STORMWATER PERMITS
OVERVIEW
CONSTRUCTION AND MS4 PERMITTING

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1987 WATER QUALITY ACT
STORMWATER PROGRAM

- Phase I regulations: November 1990
- Phase II regulations: December 1999
- Phase I discharges:
  - Associated with industrial activity
  - Municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more
CLASSES OF FACILITIES THAT DISCHARGE STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY

- Manufacturing facilities
- Mining and oil and gas
- Hazardous waste treatment, storage or disposal facilities
- Landfills
- Auto dismantlers and recycling facilities
- Steam electric power plants
- Transportation facilities (e.g. airports, trucking) with vehicle maintenance
- Sewage treatment plants
- Construction activity disturbing 5 or more acres
STORMWATER PHASE II
MUNICIPAL PERMITS

• Small MS4s in urbanized areas (urbanized area consists of core city and urban fringe with population of 50,000 or more)
  • Maps of urbanized areas at:
  • http://cfpub.epa.gov/npdes/stormwater/urbanmaps.cfm
• Designated small MS4s outside urbanized areas with a population over 10,000
Permits for construction sites of 1 to 5 acres, including sites less than 1 acre that are part of a larger common plan of development which is larger than 1 acre.

Permit waivers for small construction:
- When the rainfall erosivity factor "R" in the revised universal soil loss equation is less than 5; or
- Controls are not needed based on a total maximum daily load (TMDL) or equivalent analysis.

Online erosivity factor calculator at: http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm
ENVIRONMENTAL CONCERNS OF CONSTRUCTION SITES

- The primary pollutant of concern is sediment for construction.
- Other pollutants include trash and debris, chemicals (paint, concrete washout) oil and grease, etc.

**Typical erosion rates for land-based activities**

- Bare Soil (e.g., unmanaged construction sites) ~35–45
- Farm Land (active pasture) ~4.7
- Forest Land <1
- Farm Land (row crop) ~1
EPA 2008 CONSTRUCTION
GENERAL PERMIT (CGP)

- Reissued on July 14, 2008
  (73 FR 40338)
- Covers all Tribal lands in Region 9
  (CA, NV and AZ) and most
  Tribal lands elsewhere
OBTAINING CGP COVERAGE

- Prepare a stormwater pollution prevention plan (SWPPP) consistent with CGP requirements
- Submit a Notice of Intent (NOI) to EPA
- After receipt, NOIs posted on EPA’s website* for a 7 day review period; if no concerns raised (e.g. Endangered Species Act concerns), discharges authorized 7 days after posting.

Timing of NOI submittal
- Using electronic NOI (eNOI) submit NOI at least 7 days before beginning construction (NOI immediately posted to begin the 7 day review period)
  - Add 2 weeks if paper NOI is submitted

*http://cfpub.epa.gov/npdes/stormwater/enoi.cfm
NOI – WHO APPLIES?

- All entities which meet the definition of an “operator.”
  - Parties with control over construction plans and specifications; and
  - Parties with day-to-day operational control of activities at a construction site necessary to comply with the permit (e.g., the general contractor)
ENDANGERED SPECIES ACT (ESA) REQUIREMENTS

- NOI requires certification of compliance with ESA
- Six options are provided, e.g.,
  - No listed species present
  - Not likely to adversely effect
  - Consultation with Fish and Wildlife
- Appendix C provides ESA review procedures
- SWPPP requires documentation of ESA compliance
TMDL* REQUIREMENTS

- No approved TMDLs in Region 9 Tribal lands at the moment, but this may change in the future
- TMDL consistency requirements in the CGP:
  - Determine if there are applicable TMDLs for your site: http://cfpub.epa.gov/npdes/stormwater/tmdl.cfm
  - Comply with applicable TMDL requirements for your construction site, or construction sites in general, if any.
  - If no applicable TMDL requirements for construction sites then comply with permit effluent limits in Part 3
- NOI requires certification of consistency with TMDLs
- SWPPP requires documentation of consistency

*Total maximum daily load
CONSTRUCTION AT OIL AND GAS SITES

- 2005 Energy Act (construction stormwater permit exemption for most oil and gas exploration, production, treatment, processing and transmission facilities)
- Final EPA regulations of June 12, 2006
- November 2006 NRDC lawsuit
- Ninth Circuit opinion of May 2008 vacating June 2006 regulations
- Construction at oil and gas sites permitted under multi-sector general permit
Why a two-year permit?

