

**Review of Draft Order No.  
R8-2014-0002:  
Orange County Municipal  
Separate Storm Sewer  
System Permit**

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# Topics:

- Overview of the development of Draft Order No. R8-2014-0002
- Overview of proposed changes relative to the current Order
- Areas of greatest attention to date

# Development Overview

- Where are we?
  - Report of Waste Discharge received October 4, 2013.
  - Administrative Draft released to Co-permittees on January 21, 2014.
  - Status update to the Regional Board on April 25, 2014.
  - Draft released to public on May 2, 2014; accepting comments May 5, 2014.
  - Comment period to end on June 20, 2014.
  - First Public Workshop was held on May 19, 2014.
  - Amendments are already being made in response to comments so far → Tentative Order
  - Target adoption: September 2014

# Development Overview (cont'd)

- Considerations:
  - 14 targeted program audits affecting 12 cities starting in 2010: evaluated compliance and processes.
  - Formal inspections and informal field observations.
  - Over 100 Program Effectiveness Assessments.
  - US EPA white paper reviews (e.g. Evaluating the Effectiveness of Municipal Stormwater Programs (2008) EPA 833-F-07-010)
  - 2013 Report of Waste Discharge

# Development Overview (cont'd)

## General Conclusions:

- Current approach of incorporating Co-permittees' programs by reference may be stifling innovation.
- Incorporation by reference provides disincentive to fully document storm water programs.
- There is a need for a comprehensive set of performance metrics.

## Development Overview (cont'd)

- Past permit strategies focus on 'what to do'.
- Limited influence on fiscal strategy.
  - Fiscal information required
  - Need for uniform accounting methods to make information useful.
- Current permit introduced “measurable targeted outcomes” or performance metrics.
- Proposed permit advances the use of performance metrics.
  - Enforces the “iterative process”
  - Minimize ‘incorporation by reference’



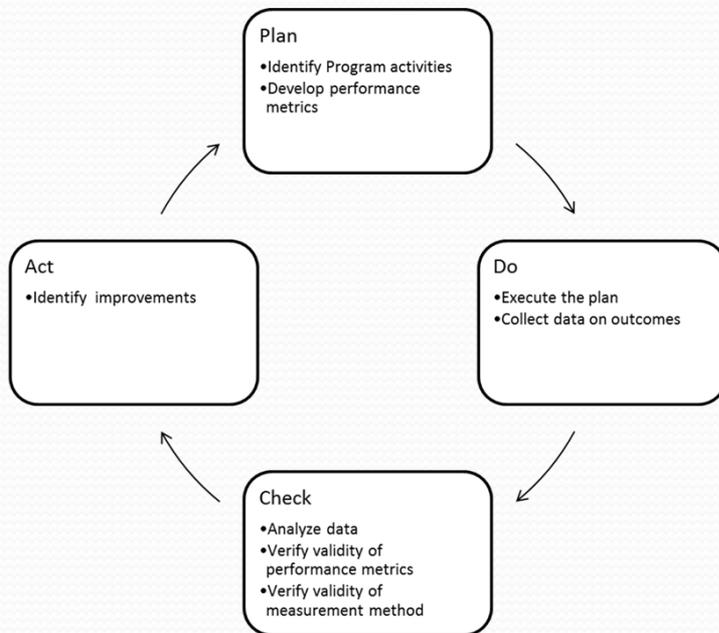
# Overview of Proposed Changes

## #1: Reduced reliance on 'incorporation-by-reference' approach

- Key elements of existing program are synthesized into the permit. Examples:
  - Sanitary Sewer Overflow program
  - Model Water Quality Management Plan/Technical Guidance Document for new development/significant redevelopment
- Focus on enforcing the permit; less focus on the content of Co-permittees' program documents.
- Program documents are still required.
  - Returns more program control to Co-permittees
  - Promotes innovation

# Overview of Proposed Changes (cont'd)

## #2: Enforcement of the “iterative process”



- Section I requirements (reinforced elsewhere):
  - Accurately document and effectively implement BMPs.
  - Develop and apply performance measures.
  - Execute program improvements.
  - Evaluate validity of performance measures/methods of measurement.

