

# **Alternative Compliance**

# Background

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- The Commission had a presentation on Alternative Compliance 18 months ago
- Presented the rationale and conceptual model
- Listed the necessary research to overcome the rate limiting steps towards alternative compliance

# Goal for Today

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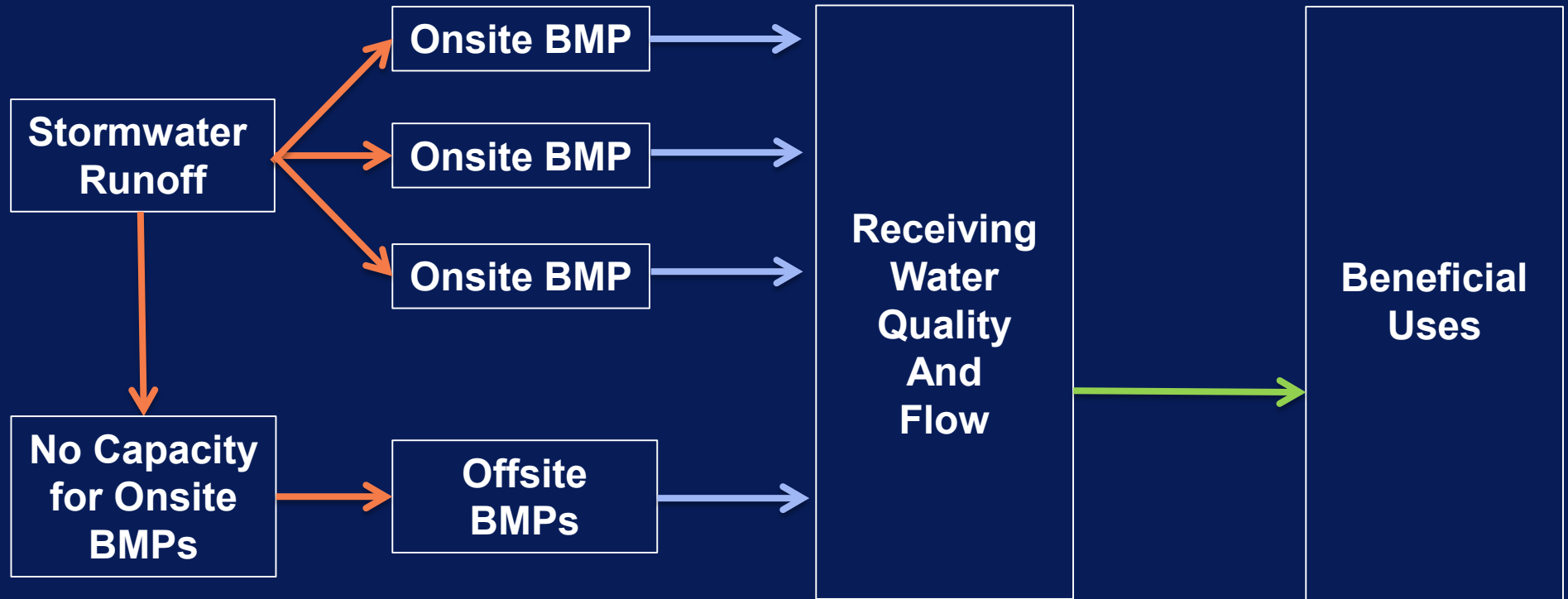
- A little bit of review to get us on the same page, then an update on what's happened over the last year and a half
- How well is SCCWRP filling in the necessary research?
- How is Alternative Compliance progressing overall?

# Alternative Compliance in Simple Terms

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- **Alternative Compliance embodies “Watershed Management”**
- **Goal is to install Best Management Practices (BMPs) on site**
  - Stormwater can't always be controlled on site
- **Alternatives to control within the watershed are encouraged**
  - Can combine into Regional BMP systems to control volume and water quality
  - Multiple uses are encouraged