- Allows coordination with the timing of the new effluent guidelines for construction industry
- CGP will be reissued in 2010 and will incorporate new guidelines due in December 2009
Construction Effluent Guidelines

- Proposed on November 28, 2008 (73 FR 72562)
- Turbidity limit of 13 NTU for sites:
  - Soil clay content is 10% or greater;
  - Annual R-factor (rainfall erosivity factor) from Revised Universal Soil Loss Equation of 50 or more; and
  - Project size of 30 acres or more.
- Basic sediment and erosion controls and pollution prevention for sites not subject to turbidity limit
- Final regulations are due by December 1, 2009
Map of Areas of the U.S. Eligible for R-factor Waiver
Soil Clay Content Ranges for the U.S.
EPA SWPPP RESOURCES

- EPA SWPPP Guide
- SWPPP Template (MS Word)
- Self-Inspection Form
- Example SWPPPs for two hypothetical projects
  - Residential
  - Commercial

- http://cfpub.epa.gov/npdes/home.cfm?program_id=6
- http://www.cicacenter.org/ (compliance assistance website for construction)
Ten tribes in Region 9 within urbanized areas and subject to permitting under Phase II regulations
  - Permit is discretionary if population < 10,000
  - Permit required if population > 10,000
One Tribe (Agua Caliente) > 10,000 and received an MS4 permit in 2004
Other Tribes not permitted at this time
Requirements may change based on 2010 census
Palm Springs Urbanized Area
PALM SPRINGS URBANIZED AREA
Clean Water Act requirements for MS4 permits:

- Reduce pollutants in the discharges to the maximum extent practicable (MEP)
- Effectively prohibit non-stormwater discharges
- Compliance with water quality standards is discretionary (1999 Ninth Circuit decision)
What is MEP?

- Rough definition in the Phase II Regulations – implementation of a stormwater management program (SWMP) consistent with the regulations and guidance

- Iterative process
  - Propose an initial SWMP based on local conditions
  - Periodically upgrade the program as new information becomes available
SWMP REQUIREMENTS FOR PHASE II MS4s

- Six minimum requirements:
  - Public education/outreach
  - Public involvement
  - Illicit discharge elimination
  - Construction site erosion control
  - Post-construction storm water management
  - Good housekeeping/pollution prevention for municipal operations
What is MEP? (Cont.)

- But how much do we have to do? Be careful what you ask for!
- Permits becoming more quantitative in their requirements, e.g.
  - Street sweeping frequency
  - Number of industrial/commercial inspections
  - Numeric new development standards
- Prescriptive requirements help clarify MEP
Number of Region 9 audits from 2001 to present:
- Arizona: 4 programs (2 audits)
- California: 122 programs (37 audits)
- Hawaii: 3 programs (5 audits)
- Nevada: 9 programs (2 audits)

Audit reports repeatedly show the need for prescriptive permit requirements for effective, enforceable programs.

Audit reports (including summary report) available at: http://www.epa.gov/region09/water/npdes/ms4audits.html
NON-STORMWATER DISCHARGES

- Certain types of minor non-stormwater discharges authorized under MS4 permits, for example:
  - Landscape irrigation
  - Uncontaminated groundwater
  - Potable water sources
  - Air conditioning condensate
  - Emergency firefighting runoff
Green Infrastructure

- New EPA priority for 2007
  - EPA Statement of Intent in April 2007 to collaborate with several organizations (e.g. NRDC and ASIWPCA) to promote green infrastructure

- EPA Green Infrastructure Action Strategy - January 2008

- 2009 webcasts
Green Infrastructure in MS4 Permits

- Region 9 is promoting green infrastructure requirements in MS4 permits
- Looking for quantitative requirements, e.g.
  - 5% effective impervious area (2009 Ventura permit)
  - Measures that address a particular design storm (e.g. 85% storm, 2009 Orange County permit)
- Open to other approaches
TMDLs and Stormwater

- More TMDLs in MS4 permits
  - Caltrans
    - 1999 permit – no TMDLs
    - Next permit - Caltrans subject to 30 TMDLs
  - Ventura County
    - 2000 permit – no TMDLs
    - 2009 permit – TMDLs for nutrients, pesticides, metals, trash and bacteria
- Only about 30% of California’s TMDLs completed so far
TMDLs and Stormwater

- TMDLs are a key catalyst for water quality improvement.
- Permits must be consistent with TMDLs.
- EPA guidance memo of November 22, 2002:
  - Effluent limits may be BMPs, but fact sheet should show they are sufficient to meet the TMDL.
  - In Region 9, we are finding numeric limits to be more appropriate in many cases.
NRC Stormwater Management Study (October 2008)

- Requested by EPA in 2006 to improve stormwater program
- Major study recommendations
  - Watershed permitting (goal is to achieve receiving water biological objectives)
  - More responsibilities for MS4s with a lead municipality (e.g. regulation of industries like the pretreatment program)
  - Regulation of products that contribute to stormwater pollution (e.g. copper in brake pads, zinc in tires, PAHs in coal-tar based parking lot sealants)
  - More attention to flow and impervious cover (low impact development)
  - Numeric expression of MEP
  - Identify high-risk industrial dischargers
NRC Report – EPA Follow-Up

- Synthesized report findings/recommendations
- Formed cross-office team to analyze findings/recommendations and identify options for implementation:
  - Watershed permitting pilot projects
  - Pollutant source reduction workgroup formed
- Effluent guidelines for post-construction runoff under consideration