Reporting
- Terminating a permit

# Two part risk determination

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## ■ Sediment discharge risk

- Estimate of bare ground soil loss using factors from the Revised Universal Soil Loss Equation (RUSLE)

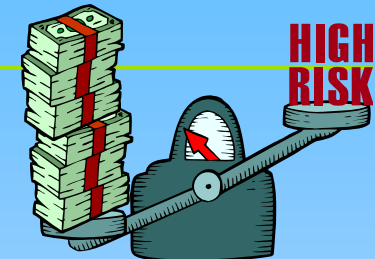
$$A = (R) (K) (LS) (C) (P)$$

- K and LS factors determined either through State provide GIS tools or site specific RUSLE calculation

## ■ Receiving water risk

- Drains to sediment sensitive water
  - 303(d) listed or TMDL for sediment-related pollutant
  - Beneficial Uses of COLD, SPAWN, and MIGRATORY

# Permit requirements are tied to risk levels



- Minimum BMPs
- Monitoring/Reporting requirements
- Compliance assessment
- REAPs

Traditional Project Risk		Sediment Risk		
		Low	Medium	High
Receiving Water Risk	Low	Level 1	Level 2	
	High	Level 2		Level 3

Existing projects grandfathered for 2-years at Risk Level 1

# Rainfall erosivity waiver


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- Operates as a zero risk level for small projects
  - Small projects are those between 1 and < 5 acres
  - Waives permit requirements for projects with an R-factor of 5 or less
- Based on USEPA R-factor waiver in the Phase II stormwater rule
- Use the EPA R-factor calculator:  
<http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm>

# R-Factor tool output

- Enter project location
  - Address, or
  - Latitude and longitude
- Enter planned construction period
- Extremely sensitive to construction period changes

EPA NPDES - Welcome to the Lower Erosivity Index Calculator [http://cfpub.epa.gov/tppdes/stormwater/LEW/erosivity\\_index\\_result.cfm](http://cfpub.epa.gov/tppdes/stormwater/LEW/erosivity_index_result.cfm)

 U.S. ENVIRONMENTAL PROTECTION AGENCY  
**National Pollutant Discharge Elimination System (NPDES)**


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**Rainfall Erosivity Factor Calculator for Small Construction Sites**



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**Facility Information**  
Facility Name: CASQA Meeting, Sacramento CA  
Start Date: 06/01/2010  
End Date: 08/20/2010  
Address: 300 J Street, Sacramento, California 95814  
Latitude: 38.5827693  
Longitude: -121.5026478

**Erosivity Index Calculator Results**

AN EROSIIVITY INDEX VALUE OF **4.66** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF 06/01/2010 - 08/20/2010.



A rainfall erosivity factor of less than 5.0 has been calculated for your site and period of construction. Contact your permitting authority to determine if you are eligible for a waiver from NPDES permitting requirements. If you are covered under EPA's [construction general permit](#) then you can use eNOI to submit your low erosivity waiver certification.

If your construction activity extends past the project completion date you specified above, you must recalculate the R factor using the original start date and a new project completion date. If the recalculated R factor is still less than 5.0, a new waiver certification form must be submitted before the end of the original construction period. If the new R factor is 5.0 or greater, the operator must submit a Notice of Intent to be covered by the Construction General Permit before the original project completion date.

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Last updated on August 07, 2009 3:37 PM  
URL: [http://cfpub.epa.gov/tppdes/stormwater/LEW/erosivity\\_index\\_result.cfm](http://cfpub.epa.gov/tppdes/stormwater/LEW/erosivity_index_result.cfm)

  
  
The documents on this site are best viewed with Acrobat 8.0

AN EROSIIVITY INDEX VALUE OF **4.66** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF **06/01/2010 - 08/20/2010**

# The new NOI: PRDs

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- Submit Permit Registration Documents (PRDs) prior to start of construction
  - NOI; Risk Determination; Site Map; SWPPP; Fee
  - Other documents if applicable
- Legally Responsible Person must submit PRDs
- PRDs are electronically filed into SMARTS