Figure adapted from W. Edwards Deming's PDCA Cycle

# Areas of greatest attention:

- 1) Receiving Waters  
Limitations Language  
Section IV
- 2) TMDLs  
Section XVIII and  
Appendices A-H
- 3) municipal inspection  
burden  
Sections VIII, IX, and X
- 4) New  
Development/Significant  
Redevelopment  
Section XII

# Receiving Waters Limitations and TMDLs

- Provides two paths to compliance:
  - Directly meet water quality standards or waste load allocations; OR
  - Develop and execute a plan to comply
- Determinations of compliance: based on a new Water Quality Monitoring Plan
  - Defines cycles of monitoring, analysis, and reporting
  - Water quality standards and WLAs function as performance metrics
  - Deadline for the Plan: 6-mos. from effective date of Order
  - Monitoring program as practiced must be continued in interim

# Receiving Waters Limitations and TMDLs

- Some commenters have essentially objected to perceived “safe harbor” provided by the second path in the Receiving Waters Limitations language.
  - “safe harbor”: developing a plan to comply protects against enforcement for not complying with water quality standards.
  - Issue expected to be resolved with State Board and USEPA
- Some commenters are concerned that TMDL requirements may conflict with ongoing work.
  - No specific conflicts have been identified yet.
  - Work done solely according to Basin Plan amendments is not enforceable; incorporation into permit is.

# Municipal inspection burden

- Things that Co-permittees must inspect:
  - Industrial sites
  - Certain commercial sites
  - Construction sites
  - Structural treatment controls as part of approved WQMPs
  - Municipally-owned structural treatment controls
  - Flood management and open storm water conveyances
  - Fixed municipal facilities (e.g. corporate yards)

# Municipal inspection burden

- Co-permittees' inspection burden factors:
  - Number of facilities and their priority distribution
  - Frequency of inspection: “high”, “medium”, and “low”
  - Level of effort
- Level of effort pertains to factors under the Co-permittees' control
  - Not site size or complexity of the site
  - Documentation
  - Inspection from vehicle vs. personal visit
    - Depends on site-specific features, e.g. accessibility/visibility
  - Difficult to quantify or predict

