

# **Ventura County Municipal Separate Storm Sewer System**

- **First MS4 Permit (1994)**
  - **Program development**
- **Second MS4 Permit (2000)**
  - **Program implementation**
- **draft MS4 Permit (2007)**
  - **Program advancement**

# **draft MS4 Permit**

- **1<sup>st</sup> draft released December 27, 2006**
  - **1<sup>st</sup> Workshop - April 5, 2007**
  - **Board direction**
  - **19 Meetings**
- **2<sup>nd</sup> draft released August 28, 2007**
  - **Revisions**

# **Municipal Action Levels (MALs)**

- **MALs were introduced in December 27, 2006 draft Ventura County MS4 Permit**
- **MALs were developed from National Storm Water Quality Dataset monitoring information**
- **MALs were computed using a statistically based population approach.**

# **Municipal Action Levels (MALs)**

- **The State Board Storm Water Panel on Numerical Limit Report recommends a statistically based population approach as one method to set Action Levels for municipal storm water discharges**

# **Municipal Action Levels**

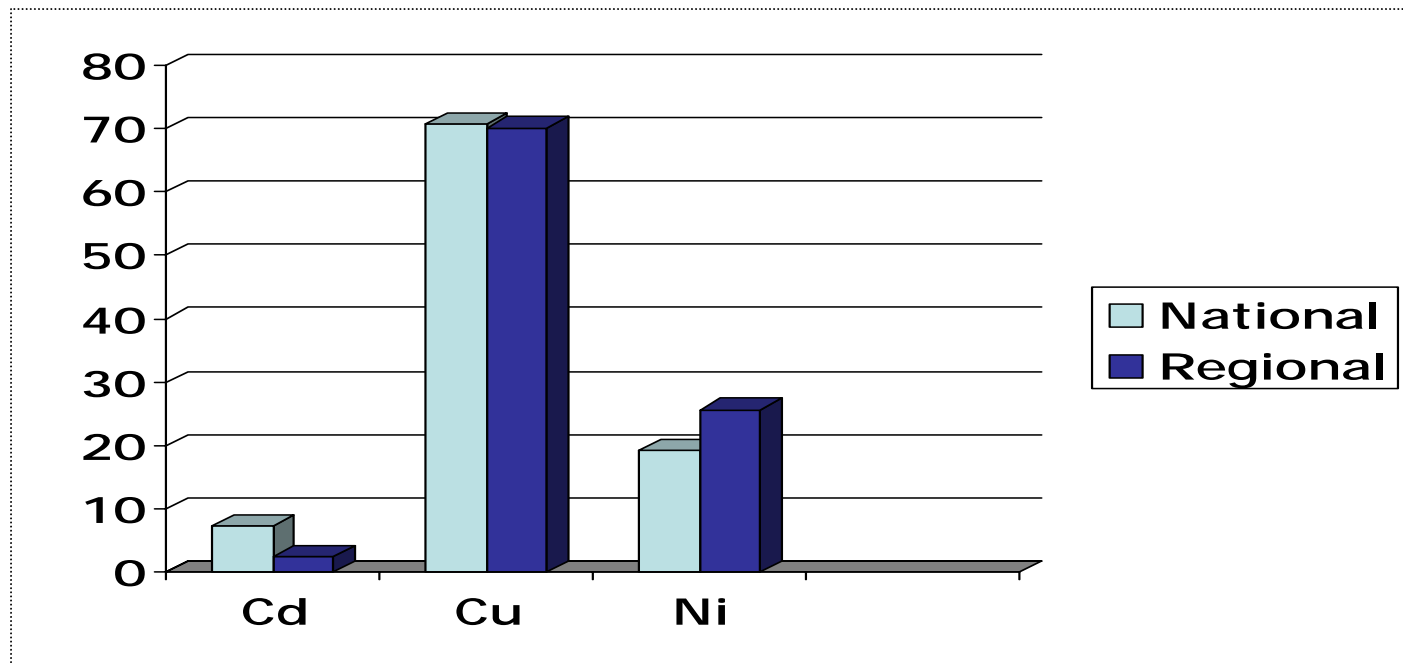
- **MALs represent a quantifiable expression of MEP**
- **MALs clearly define compliance expectations**

