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

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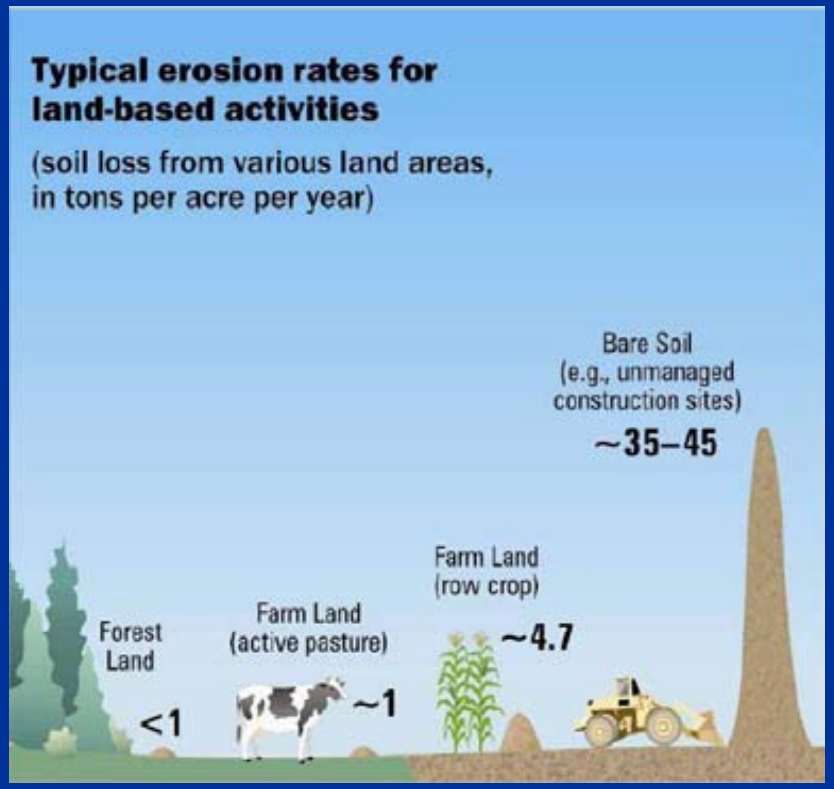
REGION 9

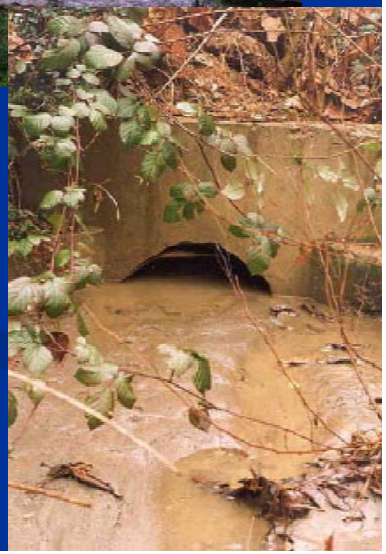
PHASE II CONSTRUCTION PERMIT REQUIREMENTS

- Permits for construction sites of 1 to 5 acres, including sites less that 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.





