



New Water: “Pollution” Meets Water Supply

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“Pollution” Control Becomes Water Supply

Legal Drivers:

- Non-Attainment of Water Quality Standards
- Total Maximum Daily Loads (TMDLs)
- Section 402 Stormwater NPDES Permits
- TMDL and NPDES Permit Lawsuits
- LA MS4 Permit and State Board Precedential Order WQ 2015-0075
- State Stormwater Policy



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“Pollution” Control Becomes Water Supply

Legal Hurdles:

- RWQCB Failure to implement Precedential Order WQ 2015-0075 Alternative Compliance
- Groundwater Protection; Permitting under Porter Cologne
- Maximum Extent Practicable v. Cost Infeasibility
- Risk of change to different regulatory approach
- Water Rights



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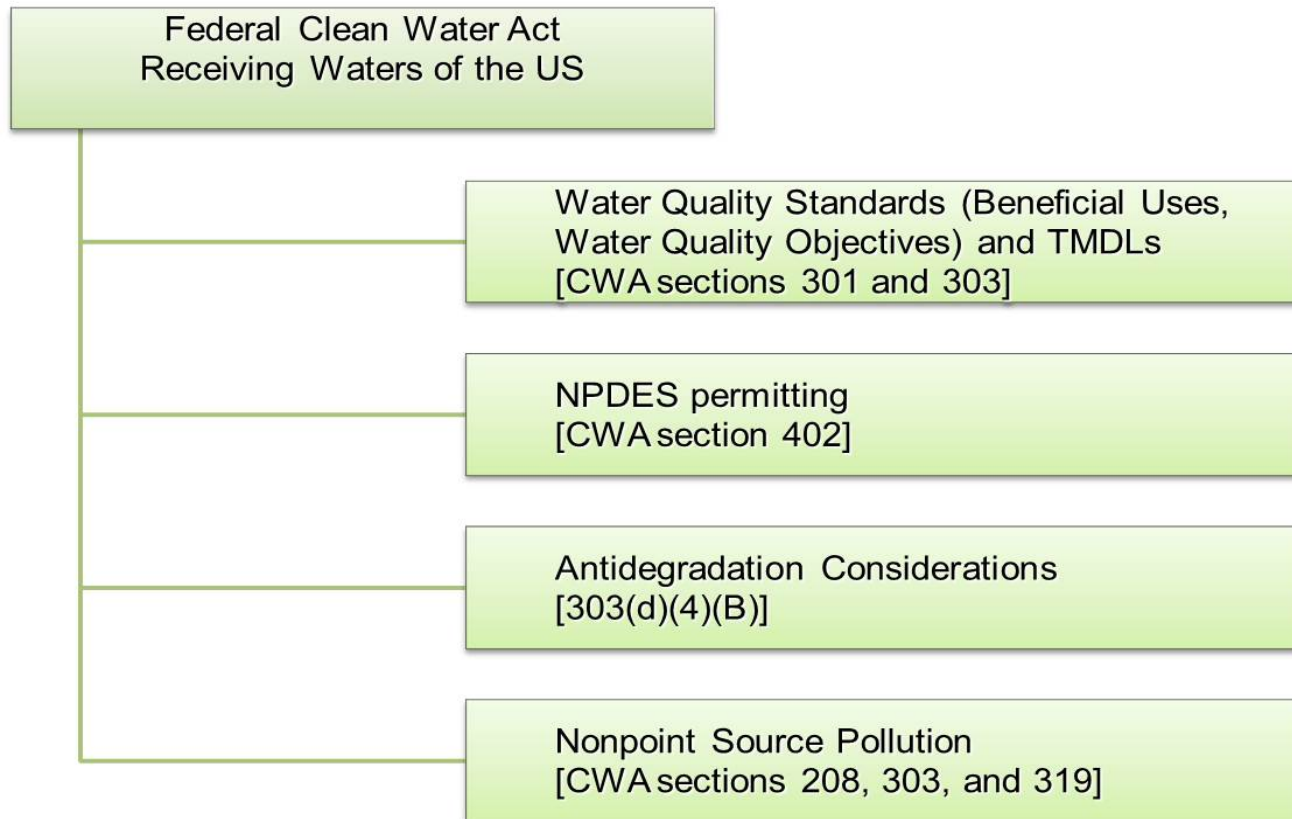
Cal State and Federal Clean Water Laws

