

# Trends in Stormwater NPDES Discharge Permitting Program

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## Trends in SW NPDES Permitting

### **How We Got to SW Permitting**

- Clean Water Act – 1972
- NRDC v. Costle – 1977
- Clean Water Act Amendment – 1987
- Phase I Regulation – 1990
- Phase II Regulation – 1999

## Trends in SW NPDES Permitting

### The Standard for SW Discharges

- Legislative Standard (federal)  
“... require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” (CWA 1987)
- Regulatory Standard (federal)  
“Controls to reduce the discharge of pollutants to the MEP; and where necessary water quality based controls ...”  
(Phase I)  
“...reduce the discharge of pollutants to the MEP, to protect water quality, and to satisfy appropriate WQ requirements of the CWA.” (Phase II)

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## Trends in SW NPDES Permitting

### The Permit Standard (con't.)

- State Standard (California)  
Prohibit the discharge of pollutants “which have not been reduced to the MEP”; which “cause or contribute to exceedances of receiving water objectives”; or cause “the violation of water quality standards”.

Headline: Regulations Are Strong!

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## Trends in SW NPDES Permitting

### **Status of Permit Requirements**

- Everyone requiring MEP performance
- Some requiring Numeric Effluent Limits (NEL's) and Water Quality Standards (WQS)
- Most requiring Total Maximum Daily Load (TMDL) limits/load reduction.
- Those who desire WQS standards are in aggressive pursuit of NEL's in permits

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## Trends in SW NPDES Permitting

### **The Changing Role of WQS for SW Permits**

- Then, A GOAL: "... to reduce the discharge of pollutants to the MEP..." (CWA 1987)
- Now, A MANDATE: "... prohibit the discharge of pollutants ... which cause the violation of a WQS." (San Diego permit, 2001)

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## Trends in SW NPDES Permitting

### The Changing Role of WQS (con't.)

- Then:

$$\begin{array}{ccccc} \text{B.U.} & + & \text{N.C.} & = & \text{WQS} \\ \text{(Beneficial Uses)} & & \text{(Numeric Criteria)} & & \text{(Water Quality Standards)} \end{array}$$

- Now:

$$\begin{array}{ccccccc} \text{B.U.} & + & \text{N.C.} & + & \text{P.O.P.} & = & \text{WQSA} \\ & & & & \text{(Politics of Pollution)} & & \text{(Water Quality Standards Applied)} \end{array}$$

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## Trends in SW NPDES Permitting

### The Changing Role of WQS, (con't.)

- BMPS: shifting to active treatment
- Measurable Goals: shifting to NEL's (loads and concentrations)
- Monitoring of Receiving Water Trends: shifting to monitoring of end-of-pipe WQS compliance
- TMDL's: becoming surrogate WQS, NEL's (mandated load reductions for 303d. streams)
- Sediment Quality Objectives: becoming TMDL's for mud

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## Trends in SW NPDES Permitting

### Defenses Against WQS Excesses

- Use Attainability Analysis: when beneficial use is excessive
- Site Specific Objectives: when the numeric criteria is excessive
- Blue Ribbon Panel: when the permit requirements are excessive

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## Trends in SW NPDES Permitting

### Defenses Against WQS Excesses\_(con't.)

- Blue Ribbon Panel: California State Water Resources Control Board
  - Question: "Is it technically feasible to establish NEL's . . . for SW permits?"
  - Answer:
    - For MS4 Permits: "...not feasible at this time to set enforceable NEL's...for urban discharges..."
    - For Construction Permits: "...active treatment technologies make numeric limits feasible ...for large construction sites..."
    - For Industrial Permits: "... numeric limits are feasible for some industrial categories..."