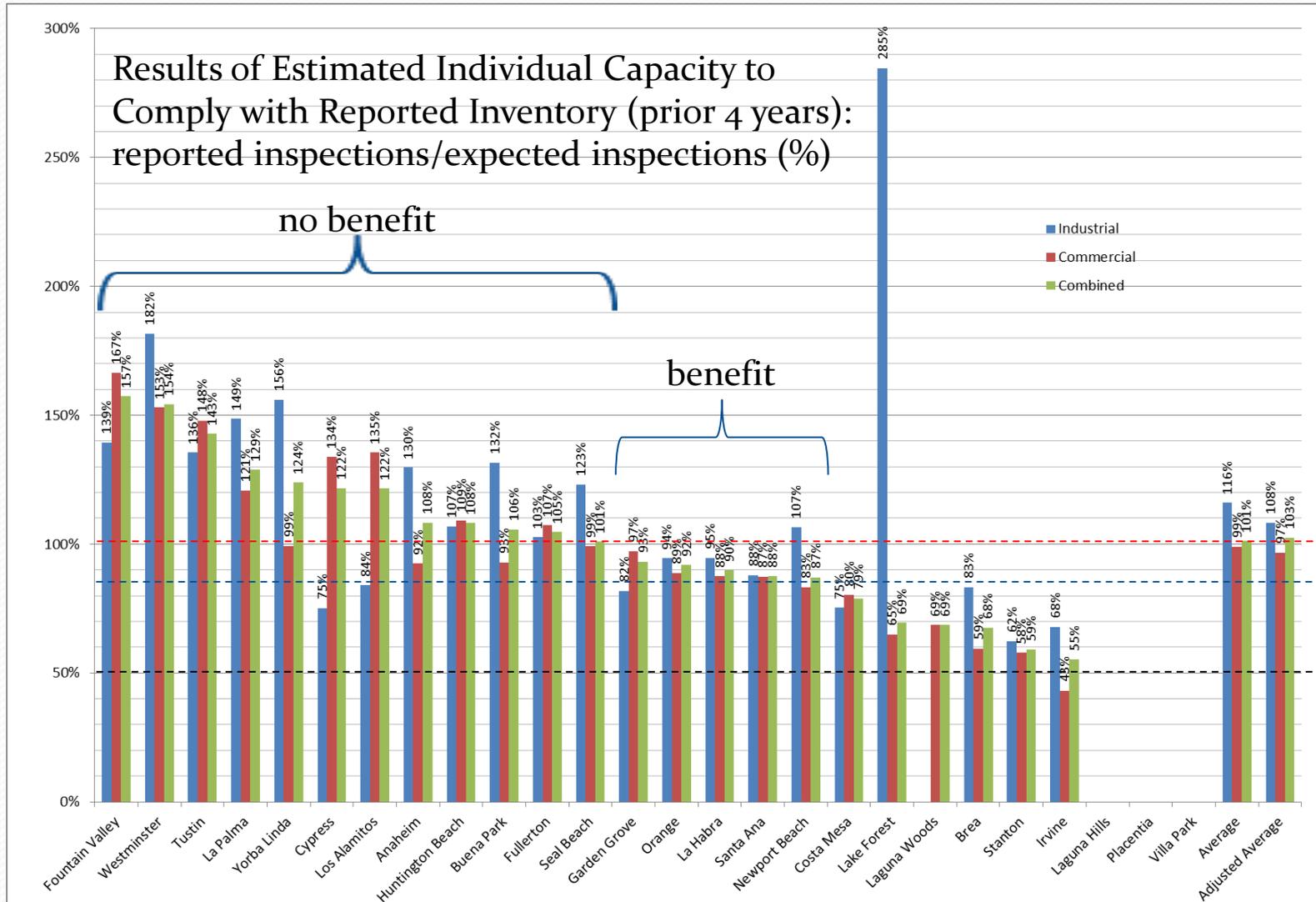
# Municipal inspection burden

- Inspection burden can be partly measured in terms of the number of “expected inspections”.
  - Estimated number of inspections needed given the inventory size and priority distribution over a period of time.
  - May be calculated per year, per permit term, or per number of sites per year (e.g. #expected inspections/100 sites/year)
- Number of “expected inspections” is not a direct measure of compliance but a strong indicator.

# Municipal inspection burden

- Draft permit proposes approximately 15% reduction in inspection burden among commercial and industrial sites.
  - Uses a more precise Pareto distribution (80-20 Rule) for prioritizing commercial sites “high”, “medium”, or “low”
- Draft permit reduces inspection burden for industrial or construction sites in other ways that are not quantifiable (inspection from car).
- Co-permittees have requested reductions of up to 50%.

# Municipal inspection burden



# Municipal inspection burden

- Co-permittees vary significantly in their capacity to meet their inspection burden for industrial and commercial sites.
  - High-performing cities performed approximately 1,900 more inspections than expected over last 4 years; or almost 500 extra inspections per year.
  - Lower-performing cities performed approximately 2,000 fewer inspections than expected.
- Apparent lower-performing cities should be examined.

# Municipal inspection burden

- Draft Permit allows a Co-permittee to propose alternative inspection schedules; facilitates examination.
- Board staff does not want to compromise the deterrent value or educational value of the inspection program.
- Can performance be improved in alternative ways?
  - Is inspection shortfall a few or many inspections (inventory size)?
  - Database doesn't readily ID sites needing inspection (IMS issue)
  - Improve documentation efficiency
  - Inspections-from-vehicle: relief is likely significant.
  - Enforcement → induce process improvements/increase resources

# Municipal inspection burden

- Does reducing commercial and industrial inspections improve the overall program?
- Will the cost savings be reinvested into more effective activities? Or will it reimburse 'voluntary' costs or go outside of the program?
- Based on arguments heard so far, Board staff does not recommend further reductions in industrial or commercial site inspection burden.
- Board staff is examining potential reductions in the construction site inspection burden.

# New Development/Significant Redevelopment

- Section XII was re-written to incorporate key elements of the 2011 Model Water Quality Management Plan (WQMP) and the Technical Guidance Document
- The 2011 Model WQMP and Technical Guidance Document were required under the current permit.
  - Designed to incorporate low-impact development (LID)
- Section XII retains the hierarchy of structural treatment controls in the current permit.
  - Some commenters assert otherwise; specific differences not yet pointed out.

# New Development/Significant Redevelopment (cont'd)

## Structural Treatment Control Hierarchy

- 1) Retention LID BMPs
  - Ex.: Infiltration basins/vaults, Harvest-use, Green/brown roofs
- 2) Biotreatment Control BMPs
  - Ex.: Bio-swales, Extended detention basins, constructed wetlands
- 3) Non-LID BMPs
  - Ex.: Sand filters, media filtration vaults, hydro-dynamic separators

# New Development/Significant Redevelopment (cont'd)

- Approach to dictating location of structural treatment controls was changed.
  - Default requirement: on-site
  - Unless there is an off-site facility available
    - Do not need to demonstrate on-site infeasibility
    - Off-site facility must meet certain requirements
    - Off-site facility generally follows LID preference
      - Except where the project is part of an older approved WQMP subject to R8-2002-0010.
      - Recognizes limitations on Co-permittees to impose new requirements for structural treatment controls on vested projects.
      - Project must still infiltrate using source and site design BMP.

# New Development/Significant Redevelopment (cont'd)

- Additional changes were made to the BMP nomenclature.
  - Intended to clarify; Co-permittees believe it confuses.
- A 1.5 factor was added for sizing biotreatment BMPs.
  - Recommended by USEPA to better equate their effectiveness with infiltration LID BMPs.
  - Co-permittees have objected.
- Apparent unintended technical changes were also made.
  - Will also need to work with the Co-permittees to eliminate unintended perceived or actual changes.

