

# NPDES Update

California Confounding Construction:  
The Construction General Permit

October 15, 2014

# Jim Taylor

- Born & raised in Ventura
- “DeDe Taylor’s son”
  - Mom was County Hydrologist, 3 decades
  - Note Grandpa’s dam at Casitas
- CSUN Graduate; pursuing CLU Masters
- Married 27 years, 4 kids
- 12+ years Willdan Associates, Sr. Engineer
- 14+ years City of Thousand Oaks, Sr. Civil Engineer
- Hydrology, Hydraulics, Floodplain, Stormwater
  - Backflow, Utility Connections, Land Development
- New Favorite Acronym: **IDSFA**
  - It Doesn’t Stand For Anything





# Overview of Today's Discussion

- Administrative structure - issued by State DWR
- Project triggers (acreage, etc)
- Consideration of Post-Construction BMP's early
- SMARTS System / NOI
- SWPPP's (certified by applicant)
- Examples of Construction BMP's
- Risk Levels 1, 2, & 3
- Risk level waiver criteria
- Linear Projects
- QSD / QSP
- Notice of Termination

# Administrative Framework

- Whole Non-Point Source Program: EPA
  - 1987 Congress amended Clean Water Act (CWA)
    - National Pollutant Discharge Elimination System (NPDES)
    - “Receiving Waters” of the United States
- Federal delegation
  - California Dept. of Water Resources
  - Regional Water Quality Control Boards (Region 4)
- Municipal Permits
  - Municipal Separate Storm Sewer System (MS4)
  - Environmentally Sensitive Areas (ESA’s)
- Industrial Permits
- **Construction General Permit (CGP)**
  - Includes a 2-1/2 page acronym list (Appendix 6)



# Project Triggers

- Applicability
  - Under this Permit there are “**Post-Construction**” requirements
    - Permanent features and mechanisms to assure clean stormwater
  - In Ventura County, Post-Construction requirements are directed by the MS4 (Municipal) Permit
- Size Thresholds
  - $\geq 1$  acre area of disturbance
  - Less than one acre but part of a larger development
  - Linear Underground Projects (LUP's)  $> 1$  acre; (Attachment A)
    - Surface area of all trenches; stockpiles; borrow areas; staging and storage
  - Oil and gas exploration (in case the schools decide to drill for oil)

# Post-Construction Considerations

- Typical projects subject to MS4 requirements
  - **Project disturbs > 1 acre and adds > 10,000 SF impervious**
  - Industrial parks >10,000 SF total *altered* surface area
  - Commercial strip mall >10,000 SF impervious surface area
  - Retail Gasoline Outlets >5,000 SF total *altered* surface area
  - Restaurants >5,000 SF total *altered* surface area
  - **Parking Lots >5,000 SF impervious surface**
  - **Streets/roads/highways >10,000 SF impervious area**
  - Automotive service facilities (prescribed SIC codes)
  - **Projects in/adjacent-to/discharging-to ESA where**
    - Discharge will likely impact sensitive biological species or habitat
    - Creates >2,500 SF of impervious surface
  - Single-family hillside homes (special case)
  - *Redevelopment (special case of the above 10 types)*