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

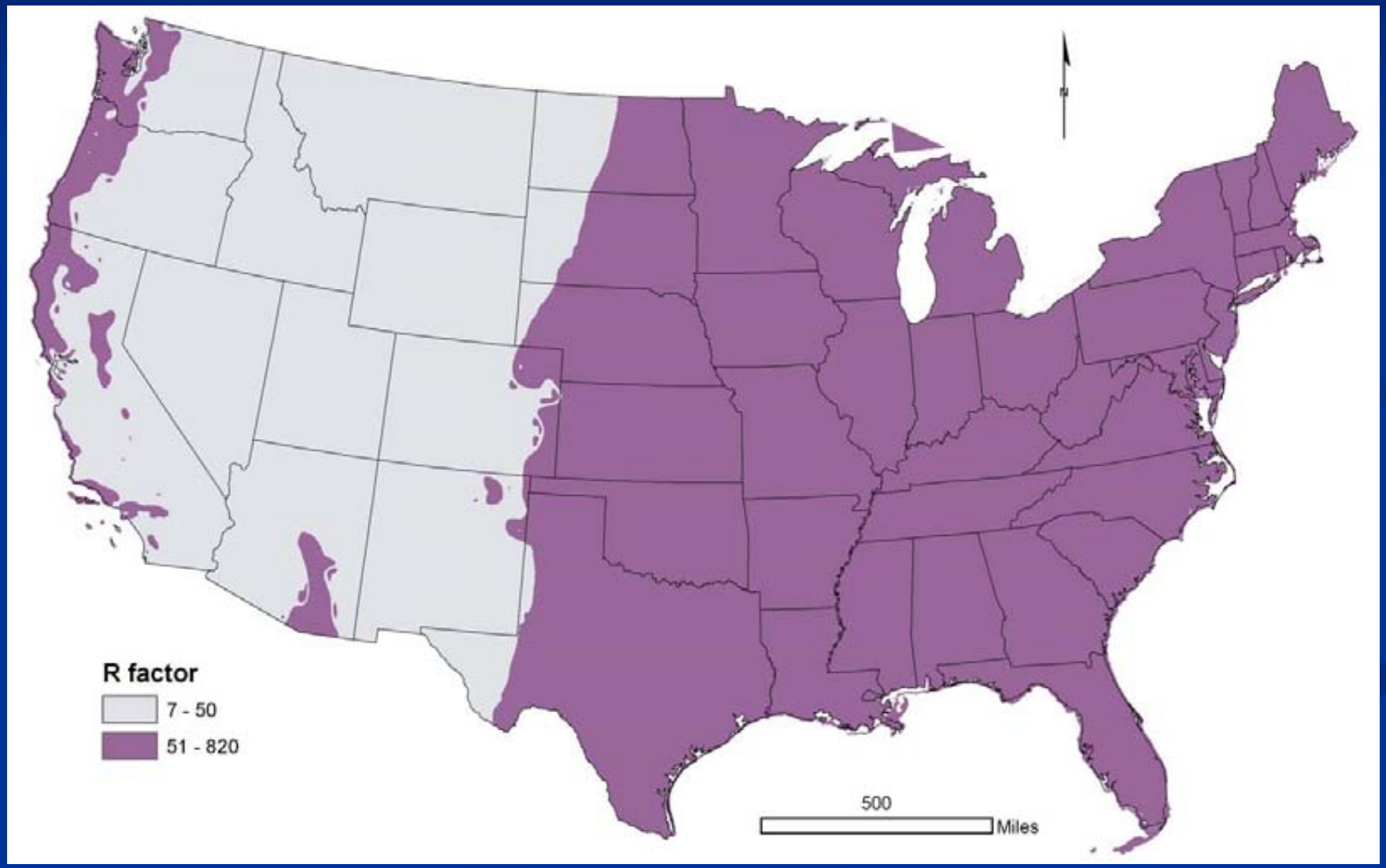
2008 CGP IS A TWO-YEAR PERMIT EXPIRING IN JUNE 2010