**SMARTS =  
Stormwater Multi-Application and Reporting System**

# Developing SWPPPs

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- SWPPPs must be developed by a Qualified SWPPP Developer (QSD)
  - QSDs must have pre-requisite qualifications as of July 1, 2010, and by September 2, 2011, must complete State-sponsored or approved training
- Only a QSD is authorized to make SWPPP revisions and amendments
  - Need to have a QSD assigned throughout term of project

# Implementing SWPPPs

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- Each project must assign a Qualified SWPPP Practitioner (QSP)
  - From July 1, 2010, until September 2, 2011, any appropriately qualified individual may serve as a QSP
  - By September 2, 2011, QSPs must have the prerequisite qualifications and have completed State-sponsored or approved training
- QSPs conduct or oversee
  - implementation of BMPs
  - inspections
  - sampling
  - development of Rain Event Action Plans

**QSP- Person assigned responsibility to ensure full compliance with the permit and implementation of SWPPP**

# Can I be a QSD/QSP?

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## QSDs

- Registered CA Professional Engineer - Civil
- Registered CA Professional Geologist or Engineering Geologist
- Registered CA Landscape Architect
- Registered Professional Hydrologist (AIH)
- Certified Professional
  - Erosion & Sediment Control (CPESC), (NICET)
  - Storm Water Quality (CPSWQ)

## QSPs

- Qualified as a QSD
- Certified Inspection of Sediment and Erosion Control (CISEC)
- Certified Erosion, Sediment, Storm Water Inspector (CESSWI)

# Rain Event Action Plans



Date: \_\_\_\_\_ 20 \_\_\_\_\_

WDID Number: \_\_\_\_\_

Rain Event Action Plan (REAP) Grading and Land Development Phase		
<i>Preparation of land for utility installation and vertical building including clearing and grubbing, demolition, blasting or rock crushing, if necessary, and soil excavation and mass grading. This form to be reviewed and completed by the qualified SWPPP practitioner within 48 hours prior to entering the Grading and Land Development Phase.</i>		
<b>Site Information:</b>		
Site Name, City and Zip Code _____	<input type="checkbox"/> Risk Level 1	<input type="checkbox"/> Risk Level 2 <input type="checkbox"/> Risk Level 3
<b>Site Storm Water Manager Information:</b>		
Name, Company and Emergency Phone Number (24/7) _____		
<b>Erosion and Sediment Control Provider – Labor Force Contracted for the Site:</b>		
Name, Company and Emergency Phone Number (24/7) _____		
<b>Storm Water Sampling Agent Information:</b>		
Name, Company and Emergency Phone Number (24/7) _____		
<b>Activities Associated with Land Surface Development</b> <i>Check ALL the boxes below that apply to your site.</i>		
<input type="checkbox"/> Demolition	<input type="checkbox"/> Vegetation Removal	<input type="checkbox"/> Vegetation Salvage-Harvest
<input type="checkbox"/> Rough Grade	<input type="checkbox"/> Finish Grade	<input type="checkbox"/> Blasting
<input type="checkbox"/> Soil Amendment(s):	<input type="checkbox"/> Over Excavation (____ ft)	<input type="checkbox"/> Soils Testing
<input type="checkbox"/> Rock Crushing	<input type="checkbox"/> Erosion and Sediment Control	<input type="checkbox"/> Surveying
<input type="checkbox"/> Equip. Maintenance/Fueling	<input type="checkbox"/> Material Delivery and Storage	<input type="checkbox"/> Other:
<b>Trades Active on Site During Land Surface Development</b> <i>Check ALL the boxes below that apply to your site.</i>		
<input type="checkbox"/> Demolition	<input type="checkbox"/> Grading Contractor	<input type="checkbox"/> Erosion and Sediment Control
<input type="checkbox"/> Storm Drain Improvement	<input type="checkbox"/> Water, Sewer, Electric Utilities	<input type="checkbox"/> Surveyor – Soils Technician
<input type="checkbox"/> Street Improvements	<input type="checkbox"/> Rock Products	<input type="checkbox"/> Sanitary Station Provider
<input type="checkbox"/> Material Delivery	<input type="checkbox"/> Equipment Fueling/Maintenance	<input type="checkbox"/> Laborers
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<b>Trade Contractor Information Provided</b>		
<input type="checkbox"/> Educational Material Handout	<input type="checkbox"/> Tailgate Meetings	<input type="checkbox"/> Training Workshop
<input type="checkbox"/> Contractual Language	<input type="checkbox"/> Fines and Penalties	<input type="checkbox"/> Signage
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