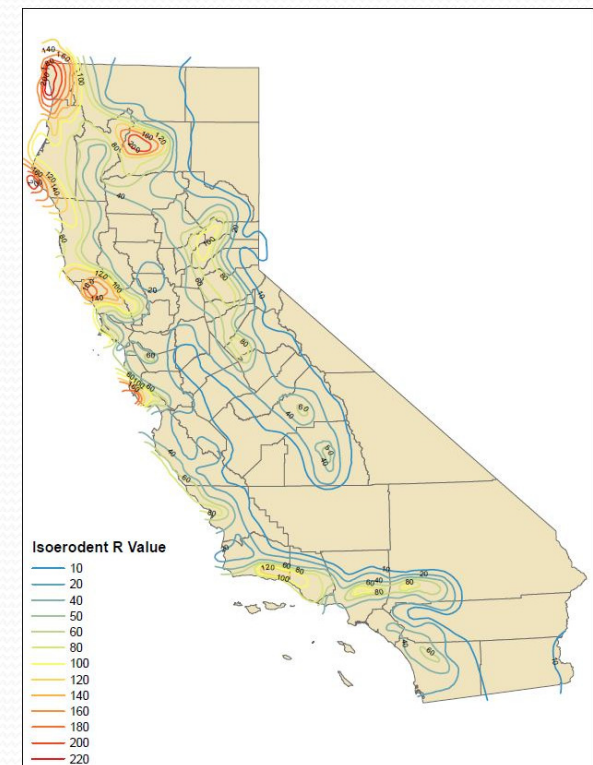


# “SMARTS” System / NOI

- Stormwater Multi-Application Reporting and Tracking System (SMARTS)
- September 2, 2012 “magic” effective date; all projects
- Application on-line
  - Develop a **Storm Water Pollution Prevention Plan (SWPPP)**
- Reports (updates) to SMARTS every September

# SWPPP's

- Prepared by QSD; certified by Applicant
- Identify the Legally Responsible Party (LRP)
- Update for multiple construction phases (size-dependent)
  - Grading
  - Foundations
  - Timber / Framing
  - Flatwork / Finishing
- Risk level
  - Complex calculations
- Deployed by QSP





# Professional Certification

- Qualified SWPPP Developer (QSD)
  - Developer (“**Designer**”)
  - Prepares the plan
  - Future Permit? {current one “expires” in ~~Sept. 2014~~ **July 2015**}
  - QSD must conduct final BMP inspection (for N.O.T.)
- Qualified SWPPP Practitioner (QSP)
  - Oversees actual deployment of BMP’s
  - “Should” consider where Post-Construction BMP’s will go
    - May affect construction sequencing

# “Risk” Levels

		Project Sediment Risk		
Receiving Water Risk		LOW	MED	HIGH
	LOW	Level 1	Level 2	
	HIGH	Level 2		Level 3

- Ratcheting levels of deployment
- Levels 2 & 3
  - Rain Event Action Plans (REAP's)
    - Monitoring at ½” of rainfall
    - “Numeric Action Levels”
- Risk Level 3 Attachment E (p.185 of the CGP's PDF)

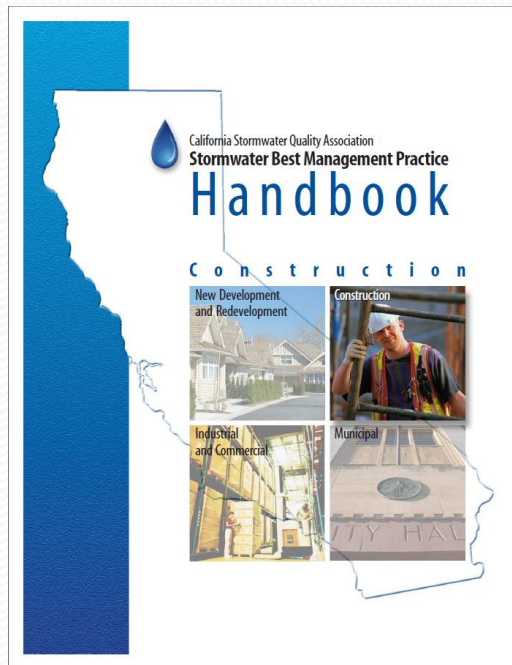
# Construction BMP's

- Classic
  - Sandbags
  - Gravelbags
  - Tarps
  - Shaker plates
  - Street sweeping
- Advanced
  - Oil/Sand separators
  - Stilling Basins
  - Silt-fences
  - Tire wash