# Revisions

- **MALs were recalculated and revised**
  - **MAL pollutants were revised**
  - **MAL values were recalculated**

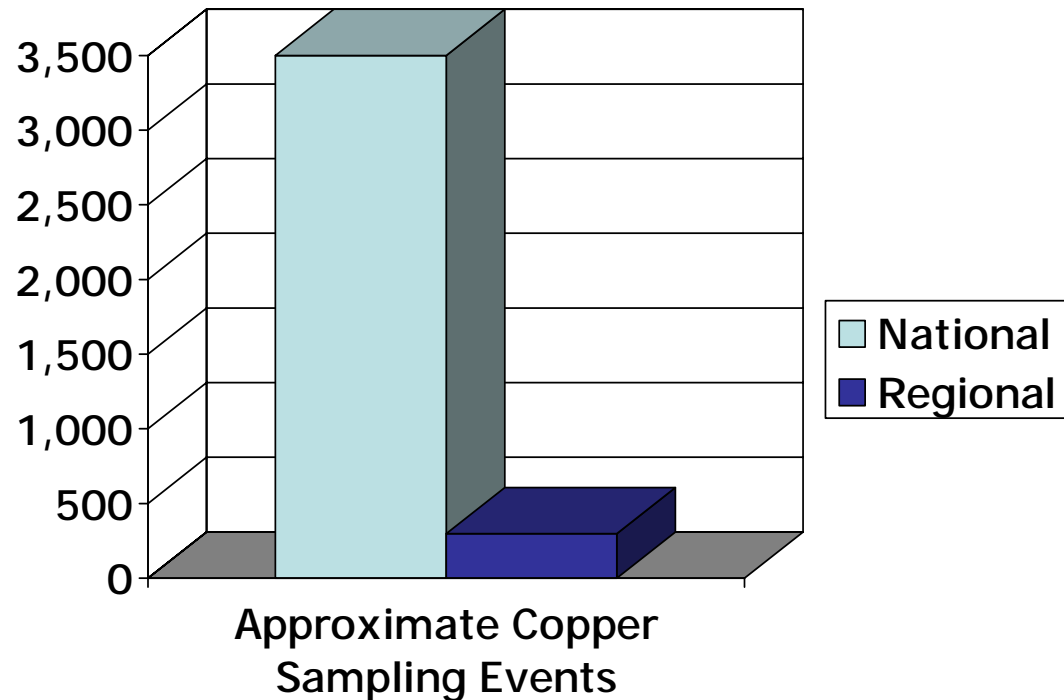
# Revisions

- **MALs based on national Data versus regional Data (US EPA Climate Zone 6)**



# Revisions

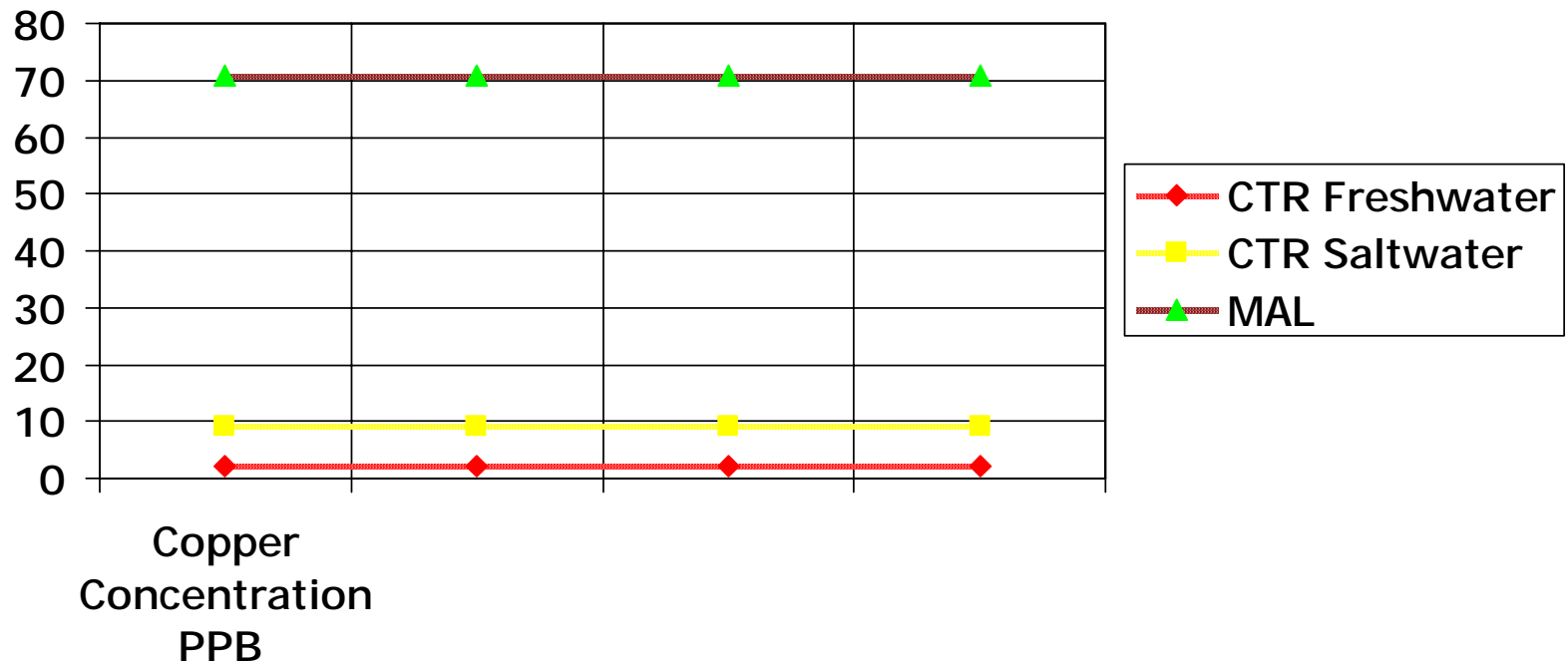
- **Number of sampling events used in computing MALs**





# Revisions

- **Revised MALs values in comparison to CTR values**



# Revisions

Pollutants	Cd, total µg/L	Cu, total µg/L	Pb, total µg/L
Caltrans Sand Filter (Monrovia)		11.62 Mean Outflow EMC	5.389 Mean Outflow EMC
Caltrans Sand Filter (Norwalk)	0.2 Mean Outflow EMC	10.79 Mean Outflow EMC	1.533 Mean Outflow EMC
Caltrans BioFilter (Grass Swale)	0.469 Mean Outflow EMC	22.728 Mean Outflow EMC	81.893 Mean Outflow EMC
<b>MAL Values</b>	<b>2.43</b>	<b>70.1</b>	<b>94.3</b>
CTR (Freshwater)	2.2	9.0	2.5
CTR (Saltwater)	9.3	3.1	8.1

# **Total Maximum Daily Loads**

- **Numerical calculations**
- **Municipal storm water discharges**
  - **Point source**
  - **Assigned WLA certain pollutants**
- **This Order incorporates MS4 WLAs**

# Revisions

- **One MS4 permit**
  - **Storm water (wet weather) discharges**
  - **Non-storm water (dry weather) discharges**
- **WLAs expressed as effluent limitations**

# **Low Impact Development/ Hydromodification**

- **Specific Objectives**
  - **Maintain pre-development hydrology characteristics by**
    - ❖ **Implementing flow/volume control measures to prevent hydromodification / protect stream habitat**
    - ❖ **Implementing an integrated approach to water quality/ resources management - remove pollutants, reduce runoff, and reuse storm water**