Draft March 18, 2008      Page 1 of 3

- Rain Event Action Plans are required for Risk Levels 2 and 3 sites
- Base on templates; complete template for each rain event
- QSP responsible for developing and implementing REAP

# Use NOAA forecasts for REAP trigger

- Complete REAP template 48 hours in advance of a likely rain event
  - 50% or greater predicted chance of precipitation in project area
- Only use NOAA forecasts <http://www.srh.noaa.gov/forecast>
- Print out and retain forecast

Day Forecast for Latitude 33.68°N and Longitude 117.81°W (Elev. 56 ft) <http://forecast.weather.gov/MapClick.php?CityName=Irvine&state=CA&...>

**Your National Weather Service forecast**

**Irvine CA**

Enter Your "City, ST" or zip code  Go

NWS San Diego, CA Point Forecast: Irvine CA 33.68°N 117.81°W (Elev. 56 ft) Forecast Valid: 5pm PDT May 26, 2009-9pm PDT Jun 2, 2009

Mobile Weather Information | En Español | Last Update: 12:09 pm PDT May 26, 2009

**Forecast at a Glance**

Tonight	Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday	Saturday Night
Increasing Clouds Lo 82 °F	Gradual Clearing Hi 72 °F	Increasing Clouds Lo 62 °F	Gradual Clearing Hi 74 °F	Patchy Fog Lo 57 °F	Patchy Fog Hi 72 °F	Patchy Fog Lo 57 °F	Patchy Fog Hi 71 °F	Patchy Fog Lo 57 °F

**Detailed 7-day Forecast**

**Tonight:** Increasing clouds, with a low around 62. Southwest wind between 5 and 10 mph becoming calm.

**Wednesday:** Cloudy through mid morning, then gradual clearing, with a high near 72. Calm wind becoming southwest between 5 and 10 mph.

**Wednesday Night:** Increasing clouds, with a low around 62. South wind between 5 and 10 mph.

**Thursday:** Cloudy through mid morning, then gradual clearing, with a high near 74. Calm wind becoming south between 5 and 10 mph.

**Thursday Night:** Patchy fog after 11pm. Otherwise, increasing clouds, with a low around 57. South wind between 10 and 15 mph becoming calm. Winds could gust as high as 20 mph.

**Friday:** Patchy fog before 11am. Otherwise, mostly cloudy, then gradually becoming sunny, with a high near 72.

**Friday Night:** Patchy fog after 11pm. Otherwise, increasing clouds, with a low around 57.

**Saturday:** Patchy fog before 11am. Otherwise, cloudy through mid morning, then gradual clearing, with a high near 71.

**Saturday Night:** Patchy fog after 11pm. Otherwise, increasing clouds, with a low around 57.

**Sunday:** Patchy fog before 11am. Otherwise, cloudy through mid morning, then gradual clearing, with a high near 72.

**Sunday Night:** Patchy fog after 11pm. Otherwise, increasing clouds, with a low around 58.

**Monday:** Patchy fog before 11am. Otherwise, cloudy through mid morning, then gradual clearing, with a high near 72.

**Detailed Point Forecast** [\[More Detail\]](#)

Click Map for Forecast [Disclaimer](#)

Lat/Lon: 33.68°N 117.81°W Elevation: 56 ft

**Current Conditions** [\[Move Up\]](#)

**Santa Ana, John Wayne Airport-Orange County Airport**

Last Update on 26 May 15:53 PDT

Humidity: 59 %  
Wind Speed: W 8 MPH  
Barometer: 29.90 in (1012.20 mb)  
Dewpoint: 53°F (12°C)  
Heat Index: 78°F (24°C)  
Visibility: 10.00 Miles