# Alternative Compliance Conceptual Model



# Alternative Compliance: Which One?

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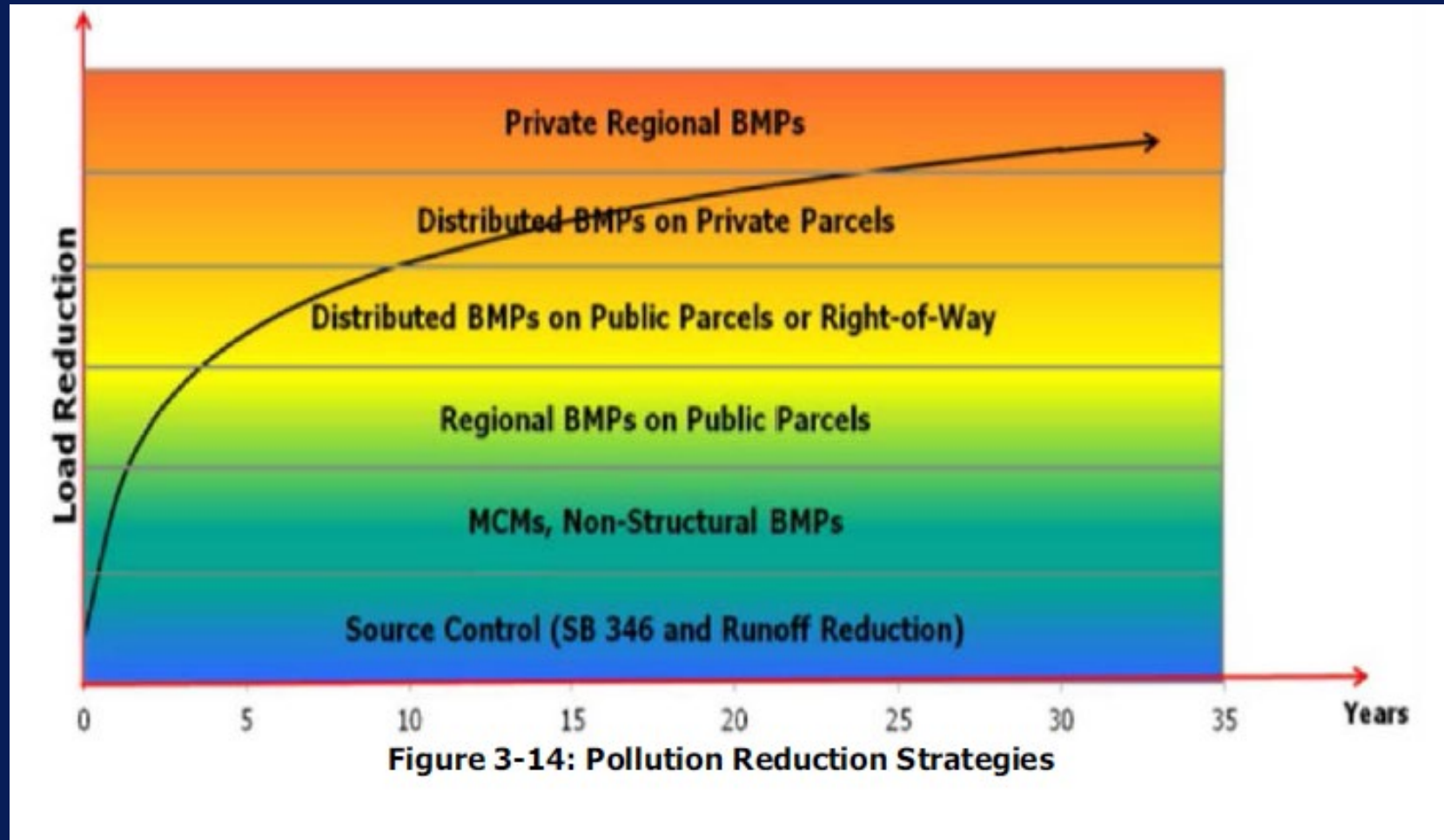
- There are two kinds of Alternative Compliance being used in Southern California
- Alternative Compliance for *Receiving Water Objectives*
- Alternative Compliance for *Land Development Standards*

# Alternative Compliance for Receiving Water

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- Use watershed-wide planning to demonstrate compliance
- Model-based, with a priority given to publicly owned structural BMPs and non-structural controls
- Uses *Reasonable Assurance Analysis* to provide confidence
  - LA RWQCB specifies model parameters, milestone monitoring, and adaptive strategies