- **Porter-Cologne** Water Quality Control Act, Cal Water Code § § 13000 *et. seq.* [1949] **1969**;
- **Federal Clean Water Act**, 33 U.S.C. § § 1250 *et. seq.* [1948, 1956, 1965] **1972**, 1977, 1981 and **1987**
 - **1987 Stormwater amendments**
 - 33 U.S.C. § 1342(p)(A) industrial stormwater
 - 33 U.S.C. § 1342(p)(B) municipal stormwater

Cal State and Federal Clean Water Laws

- California is a “**Delegated State**”
 - 1973 & 1989 MOUs
 - Porter Cologne Water Quality Program approved as substitute for federal Clean Water Act Program—Should govern “discretion”
- State and Regional Water Boards implement combined state Porter Cologne and federal Clean Water Act water quality program per state and federal statutes and regs

Federal Clean Water Act—the Basics



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State & Federal Clean Water Laws

- Establish **Water Quality Standards** for receiving waters in Basin Plan
- Establish **TMDLs** for receiving waters that don't meet Water Quality Standards
- Require **permits** (*federal **NPDES Permits** or state **Waste Discharge Requirements***) with *limitations/requirements* and *monitoring* to implement TMDLs and meet Standards



Water Quality Standards

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Water Quality Standards

- **Designated Beneficial Uses of a waterbody**
 - Under CWA for surface waters of US
 - Under Porter Cologne surface/ground waters of state

- **Water Quality Criteria (Objectives) for pollutants in water (narrative/numeric)**

Setting Water Quality Criteria

- Must support and provide for attainment of designated beneficial uses 33 U.S.C § 1313(c)
- Regulate specific pollutants in receiving water on pollutant by pollutant basis 40 CFR § 131.11
- Can be narrative or numeric

Issues: Setting Water Quality Standards

Not all waters support these uses



Some waters support have these characteristics



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Setting Water Quality Standards

“Given the number of surface waters present in many states (including California), it is not surprising that beneficial uses were assigned to some waterbodies without actual direct evaluation. In some cases, uses may have been designated based on known (existing) uses in downstream waterbodies, or in other parts of the same watershed.” *California Impaired Waters Guidance*, Appendix C, p. C-1.



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Federal Clean Water Act TMDLs

- Clean Water Act Section 303(d)
 - State must list all waters not attaining Water Quality Standards (including Water Quality numeric criteria) set forth in Basin Plans
 - States must issue **Total Maximum Daily Loads (TMDLs)** for all waters not attaining Water quality Standards
 - Total Maximum Daily Loads must identify and specify **Load Allocations (LAs)** for all nonpoint sources, and **Waste Load Allocations (WLAs)** for all point sources

Federal Clean Water Act TMDLs

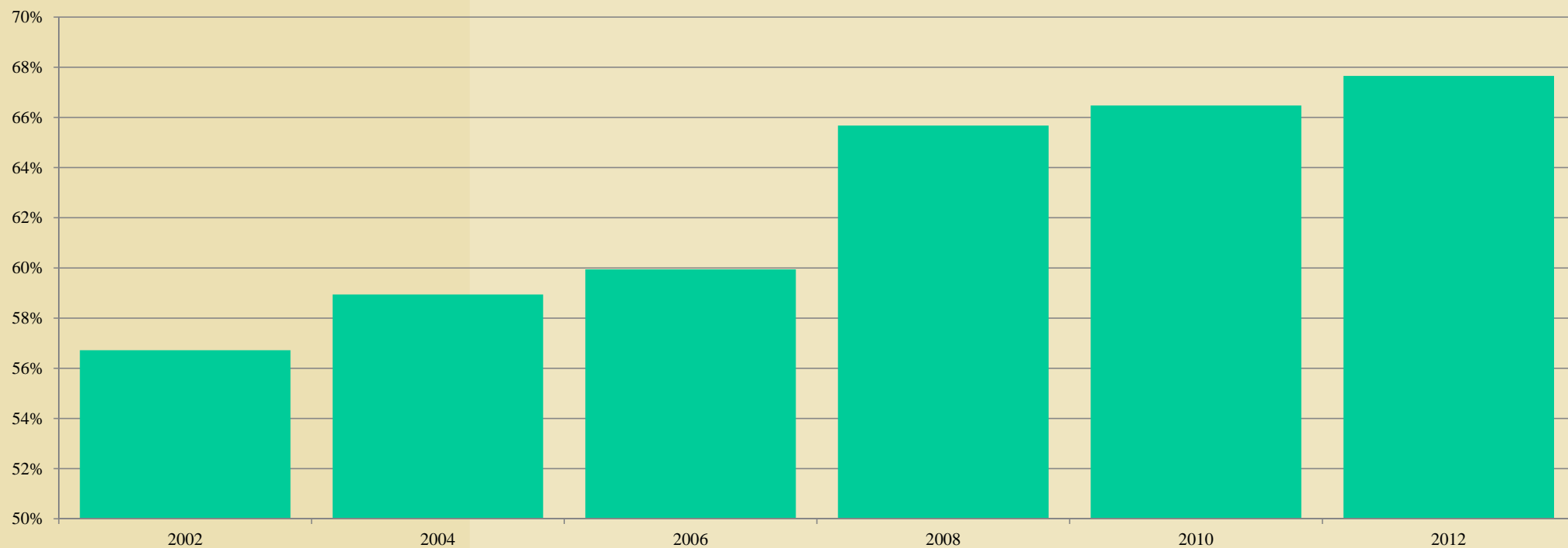
- EPA determines thousands of waterbodies are listed for impairment due to stormwater-source pollutants, most commonly sediment, pathogens, nutrients and metals
- EPA issues Stormwater TMDL guidance
 - *TMDLs with Stormwater Sources* (July 2007)
 - *TMDLs and NPDES Stormwater Permits for Impaired Water Bodies—A Summary of State Practices* (Sept. 2007)
 - *TMDLs to Stormwater Permits Draft Handbook* (November 2008)