**A Few Clouds**

68°F (20°C)

[More Local Wx:](#) [3 Day History:](#)

of 2 5/26/2009 4:33 PM

# Minimum BMPs are specified in 5 categories

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- Good Site Management  
“Housekeeping”
  - Non-stormwater Management
  - Erosion Control
  - Sediment Controls
  - Run-on and Runoff Controls
- Minimum BMPs increase as Risk Level increases
  - Review the details of all minimum BMPs carefully



# Two types of numeric limits assess runoff quality

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## ■ Numeric Action Levels - **Risk/Type 2 & 3 sites**

- NALs assess BMP/SWPPP performance
- Based on storm event average
  - Turbidity 250 NTU
  - pH 6.5-8.5 pH units

## ■ Numeric Effluent Limitations - **Risk/Type 3 sites**

- Effluent limits are compliance numbers
- Exceeding a NEL = permit violation
- Based on daily average
  - Turbidity 500 NTU
  - pH 6.0-9.0 pH units

# When don't the numbers apply

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- pH NEL and NAL only apply construction phases when there is a “high risk of high pH discharge”
  - Utilities phase
  - Vertical build phase
  - Any other phase when materials are applied to the land that could alter pH of discharge
- NEL Exemptions
  - Storms above designated compliance event, 5-year 24-hour event
  - Run-on influenced by disaster (e.g. fire)

# NAL and NEL exceedances

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## NAL Exceedance

- Report data within 10 days
- Evaluate BMPs and SWPPP
- Implement corrective actions
- Document evaluation and actions
- Revise SWPPP
- Submit NAL report if requested

## NEL Exceedance

- Report data and submit NEL violation report within 24 hours of identification
  - Identify corrective actions
- Augment monitoring program
- May trigger fines

# Visual monitoring remains important for all projects

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- BMP inspections
  - Weekly
  - Daily during rain events
- Site visual monitoring
  - Pre-storm
  - Post-storm
- Quarterly non-stormwater inspections

# Water quality monitoring by risk level – 1 and 2

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## Risk Level 1

- Non-visible pollutant monitoring as necessary

*\* Only required during construction phases with high risk of high pH discharge*

## Risk Level 2

- Non-visible pollutant monitoring as necessary
- Stormwater discharge monitoring for pH\* and turbidity; other pollutants required by RWQCB
- Non-stormwater discharges from site
- Contained rainwater when discharged

# Water quality monitoring by risk level – 3

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## Risk Level 3

- Non-visible pollutant monitoring as necessary
- Stormwater discharge monitoring for pH\* and turbidity; other pollutants required by RWQCB
- Non-stormwater discharges from site
- Contained rainwater when discharged
- Report all field data within 5 days of storm event

## Risk Level 3 (Conditional)

- Projects greater than 30 acres with direct discharge add
  - Bioassessment monitoring

*\* Only required during construction phases with high risk of high pH discharge*

# Water quality monitoring for risk level 3 projects that exceed NEL

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- Projects exceeding NEL must augment monitoring program
- Exceed turbidity NEL
  - Add SSC to discharge monitoring
  - Start receiving water\* monitoring for SSC and Turbidity
- Exceed pH NEL
  - Start receiving water\* monitoring for pH

SSC = Suspended  
Sediment  
Concentration

*\*Only required if the site has a direct discharge to a receiving water*

# Annual Reports more than a compliance certification

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- Due September 1
- Electronically submit in SMARTS
- Monitoring results
- Inspection details
- Summary of corrective actions and planned
- Documentation of training

# Reporting summary by risk

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## Risk Level 1

- Annual Report due September 1

## Risk Level 2

- Annual Report due September 1
- When NAL is exceeded, submit sample results within 10 days of storm event conclusion
- NAL report, if requested by RWQCB