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## Trends in SW NPDES Permitting

### **The Evolution of SW NPDES Permits**

- Permit Round 1 Focus: Implement locally designed SWPPP/BMP programs
  - Public education/involvement
  - Monitoring/Reporting
  - Illicit discharge controls
  - Construction/Industrial site controls
  - Post-construction run-off controls
  - Pollution prevention/good housekeeping
  - Exercise of legal authority

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## Trends in SW NPDES Permitting

### **Evolution of SWNPDES Permits** (con't.)

- Permit Round 2 Focus: Response to failure of SWPPP/BMP's to achieve WQS
  - SWPPP reviewed/approved by permit writer
  - BMP's implemented
  - Attainment of WQS is the performance measure
  - Mid-permit term redesign of SWPPP/BMP program is the remedy – the 'Iterative Approach'

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## Trends in SW NPDES Permitting

### Evolution of SW NPDES Permits (con't.)

- Permit Round 3 Focus: Attainment of NEL's
  - SWPPP's written by permit writers
  - Super-regional permits
  - TMDL's, NEL's, Action Limits imposed
  - Dry weather discharges banned
  - Mandatory LID requirements
  - Hydro-modification/impervious area limits
  - Green infrastructure requirements
  - SW criteria deed restrictions
  - End-of-pipe WQS compliance monitoring
  - Minimum action level triggers
  - Anti-degradation
  - Areas of Special Biological Significance

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## Trends in SW NPDES Permitting

### Evolution of SW NPDES Permits (con't.)

- Permit Round 3 Impacts
  - Massive prescriptive permits (100's of pages)
  - Significant permitting delays (14 of 28 California permits expired)
  - Incalculable costs
  - Permit Litigation and appeals (nearing 100% of active California permits)

Headline: Avoid Court at all Costs!

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## Trends in SW NPDES Permitting

### **Evolution of SW NPDES Permit** (con't.)

- Permit Round 3 Enforcement
  - Event based penalties
  - Audit based penalties
  - Mid-permit term change orders
  - Search for effectiveness assessment methodology

Headline: They are Serious about Enforcement!

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## Trends in SW NPDES Permitting

### **SW NPDES Costs and Financing**

- National Water Quality Assessment -  
SW needs at \$9 bil
- Anne Arundel County, Maryland –  
SW needs at \$5 bil
- Local Funding sources
  - Local general funds
  - Developer exactions
  - Service/utility fees

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## Trends in SW NPDES Permitting

### **Costs and Financing** (con't.)

- Financing Problems/Limitations
  - Taxpayers won't support adopted goals
  - Unequal yoking of co-permittees
  - Voter initiatives
  - State legislature/City Council
  - Unaffordable objectives

Headline: Try cheaper alternatives!

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## Trends in SW NPDES Permitting

### **The Growing Role of the Courts**

- Legal challenges to permits
  - Citizen suits (Defenders of Wildlife)
  - Permittee appeals (San Diego)
  - Permit authority's enforcement suits (EPA v. Dallas)

Headline: Conflict is counter-productive!

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## Trends in SW NPDES Permitting

### **Role of Courts** (con't.)

- Courts are defining:
  - The scope of MEP
  - The applicability of WQS
  - State authority to impose WQS
  - Applicability and scope of TMDL's
  - Adequacy of the regulations
  - Legality of general permits
  - Performance timelines
  - Adoption of effluent limit guidelines
  - Taxing/service fee authority of local agencies
  - Federal obligation to participate
  - Legality of benchmarks/action levels
  - Legality of BMP's as compliance

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## Trends in SW NPDES Permitting

### **Overheard at EPA**

- MS4 permit renewals are late
- TMDL's must be included in MS4 permits – but achieved by BMP's – not NEL's
- An effective NEL assessment method is needed for MS4 permit programs
- Should EPA continue it's – 'Interim (BMP = MEP) Policy' – or move to WQS by NELS's

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## Trends in SW NPDES Permitting

### What is Needed in the SW NPDES Program

- National (or state) SW Science Summit
  - Research agenda prioritization
  - NURP II – turning data into information
- National (or state) SW Policy and Strategic Plan
  - Defining roles and priorities for source reduction, BMP's, treatment
  - Defining key standards – 'MEP', 'Success', 'Failure'
- Education of state/federal regulatory leaders
- Effectiveness assessment model
- Risk assessment and prioritization process

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## Trends in SW NPDES Permitting

### What Is Needed (con't.)

- State/federal support of coordinated monitoring, targeted on risk and effectiveness models
- Numeric based performance measures that work for stormwater
- Credible 'cost/benefit' measure
- Program goals people are willing to pay for
- Tell your story well – locally, in state, in Wash., D.C.

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## Trends in SW NPDES Permitting

### **In Conclusion**

Headline: Time is of the Essence!