California TMDLs

- Current California 303(d) list identifies more than 1,883 water body/pollutant impairments
- State Board currently estimates that the total number of TMDLs needed is over 400.
- Regional Boards are currently developing over 120 TMDLs, many addressing multiple pollutants.

The Trends

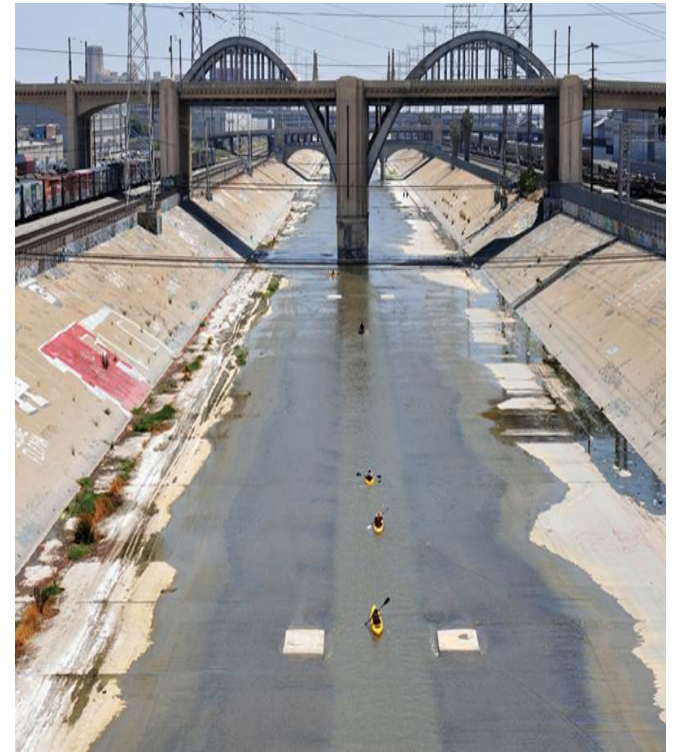
% Impaired of Assessed Waters by Stream Mile, Shore Mile, and Open Water Area



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Federal Clean Water Act TMDLs

- Clean Water Act Sections 303(d) and (e) require incorporation of TMDLs into Basin Plans
- TMDLs are primarily implemented through **NPDES Permit requirements** that are consistent with the assumptions and requirements of WLAs. 40 CFR § 122.44(d)(1)(vii)(B)



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Development of Stormwater Permits



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Federal NPDES Permits / CA WDRs

- Clean Water Act § 301
 - No discharge of a pollutant from a *point source* to Waters of the US without an NPDES Permit
- Porter Cologne Sections § 13260;13263
 - No discharge of waste that could affect the quality of waters of the state without Waste Discharge Requirements (WDRs)