- 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

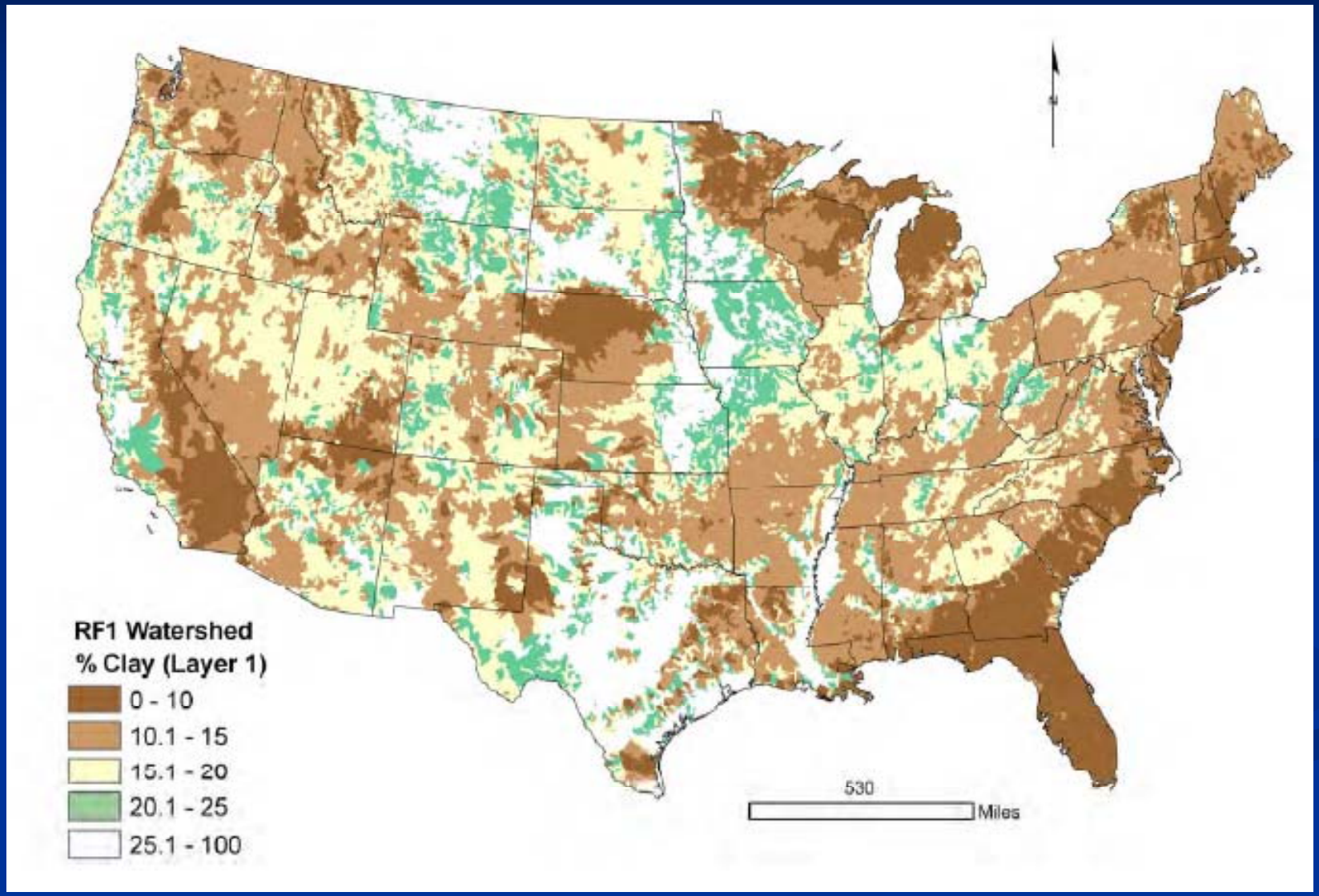
Construction Effluent Guidelines

- 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

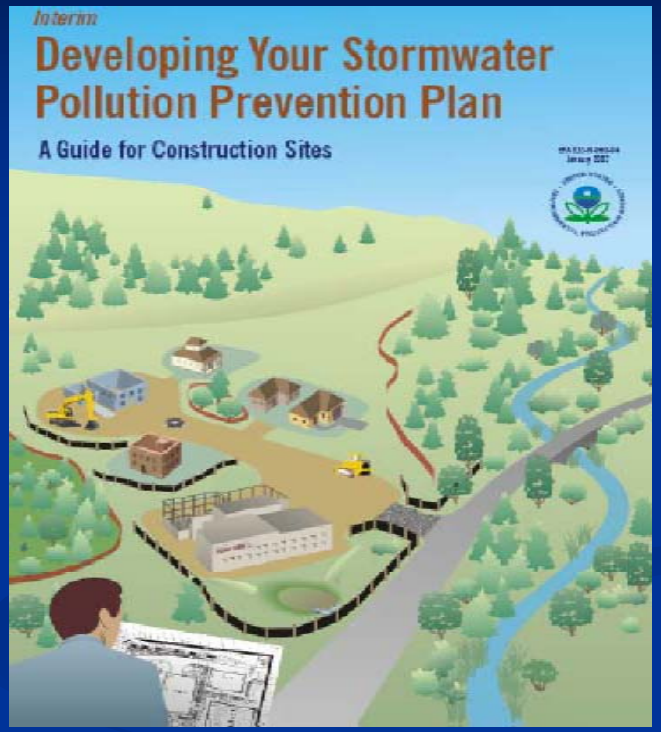
Map of Areas of the U.S. Eligible for R-factor Waiver



Soil Clay Content Ranges for the U.S.