# Example Alternative Compliance Prioritization in Dominguez Channel Enhanced Watershed Management Plan



Typically aims to control 85<sup>th</sup> percentile 24-hour storm

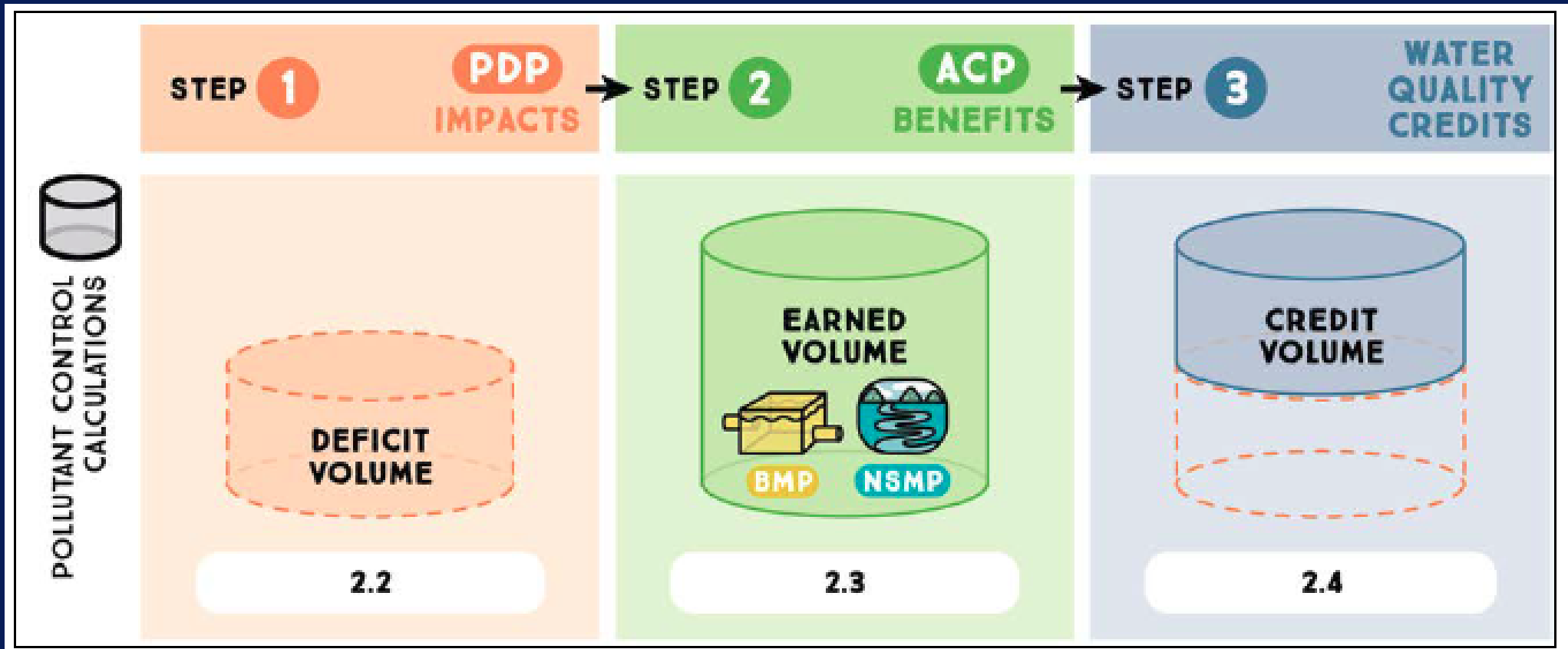


# Alternative Compliance for Land Development

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- **Trades on-site BMPs for explicit off-site BMPs for compliance**
  - Specific to Planned Development Projects (PDPs)
- **Empirically based, with mandate for structural BMPs and natural resource restoration**
  - one-for-one, or many-for-regional BMP offsets
- **Pre-defined “BMP currency” provides confidence for trading**