Federal NPDES Permits / CA WDRs

Initially Only Point Sources Require Permits



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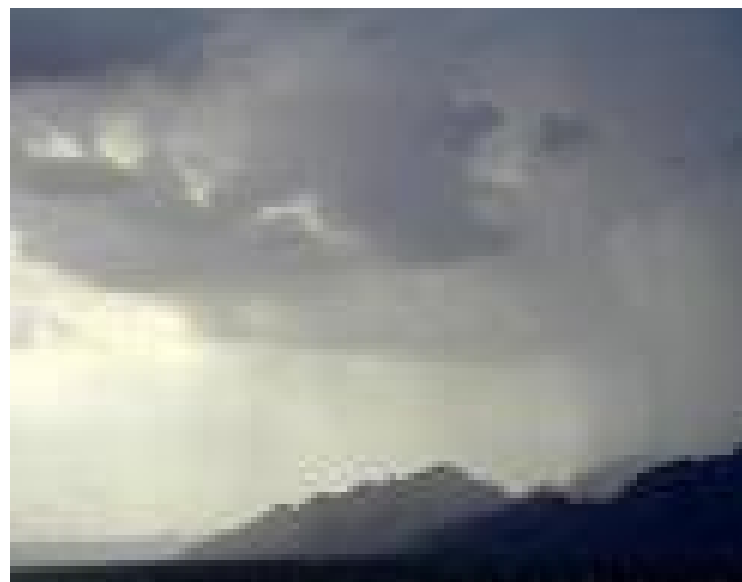
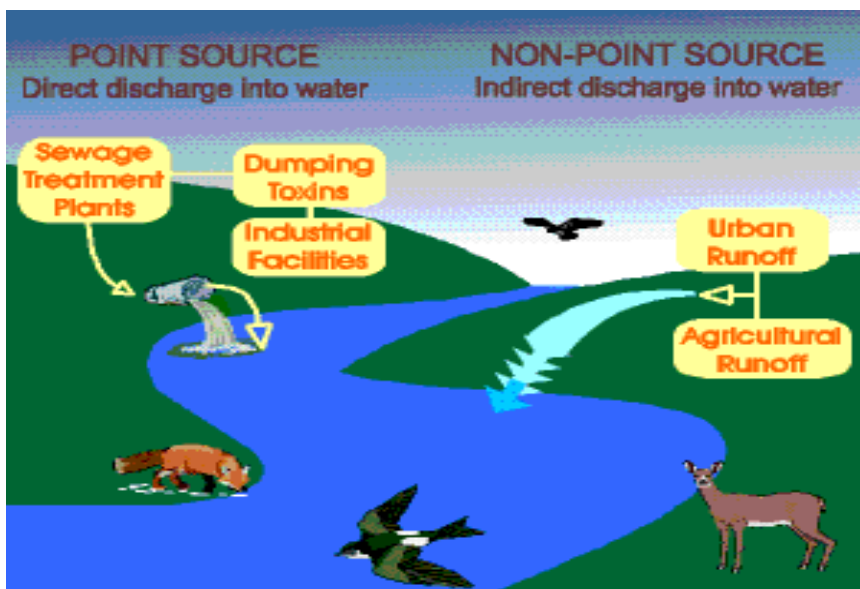
Federal NPDES Permits/CA WDRs

1987 Amendments to Clean Water Act Stormwater Discharge Permits



Stormwater NPDES Permits/CA WDRs

**Stormwater Pollutants = Nonpoint Source Pollutants
In a Pipe**



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Federal Stormwater NPDES Permits

- NPDES Permits for discharges from municipal storm drain systems (**MS4s**) 33 U.S.C. § 1342(p)(3)(B)
 - *shall* require controls to reduce the discharge of pollutants to the **Maximum Extent Practicable (MEP)**, including management practices, control techniques, design and engineering methods—
Technology Based Effluent Limitation (**TBEL**)
 - such ***other provisions as the...State determines appropriate***—including Water Quality Based Effluent Limitations (**WQBELs**)

Federal Stormwater NPDES Permits

- Stormwater management programs and Best Management Practices (**BMPs**) are appropriate for MS4 Permits. 40 CFR Sections 122.26; 122.44(k)(2)
- NPDES permits must include requirements consistent with Waste Load Allocations of adopted TMDLs. 40 CFR Section 122.44(d)(1)(vii)(B)