# New Development/Significant Redevelopment (cont'd)

- Non-priority project plans now only required if the non-priority project “includes modifications or improvements that are, or affect areas that are exposed to storm water or which may be sources of urban runoff”.
  - Co-permittees view this as overly broad.
  - Board staff concurs that scope of “non-priority projects” needs to be narrowed. Alternative language is being developed.

Questions/Comments?

# Receiving Waters Limitations and TMDLs

## Receiving Water Limitations

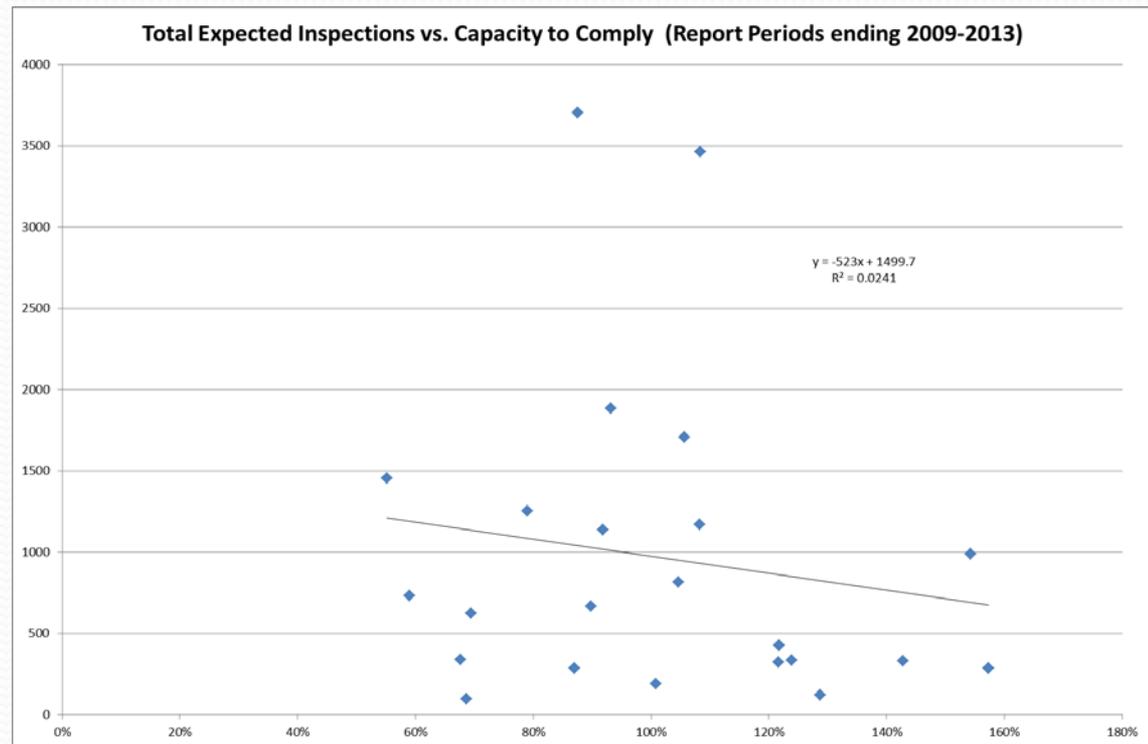
- Exceedance: plan is mandatory
- Allows plans with no further intervention
- Initial submittal: draft plan
- Deadline: 6-mos./90-days (EO request)
- Submittal must be amended in 60-days on EO request
- Subject to public review

## Waste Load Allocations

- Exceedance: plan is voluntary
- Allows plans with no further intervention
- Initial submittal: notice of intent to prepare
- Deadline: none
- Follow-up submittal: draft plan
- Deadline: 6-mos./18-mos. (complying)
- Submittal must be amended in 60-days on EO request
- Subject to public review

# Does expected inspection burden correlate with capacity to comply?

1. Expected inspection burden of industrial and commercial sites over 4 years was calculated for each city (report periods ending 2009-2013).
2. Reported inspections are compared to the expected inspections to provide estimated capacity to comply; percent of expected inspection burden.
3. Correlation coefficient was calculated.
4. Conclusion: Inspection burden is not a good predictor of a Co-permittee's capacity to comply. Co-permittees with large burdens do not necessarily have difficulty with compliance; small burdens do not necessarily mean compliance is easier. Other factors are involved.



# Municipal inspection burden

## Comparisons with Los Angeles County and San Diego Regional MS4

- Objective comparisons between permits are impractical to do.
  - Permit requirements are a mixture of objective and subjective criteria.
    - Can tell if a requirement increases or decreases inspection burden.
    - Cannot always measure the magnitude of the change.
    - Sum total of changes cannot be estimated.
  - Partly depends on:
    - How ambiguity is exploited (gamesmanship).
    - Nature of the sites.