EPA SWPPP RESOURCES

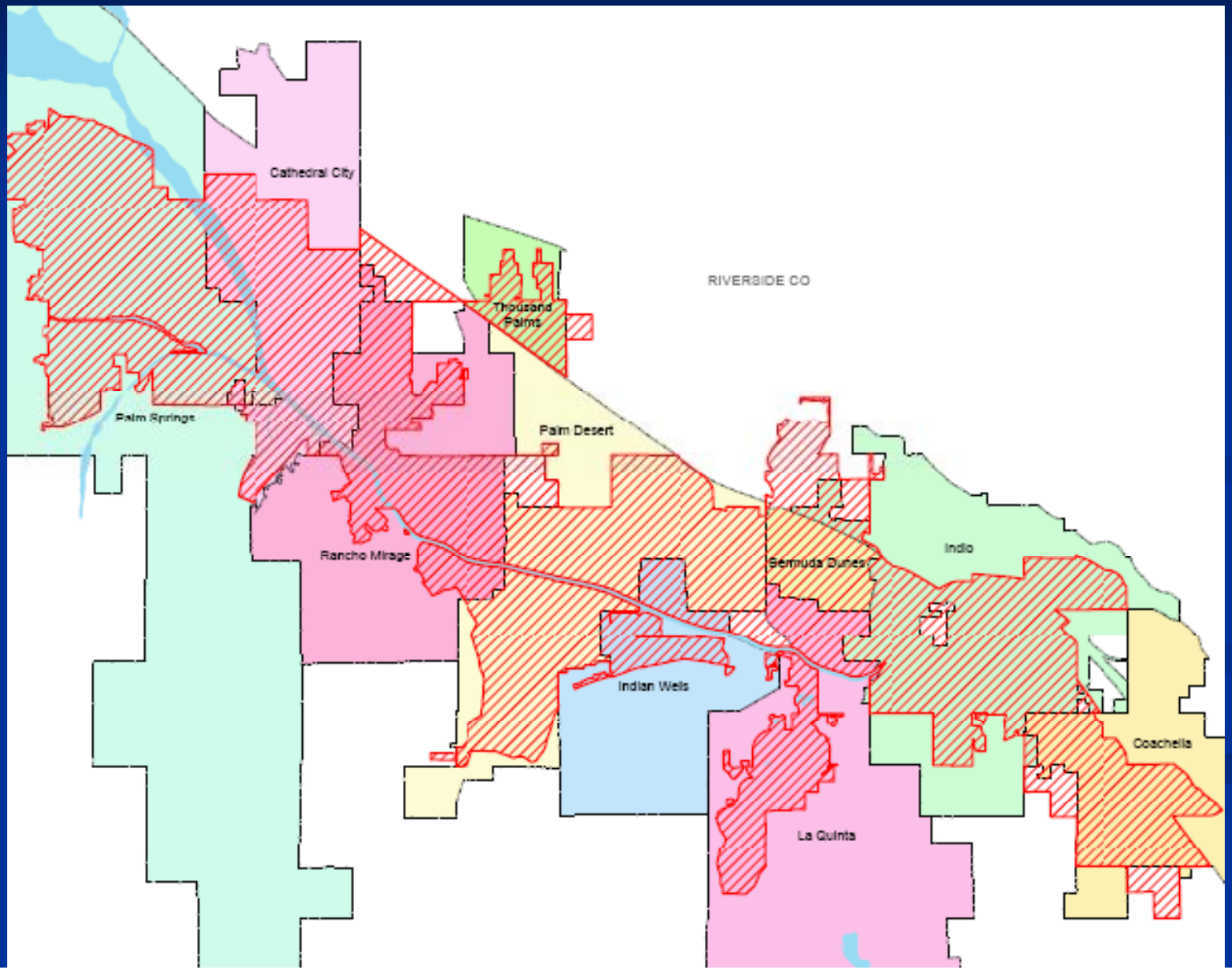


- EPA SWPPP Guide
- SWPPP Template (MS Word)
- Self-Inspection Form
- Example SWPPPs for two hypothetical projects
  - Residential
  - Commercial
- http://cfpub.epa.gov/npdes/home.cfm?program_id=6
- http://www.cicacenter.org/ (compliance assistance website for construction)