Federal Stormwater NPDES Permits



- *Defenders of Wildlife V. Browner*, 191 F.3d 1159 (9th Cir. 1999)
 - municipal storm water does not have to strictly comply with Water Quality Standards or TMDLs
 - Numeric Effluent Limits are not required in MS4 Permits
 - EPA and States retain discretion to require compliance with Water Quality Standards/TMDLs and to impose Numeric Effluent Limits

California NPDES Permits/WDRs



- State Water Resources Control Board Order 99-05
 - EPA vetoes MS4 Permits that do not include a requirements to comply with Water Quality Standards
 - California exercises discretion to require a level of compliance with Water Quality Standards despite *Defenders of Wildlife v. Browner*
 - MS4 discharges **shall not cause or contribute to an exceedance of Water Quality Standards**
 - **“Receiving Water Limitations”**

Legal Drivers

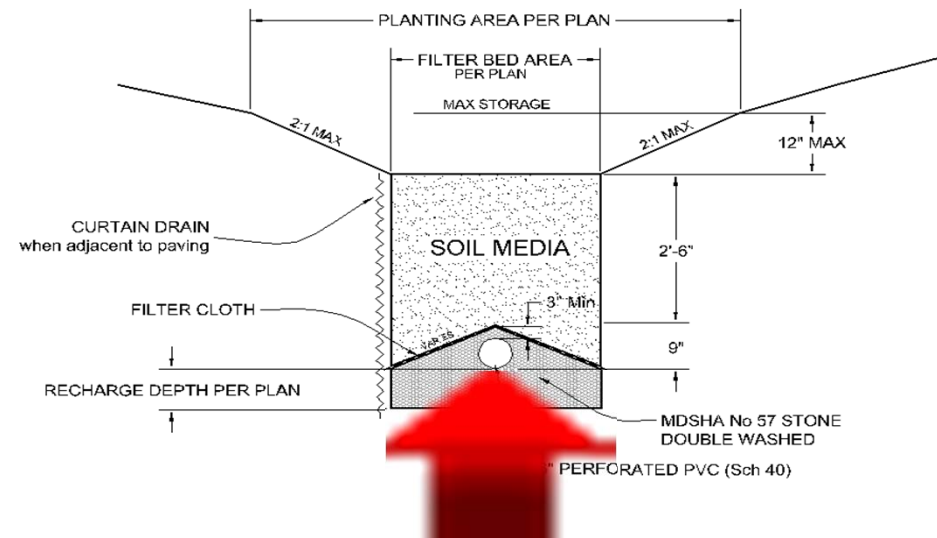


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Stormwater Infiltration Requirements



No Release of 85th
Percentile 24-hour storm
event (Design Volume)



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Stormwater Infiltration Requirements New Development/Redevelopment

Permit Criteria	San Diego County 2007 MS4 Permit	South Orange County 2009 MS4 Permit	South Riverside County 2010 MS4 Permit	San Diego Regional MS4 2012 DRAFT Permit
LID Sizing Criteria	<ol style="list-style-type: none"> 1. Size all treatment systems for 85th percentile event. 2. Treat excess surface discharge. 	<ol style="list-style-type: none"> 1. Fully retain onsite water quality volume (85th percentile event) without any runoff. 2. If #1 infeasible, treat excess surface discharge with biofiltration; increase sizing for biotreatment BMPs by 0.75 times the design storm volume remaining. 3. If #2 infeasible to biofilter or biotreat, use conventional BMPs and mitigate volume reduction offsite. 	<ol style="list-style-type: none"> 1. Size and design BMPs to ensure onsite retention, without runoff, the 24-hour 85th percentile storm event. 2. If #1 infeasible, treat excess surface discharge with biofiltration; increase sizing for biotreatment BMPs by 0.75 times the design storm volume remaining. 3. Treat excess surface discharge not retained or biofiltered using treatment controls. 	<ol style="list-style-type: none"> 1. Size and design BMPs to retain the volume equivalent to runoff produced by the 85th percentile storm event. 2. If on-site retention is technically infeasible flow-thru LID BMPs must be implemented to treat remaining SWQDv not retained on site. 3. Mitigate portion of SWQDv not retained on-site. At offsite location or via credit or ee program