# **Low Impact Development/ Hydromodification**

## **Continued**

- ❖ **Implementing better site design**
- ❖ **Reducing effective impervious area to less than five percent of project area**
- ❖ **Mitigating pollutants at water quality volume/ flow**

# Revisions

- **Provide for a simple Interim Hydromodification Control Criterion until the SMC Study is completed**
  - **Incorporated a simple criterion of matching the 2 year 24 hour pre-development storm event peak flow and volume for projects disturbing less than fifty acres of land**  
**[agenda pg. 5-73; permit pg. 54]**

# Revisions Continued

- **On site controls to reduce flow may not be as effective as watershed scale strategies to avoid adverse hydromodification impacts**
  - **Provided for the development of watershed scale Hydromodification Control Plans after the completion of the SMC hydromodification control study [agenda pg. 5-73; permit pg. 54]**



# Revisions Continued

- **Implementing impervious area reduction, and low impact development strategies in redevelopment and built-out areas will be difficult**
  - **Provided for alternate post- construction storm water mitigation programs, if first reviewed and recommended by a state or regional planning agency such as the Local Government Commission [agenda pg. 5-78; permit pg. 59]**

# **Wet Season Grading Restriction Criteria:**

- **Disturbed slopes 20% or greater**
- **Sites discharging into 303(d) listed water bodies (listed for sedimentation/ siltation)**
- **Sites discharging into environmentally sensitive areas (ESAs)**
- **Approximately 8% of Ventura County construction sites may be impacted by the wet season grading restriction**

# Revision

- **Permittees (not Regional Board Executive Officer) are to grant Variance from Grading Restriction for good cause:**
  - **Not cause/ contribute to water quality degradation**
  - **Ensure that TSS discharged is 100 mg/L or less [agenda pg. 5-81; permit pg. 62]**

# Revision Continued

- **Ensure that Turbidity of discharge is 50 NTU or less**
- **Not impair beneficial uses**
- **Includes a monitoring program to ensure effectiveness**







# Monitoring

- **The primary objectives include**
  - **Assessing chemical, physical, and biological impacts of storm water**
  - **Assessing receiving water quality**
  - **Assessing compliance**
  - **Characterization of storm water discharges**

# Monitoring Continued

- **Identifying sources of pollutants**
- **Measuring and improving measures implemented under this Order**
- **Requirements used to refine BMPs and for the protection and enhancement of the beneficial uses of the receiving waters in Ventura County**  
[agenda pg. 5-149; permit pg. F-1]



# Revisions

- **Monitoring**
  - **Dry weather mass emission**
  - **Total Suspended Solids (TSS)**
  - **Tributary**
  - **Bioassessment**
    - ❖ **Ecological Restoration Plans**

# Revisions

- **Reduced in Scope**
  - **Trash and Debris Study**
    - ❖ **Eleven areas to two**  
[agenda pg. 5-161; permit pg. F-13]
  - **Pyrethroid Insecticides**
    - ❖ **Three watersheds to one (Calleguas Creek)**
    - ❖ **Largest urban watershed**  
[agenda pg. 5-162; permit pg. F-14]

# Revisions

- **Total Maximum Daily Load**
  - **Non-storm water (dry weather)**  
[agenda pg. 5-154; permit pg. F-6]
  - **Storm water (wet weather)**  
[agenda pg. 5-154; permit pg. F-6]
  - **TMDL monitoring**  
[agenda pg. 5-154; permit pg. F-6]

# **Other Issues and Public Agency Requirements**

- **Potable Water Discharges**
- **Trash Excluders**
- **Routine Maintenance Permit Exclusion**
- **Street Resurfacing versus gravel road maintenance**
- **Three Updates**
- **Uniform Cost Reporting**
- **Phase I versus Phase II Programs**
- **BMP Substitution**