MS4 PERMITTING FOR TRIBES IN REGION 9

- 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



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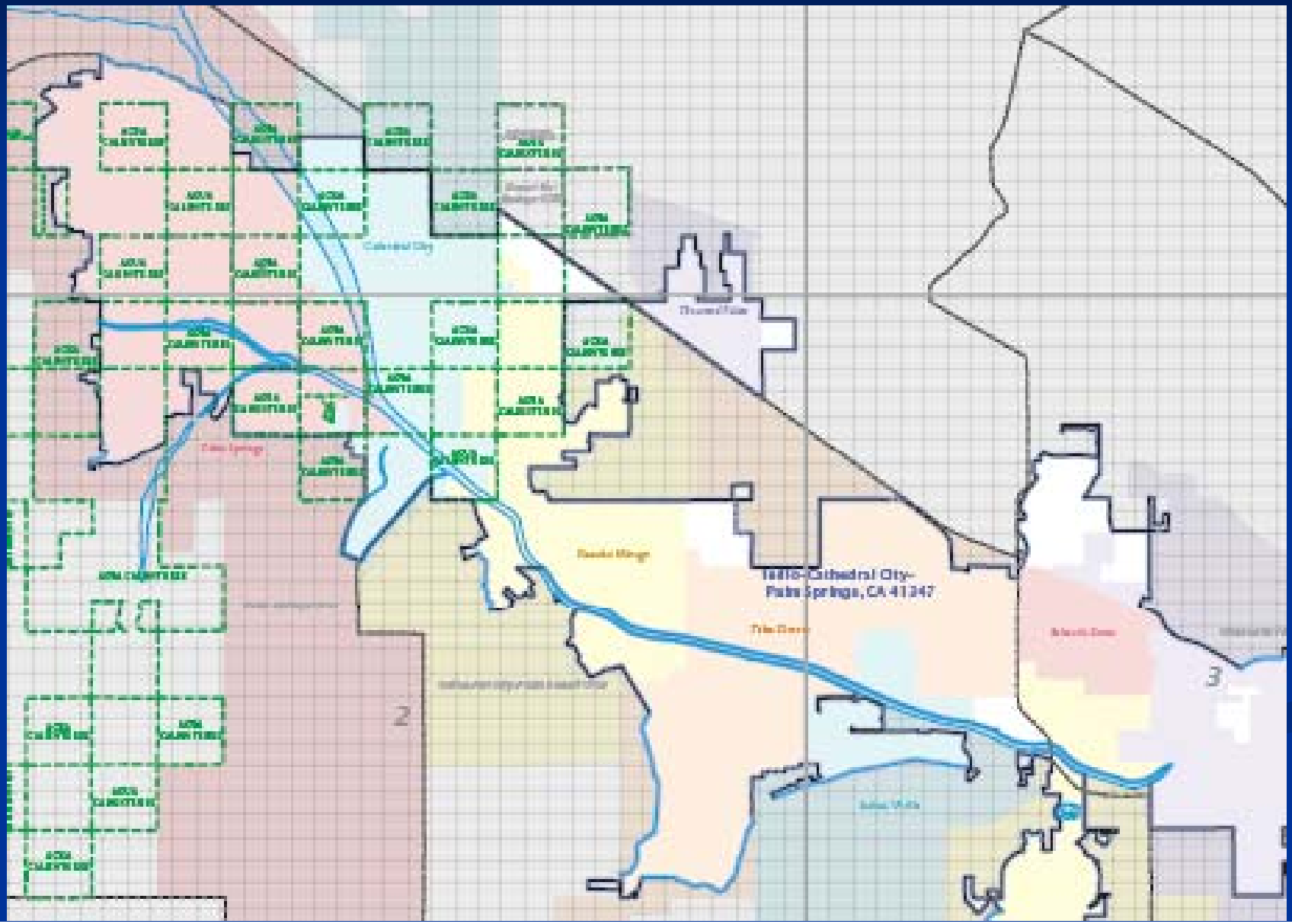

MS4 PERMITTING

- 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 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

MS4 PROGRAM AUDITS

- 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