Stormwater Infiltration Requirements New Development/Redevelopment

Permit Criteria	San Diego County 2007 MS4 Permit	South Orange County 2009 MS4 Permit	South Riverside County 2010 MS4 Permit	San Diego Regional MS4 2012 DRAFT Permit
LID Technical Infeasibility and Mitigation Process	<ol style="list-style-type: none"> 1. No requirement. 2. Model SUSMP to include criteria for LID BMP applicability and feasibility. 	<ol style="list-style-type: none"> 1. Offsite “waiver” (mitigation) programs to be developed. 2. In-lieu fees. 3. Water quality credit system. 	<ol style="list-style-type: none"> 1. LID waiver program. 2. Mitigate pollutant load estimated from each project participating in program. 3. Water quality credit option. 4. In-lieu fee option 	<ol style="list-style-type: none"> 1. Demonstrate retention LID BMPs implemented to maximum extent technically feasible given project site conditions. 2. For SWQDV not retained on-site, require either i) implement an offsite mitigation project; or ii) provide sufficient funding for a public or private offsite mitigation project via a mitigation fund.

MS4 Permit Numeric Effluent Limits

- Numeric TBELs added to General Stormwater NPDES Permit for Construction Activities (Order No. 2009-0009-DWQ)
- Successfully challenged in court: *California Building Industry Association et al. v. State Water Resources Control Board* (December 27, 2011)
- General Construction Permit amended (Order No. 2012-0006-DWQ) to eliminate NELs, but still includes Action Levels and Receiving Water Limitations

Prohibition of Non-Stormwater Discharges

Discharges of Low Threat Hydrostatic Test Water
to Surface Waters

Order No. R4-2009-0068
CAG674001

A. Effluent Limitations

1. Discharge of an effluent from the outfall location(s) listed in the enrollment authorization factsheet in excess of the following limitations is prohibited.

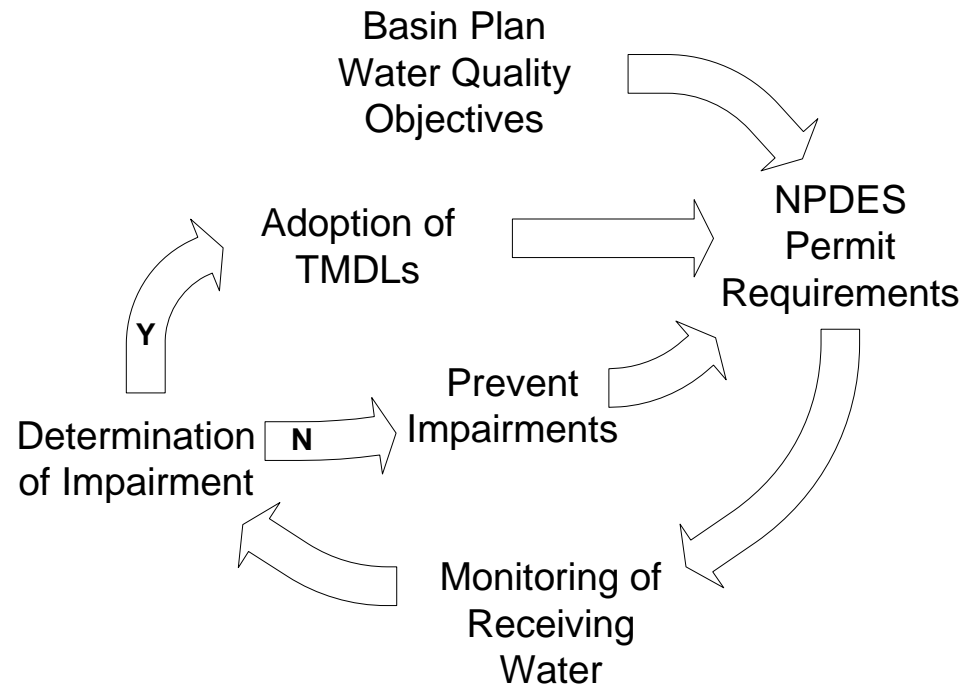
Constituents	Units	Discharge Limitations	
		Daily Maximum	Monthly Average
Total Suspended Solids	mg/L	150	50
Turbidity	NTU	150	50
BOD5 20 °C	mg/L	30	20
pH	pH units	6.5 to 8.5	---
Oil and Grease	mg/L	15	10
Settleable Solids	ml/L	0.3	0.1
Total Residual Chlorine	mg/L	0.1	---

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Increasing TMDLs, WQBELs, More Stringent Receiving Water Limitations