# Reporting summary by risk

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## Risk Level 3

- Annual Report due September 1
- Field sample results within 5 days of storm event conclusion
- When NAL is exceeded, submit sample results within 10 days of storm event conclusion
- NAL report, if requested by RWQCB
- When NEL is exceeded, submit NEL Violation Report within 24 hours of identification of the exceedance

# Terminating a Permit

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- Submit Notice of Termination
- Meet final stabilization requirement
  - Demonstrate that the site will not pose any additional risk of sediment discharge:
    - 70% final cover method – photos; **OR**
    - RUSLE method – computation proof; **OR**
    - Custom method
- Elements of SWPPP are complete
- Compliance with Post Construction standards
  - Long term maintenance plan (minimum of 5-years) is in place

# Etcetera

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- Active Treatment Systems (ATS)
  - Must follow prescribed requirements (Attachment F)
  - ATS specific effluent limitations and monitoring requirements
- Linear Underground/Overhead Projects
  - Included in the 2009 CGP
  - Separate requirements called out in Attachment A
- Legally Responsible Person and Authorized Signatories
  - Language is more specific about who can submit PRDs, NOIs, and Reports
- Post construction runoff reduction
  - Only applies in areas without a MS4 SWMP

# Key Dates

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- Permit Adoption Date: September 2, 2009
- Permit Effective Date: July 1, 2010
- Interim QSD effective: July 1, 2010
- QSD/QSP Training: September 2, 2011
- Post Construction grandfathering through September 2, 2012
- Risk Determination grandfathering through September 2, 2011
- First Annual report due September 1, 2010

# Help is on the way

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- Look for the CASQA Construction BMP Handbook update, due to be released at the end of 2009.
- Look for SMARTS beta test opportunities
- Look for completion of GIS tools to help with Risk Determination
  - Receiving water risk
  - K and LS factors for RUSLE

# Questions



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# Site management minimums

	Site Management BMPs	Risk Level
1	Manage construction materials	1, 2, 3
2	Manage wastes	1, 2, 3
3	Vehicle storage and maintenance	1, 2, 3
4	Good housekeeping for landscape materials	1, 2, 3
5	Potential pollutant assessment	1, 2, 3
6	Good housekeeping for air deposition	1, 2, 3
<b>7</b>	<b>Develop and implement REAPs</b>	<b>2, 3</b>

# Non-stormwater minimums

	Non-stormwater BMPs	Risk Level
1	Control non-stormwater discharges	1, 2, 3
2	Wash vehicles in manner that prevents discharge to surface water or MS4s	1, 2, 3
3	Clean streets in manner that prevents discharge to surface water or MS4s	1, 2, 3

# Erosion control minimums

	Erosion Control BMPs	Risk Level
1	Implement wind erosion controls	1, 2, 3
2	Provide effective soil cover for inactive areas (areas that have been disturbed and wont be re-disturbed for 14 days)	1, 2, 3
3	Limit use of plastic materials	1, 2, 3

# Sediment control minimums

	Sediment Control BMPs	Risk Level
1	Establish and maintain effective perimeter controls	1, 2, 3
2	Stabilize construction entrances and exits	1, 2, 3
3	If using sediment basins, design per guidance	1, 2, 3
4	<b>Implement appropriate erosion control in conjunction with sediment control (runoff control and soil stabilization) for areas under active construction</b>	<b>2, 3</b>

# Sediment control minimums

	<b>Sediment Control BMPs</b>	<b>Risk Level</b>
<b>5</b>	<b>Apply linear slope controls along toe, face, and at grade breaks as specified</b>	<b>2, 3</b>
<b>6</b>	<b>Ensure all construction traffic uses stabilized entrances and exits</b>	<b>2, 3</b>
<b>7</b>	<b>Inspect all access roads daily and clean daily if needed, and clean prior to rain event</b>	<b>2, 3</b>
<b>8</b>	<b>Regional Board may require additional sediment control measures to protect receiving waters</b>	<b>3</b>

# Run-on and runoff control minimums

	Run-on and Runoff Control BMPs	Risk Level
1	Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site	1, 2, 3
2	Direct run-on away from disturbed areas of the site	1, 2, 3