# **Potable Water - Non-Storm Water Discharge can be Controlled to not Become a Source of Pollutants**

- **Water Line Flushing is Required by the CA Department of Public Health**
- **Dechlorination Necessary Prior to Discharge**
- **Recommend Separate General Permit**

# Other Issues - Trash Excluders

- **Attaches to Catch Basin Interior**
- **5mm mesh screen**
- **Catches Trash and Debris >5mm**
- **In High Storm Conditions, Water Overflows Screen to Discharge Freely**





# Other Issues – Trash Excluders Continued

- **Screen is Attached to Curb Face**
- **Keeps out Trash for a Street Sweeper to Collect**
- **Automatically Retracts to Allow Greater Flows to Enter Drain**



## **Other Issues – Routine Maintenance**

- **Construction Activity is Federally Defined and Regulated under 2 Separate Construction Permit(s)**
- **General Exclusion from NPDES Permitting for “Routine Maintenance”**
- **Commonly Misinterpreted**



# Revisions – Routine Maintenance...

- **To Maintain original Line and Grade, Hydraulic Capacity, or original purpose of the Facility but Only includes:**
  - **Dirt or Gravel Road Shoulder work;**
  - **Dirt or Gravel Road Maintenance work:**  
**or**
  - **Ditch Clean outs**  
**(With A 401 Certification, if necessary)**

# **Uniform Cost Reporting**

- **Federal Regulations require an Annual Accounting of Financial Resources to implement a storm water management program [40 CFR 122.42(c)(3) and (5)]**
- **Fiscal Analysis Required Demonstrating Sufficient Financial Resources [40 CFR 122.26(d)(2)(vi)]**

# **Phase I versus Phase II**

- **Part 2 Application for County of Ventura Included all the Cities as Permit Co-Applicants**
- **Phase II Requirements**
  - **Similar BMPs**
  - **Similar Timeline**
  - **Similar Costs**

# **BMP Substitution**

## **[Part 5.A.2 (page 35 of draft)]**

- **The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants**
- **The fiscal burden of the original BMP or program is substantially greater than the proposed alternative and does not achieve a substantially greater improvement in storm water quality**
- **The proposed alternative BMP or program will be implemented within a similar period of time**

# **USEPA TMDL/ NPDES Permit Policies**

- **“[P]oint sources implement the waste load allocations within TMDLs through enforceable water quality-based discharge limits in NPDES permits authorized under section 402 of the CWA.”**

**USEPA Office of Water Memo,  
*New Policies for establishing and Implementing  
TMDLs, 1998***

# **USEPA TMDL/ NPDES Permit Policies**

- **“Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL. See 40 CFR § 122.44(d)(1)(vii)(B).”**

***USEPA Office of Water Memo, Establishing TMDL Waste Load Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs, 2002***

# USEPA TMDL/ NPDES Permit Policies (cont'd)

- **Effluent limitations to control the discharge of pollutants generally are expressed in numerical form. However, in light of 33 U.S.C. 1342(p)(3)(B)(iii), EPA recommends that for NPDES-regulated municipal ...storm water discharges effluent limits should be expressed as best management practices (BMPs) or other similar requirements, rather than as numeric effluent limits.”**

*USEPA Office of Water Memo, Establishing TMDL Waste Load Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs, 2002*

# **USEPA TMDL/ NPDES Permit Policies (cont'd)**

- **The CWA definition of "effluent limitation" is quite broad ("effluent limitation" is "any restriction . . . on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources..."). See CWA § 502(11).**



# **USEPA TMDL/ NPDES Permit Policies (cont'd)**

- **Accordingly, effluent limits in NPDES permits may be written in a form that derives from, and complies with, applicable water quality standards that use any of these various time measures. See 40 CFR 122.44(d) (1) (vii) (A).**

**USEPA Office of Water Memo, *Establishing TMDL Daily Loads in Light of the Decision by the US Court of Appeals for the D.C. Circuit in Friends of the Earth Inc., v. EPA et al.* No. 0550-15 (April 25, 2006) and its Implications for NPDES Permits, 2006**