- More than **80** TMDLs incorporated into Caltrans MS4 Permit. Order 2011-0011-DWQ
- LA Regional Board “was uniquely positioned” to incorporate into MS4 Permit. Order R4-2012-0175 as amended by WQ 2015-0075
 - Numeric WQBELs for TMDLs,
 - WQBELs “expressed as Receiving Water Limitations”
 - **33** TMDLs

The Regulatory Cycle



9th Circuit Court of Appeals



Natural Resources Defense Council v. County of Los Angeles (2013) 725 F.3d 1194

- If the MS4 Permit requires compliance with a receiving water limitation, it is enforceable via citizen suit even if it is not a federal Clean Water Act requirement
- Per the wording MS4 Permits, implementation of BMPs to the MEP and the iterative process of improving BMPs is not compliance or a safe harbor

9th Circuit Court of Appeals



- The presence of pollutants in receiving waters above Water Quality Standards establishes the basis for an enforcement action/3rd party citizen suite against municipal permittees based on MS4 Permit language
- Municipal permittees are jointly liable for exceedences detected in receiving water monitoring based on MS4 Permit language—in effect shifts the burden of proof to permittees to show they do not cause or contribute

The Perfect Storm for MS4 Permittee Liability



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Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **The LA MS4 Permit** (Order R4-2012-0175; amended R4-2015-0075):
 - Incorporates Receiving Water Limitations for all pollutants regulated by the Basin Plan
 - Contains numeric WQBELs for some TMDL pollutants; Receiving Water Limitations for other TMDL pollutants
 - Requires strict compliance in receiving waters and end of pipe
 - Imposes Joint Liability and shifts burden to establish compliance
 - Contains a “**Alternative Compliance Pathway**”

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Requirements:**
 - Prepare and attain Regional Board approval of Watershed Management Plan (WMP) or Enhanced Watershed Management Plans (EWMP)
 - Must contain customized strategies, control measures and BMPs to be implemented on a defined schedule and predicted to attain measurable performance standards
 - Reasonable assurance analysis must show discharges will attain WQBELs, all Receiving Water Limitations

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Requirements:**
 - WMPs must demonstrate they attain MEP—retention for new development/significant redevelopment
 - EWMPs must demonstrate no delay in MEP plus:
 - Multi-benefit projects
 - Retain all non-stormwater runoff plus all runoff from the 85th percentile 24-hour storm event for the drainage areas tributary to the EWMP projects
 - While attaining flood control or water supply benefits

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Requirements:**
 - Must provide for robust receiving water and outfall monitoring
 - Must update every 2 years, including comparisons of anticipated pollutant reductions to those actually attained end of pipe and in receiving waters and update to Reasonable Assurance Analysis
 - Must be developed and approved by the Regional Board in an “open and transparent process” with public participation

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Results:**
 - Deemed in compliance with Receiving Water Limitations for non-TMDL pollutants (provided iterative process is followed and WMP/EWMP updated for any pollutants determined to be exceedances)
 - Deemed in compliance with Interim Receiving Water Limitations and WQBELs for TMDL pollutants, which may be extended

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Results:**
 - Attain compliance with **final** Receiving Water Limitations and WQBELs for TMDL pollutants *only if monitoring shows attainment*, but
 - Considered could be considered compliance if Time Schedule Order or TMDL amendment allow for extension to attain standards and WMP/EVMP is adaptively managed to achieve ultimate compliance

Precedential State Board Order

Re: Los Angeles County MS4 Permit

- **Alternative Compliance Pathway Results:**
 - Compliance while preparing plan if meet conditions—LID Ordinance and Green Streets Ordinance
 - Some limited indication that SWRCB may in the future be willing to revisit Water Quality Standards/TMDLs that are infeasible to attain with implementation of WMP/EVMP
 - Joint responsibility for exceedances and shifting of burden to prove compliance continues
 - **30** WMPs/EWMPs within the LA MS4 Permit Boundaries

Precedential State Board Order

All Regional Boards

- MS4 Permits must continue to require compliance with Water Quality Standards, Receiving Water Limitations, and may adopt numeric WQBELs
- May provide for Alternative Compliance over time
- Alternative Compliance Pathway should be watershed based, adopt LID retention standards, and capture, infiltrate and reuse stormwater
- With Alternative Compliance Permittees are Liable

State Board Stormwater Strategic Initiative

- **Goal:** Shift regulation to require, provide incentives to implement approaches to improve water quality and supply