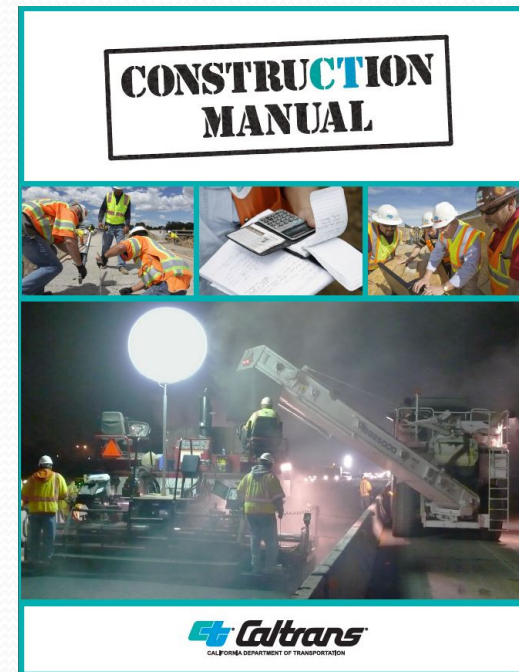


# Construction BMP Resources

- CASQA Handbook (\$200)
- Caltrans Handbook



- <https://www.casqa.org/resources/bmp-handbooks>
- Subscription



- [http://www.dot.ca.gov/hq/construc/constmanual/construction\\_manual.pdf](http://www.dot.ca.gov/hq/construc/constmanual/construction_manual.pdf)

# MS4 Table 6 “Baseline” BMP’s

Table 6 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TC-1	TC-1
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>1</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

# Table 7: $\geq 1$ acre but $< 5$ acres

Table 7 - BMPs at Construction sites 1 acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1

BMPs	CASQA Handbook	Caltrans Handbook
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

# Table 8: $\geq 5$ acres

Table 8 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
<b>Sediment Controls</b>		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
<b>Tracking Control BMPs</b>		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

# Table 9: Sediment-sensitive

- Environmentally-Sensitive Area (ESA) / 303(d) waters
- More-intense inspection and deployment schedule

Table 9 - Enhanced Construction BMP Implementation

CONSTRUCTION SITE BMPs	CASQA Handbook	Caltrans Handbook
<b>Erosion Controls</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Hydraulic Match	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Stow Muck	EC-6	SS-6
Opensoils and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
Slope Drapes	EC-11	SS-11
<b>Sediment Controls</b>		

CONSTRUCTION SITE BMPs	CASQA Handbook	Caltrans Handbook
Silt Fence	SE-1	SC-1
Fiber Rolls	SE-5	SC-5
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Covered Bag House	SE-3	SC-3
Siltor Sweeping under Vehicle	SE-7	SC-7
Sand Bag Barrier	SE-8	SC-8
Siltor Drain Silt Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wood Barrier Controls	WE-1	WE-1
Redundant Construction Interceptor	TC-1	TC-1
Redundant Construction Interceptor	TC-2	TC-2
Interceptor Tank Bank	TC-3	TC-3
Advanced Treatment System		
<b>Non-Storm Water Management</b>		
Water Collection Facilities	WS-1	WS-1
Detention Basins (Construction Staging)	WS-2	WS-2
Self-cleaning Silt and Sediment Traps	WS-3	WS-3
Vehicle and Equipment Washing	WS-4	WS-4
Vehicle and Equipment Washing	WS-5	WS-5
Vehicle and Equipment Washwater	WS-6	WS-6
<b>Waste Management</b>		
Household Appliances and Supplies	WM-1	WM-1
Household Appliances and Supplies	WM-2	WM-2
Soil Management and Control	WM-3	WM-3
Soil Management and Control	WM-4	WM-4
Soil Management and Control	WM-5	WM-5
Concrete Wash Management	WM-6	WM-6
Concrete Wash Management	WM-7	WM-7
Sanitary Waste Management	WM-8	WM-8





# Risk Level “Erosivity” Waiver

- < 5 acres
- Site Erosivity Value, “R”
  - From the Universal Soil Loss Equation (“RUSLE<sub>2</sub>”)
- Erosivity Index, “EI” **varies according to time of year**
  - Antecedent moisture contributes to erosion
  - Must know your final day of site stabilization
- Note: Online program still has errors



# Linear Underground Project (LUP)

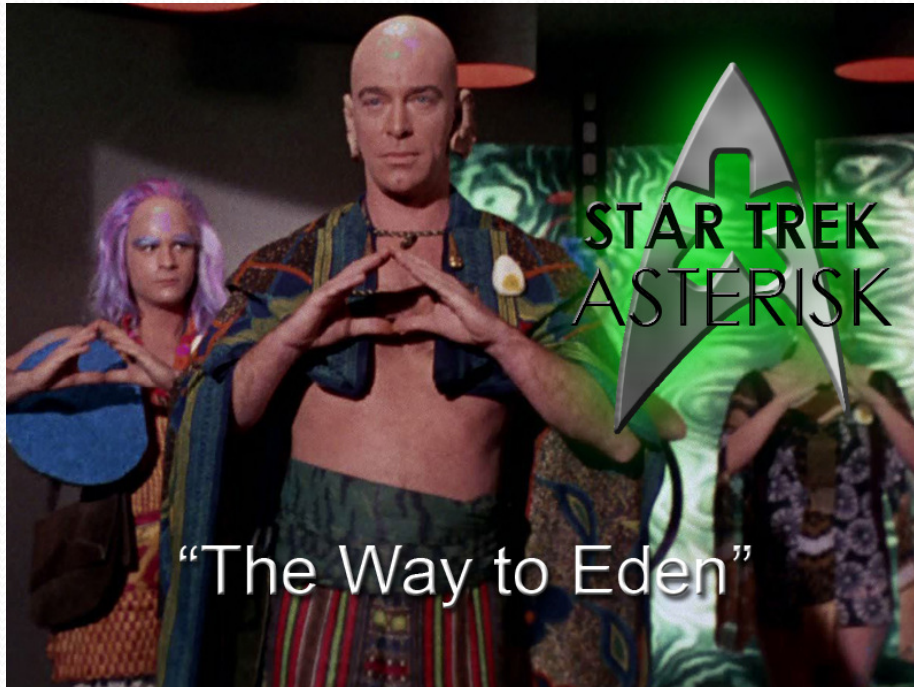
- Linear Underground Projects (LUP's) > 1 acre;  
(Attachment A)
  - Surface area of all trenches; stockpiles; borrow areas; staging and storage
- Ensure includes a truck route
- Exemptions:
  - Maintenance-oriented
  - Code-required upgrades
  - Covered under a larger project (e.g., tie-ins)



# Notice of Termination (N.O.T.)

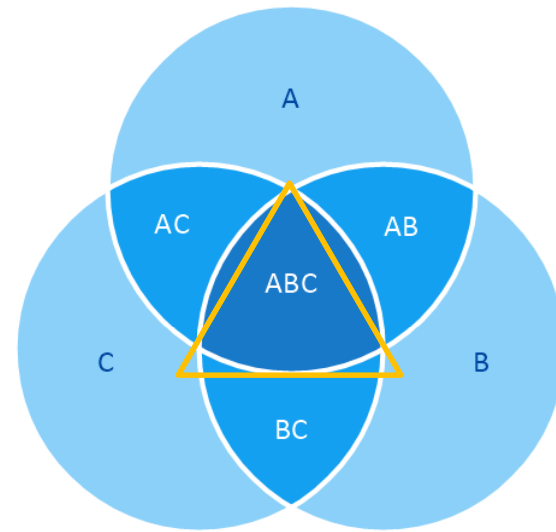
- Post-Construction BMP's must be present
  - Substantially complete / serviceable
- Used to be paperwork; now use SMARTS (Sept.2012)
  - Exemption if under an MS4 permit (and we all are)
    - Still must have furnished the proof you're exempt through SMARTS
  - If not exempted, must submit a post-construction map and worksheet (bunch of SMARTS screens)

# Questions?



“One.”

Bringing the silos of potable water, wastewater, and stormwater into the cooperative integral triangle of one.



Ref. City of LA's "One Water" program

Jim Taylor, PE, CFM

[jtaylor@toaks.org](mailto:jtaylor@toaks.org)

(805) 449-2442