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State Board Stormwater Strategic Initiative

- **Immediate Action Project 1:** create goal for increase in stormwater capture/use; remove barriers to capture/use; increase capture/use; change permit provisions
- **Immediate Action Project 4:** SB 985; adopt stormwater resource plan guidelines; collaborate with Groundwater Sustainability Management Plans
- **Immediate Action Project 5:** Implement Alternative Compliance for MS4s; guidance and permit template
- **Immediate Action Project 8:** \$\$\$\$\$\$\$\$\$\$\$\$\$

Legal Hurdles



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RWQCB Failure to Implement Alternative Compliance

- San Diego Regional Water Quality Control Board MS4 Permit
 - Currently requires infiltration of SQDV onsite or mitigation offsite and preparation of Watershed Improvement Plans, in part to provide offsite mitigation, credit, or fee programs for SQDV
 - Alternative Compliance proposed but not complete
 - Nothing stays or precludes enforcement
 - No assurance of coverage for time anticipated to attain compliance
 - No compliance coverage while preparing plans

Groundwater Protection and Permitting

- Groundwater management agency comments on MS4 Permits and WMPs/EWMPs indicate:
 - Concerns about effects of infiltration project siting and potential absence of detailed knowledge of impacts of land use, soils conditions, depths to groundwater, underlying groundwater quality on infiltration
 - Requests for effluent limitations on infiltration to protect groundwater
 - Need for study of planned infiltration systems

Groundwater Protection and Permitting

- Groundwater management agency comments:
 - Demand consultation regarding development of infiltration facilities
 - Prefer regional and subregional facilities to allow O&M; concern about prioritization of small, onsite infiltration systems without sufficient study of infiltration conditions.



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Groundwater Protection and Permitting

- Permitting under Porter Cologne is required for Injection Wells—WDRs
- Comments indicate large scale infiltration/recharge should require WDRs
- Permitting increases costs of projects and may require additional treatment prior to infiltration



MEP v. Cost of Regional Infiltration Projects

Selected Program	Permittees within watershed	Lead permittee	Watershed size	Receiving water	Cost to develop WMP/EWMP	Implementation cost
WMP	Bellflower, Cerritos, Downey, Lakewood, Long Beach, Paramount, Signal Hill, LACFCD	Long Beach	17,720 acres	Los Cerritos Channel and Alamitos Bay	\$600,000	\$ 332 million
WMP	Downey, LACFCD Lakewood, Lynwood, Paramount, Pico Rivera, Signal Hill, South Gate, Long Beach	Signal Hill	27,981 acres	Los Angeles River	\$600,000	\$157-293 million
EWMP (June 2015 draft)	LA County, LACFCD, Santa Clarita	Santa Clarita	121,423 acres	Santa Clara River	\$850,000	\$623.7 million
EWMP (draft not available)	Arcadia, Azusa, Bradbury, Duarte, Monrovia, County, LACFCD, Sierra Madre	Sierra Madre	26,240 acres	Los Angeles River	\$790,000	\$1.4 billion
EWMP (June 2015 draft)	Baldwin Park, Covina, Glendora, Industry, La Puente, LACFCD, LA County	LA County	79,125 acres	San Gabriel River	\$1,500,000	\$2.14 billion

Risk of Change in Regulatory Approach

- Acknowledged by SWRCB in WQ 2015-0075, pp. 45-46
- Environmental Groups petition: Infiltration of 85th percentile 24-hour storm event won't meet water quality standards
- SWRCB concurs: “...*any additional control measures required to reach compliance that may be required...must not require changes to installed storm water retention projects...New or additional measures... **should** be additive*”

Water Rights

- Is runoff New Water, or does anyone have rights?
 - Interference with runoff flowing into surface waters or subterranean streams under § 1200?
 - All water flowing into a natural channel is subject to appropriation per Water Code § 1201—has it been appropriated?
 - Infiltration of rainwater that has not entered channel and has not been put to beneficial use (Water Code § 10573(c))
 - Use of rainwater from rooftops does not require a water rights permit per Water Code 10574

Water Rights

- Who owns groundwater storage?
- Will infiltration/injection increase safe yield?
- Can infiltrated/injected water be accessed/pumped?
- What steps must be followed to store and retrieve infiltrated or injected water?
 - Adjudicated basins
 - Managed basins

Questions?

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