# Example Alternative Compliance For Land Development In the San Diego Water Equivalency Document



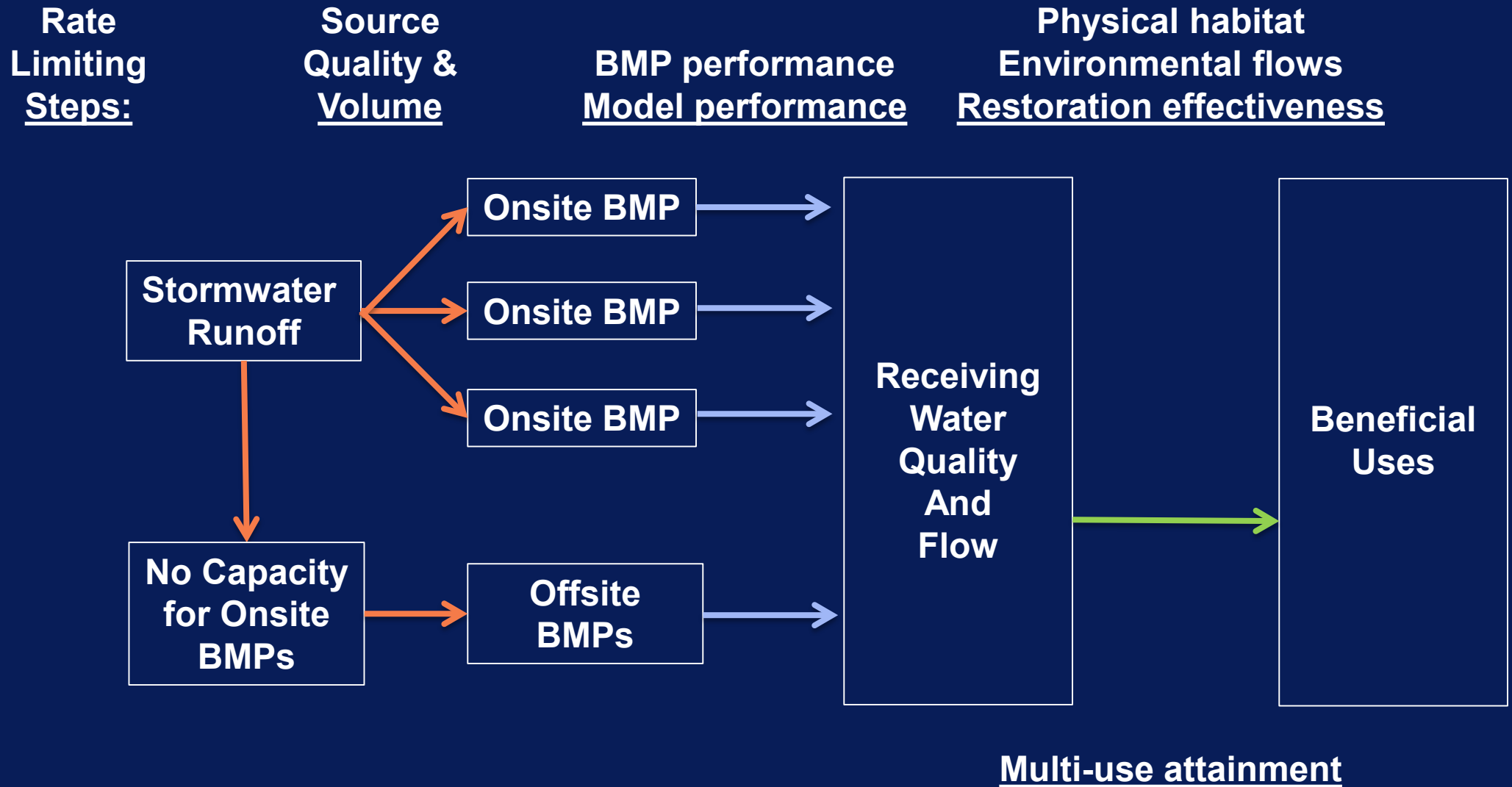
Aims to control 85<sup>th</sup> percentile 24-hour storm for capture BMPs  
or 150% of design storm for flow through controls

# The Two Approaches Share Similar Technical Challenges

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- Stormwater inputs
- BMP performance
- Assuring BMPs will improve receiving water quality and achieve beneficial uses
  - Mantra for multiple uses

# Alternative Compliance Conceptual Model



# BMP Performance Evaluation

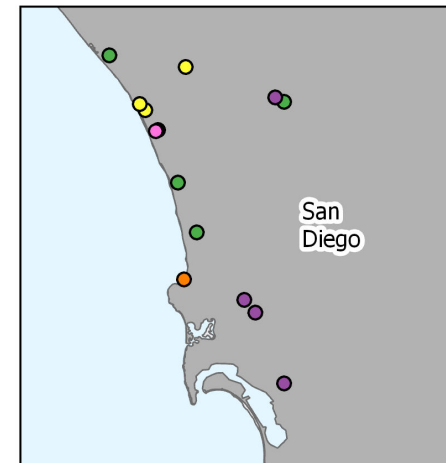
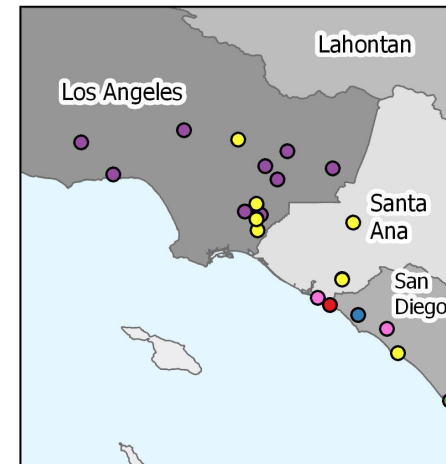
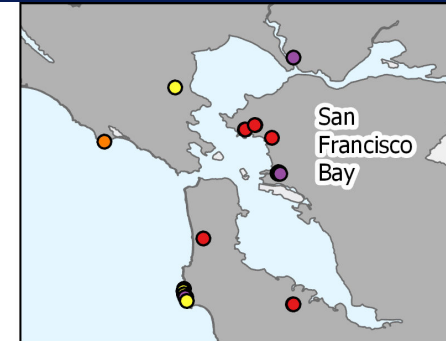
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- **Currently, most BMP performance information comes from the International BMP Data Base**
  - Most BMP data from California are > 12 years old
- **Our goal was to compile as much data as possible on California specific BMP performance**
- **Updated BMP performance data can be used for:**
  - Improved BMP designs
  - Reducing uncertainty in Reasonable Assurance
  - More accurate performance for water quality equivalency trading

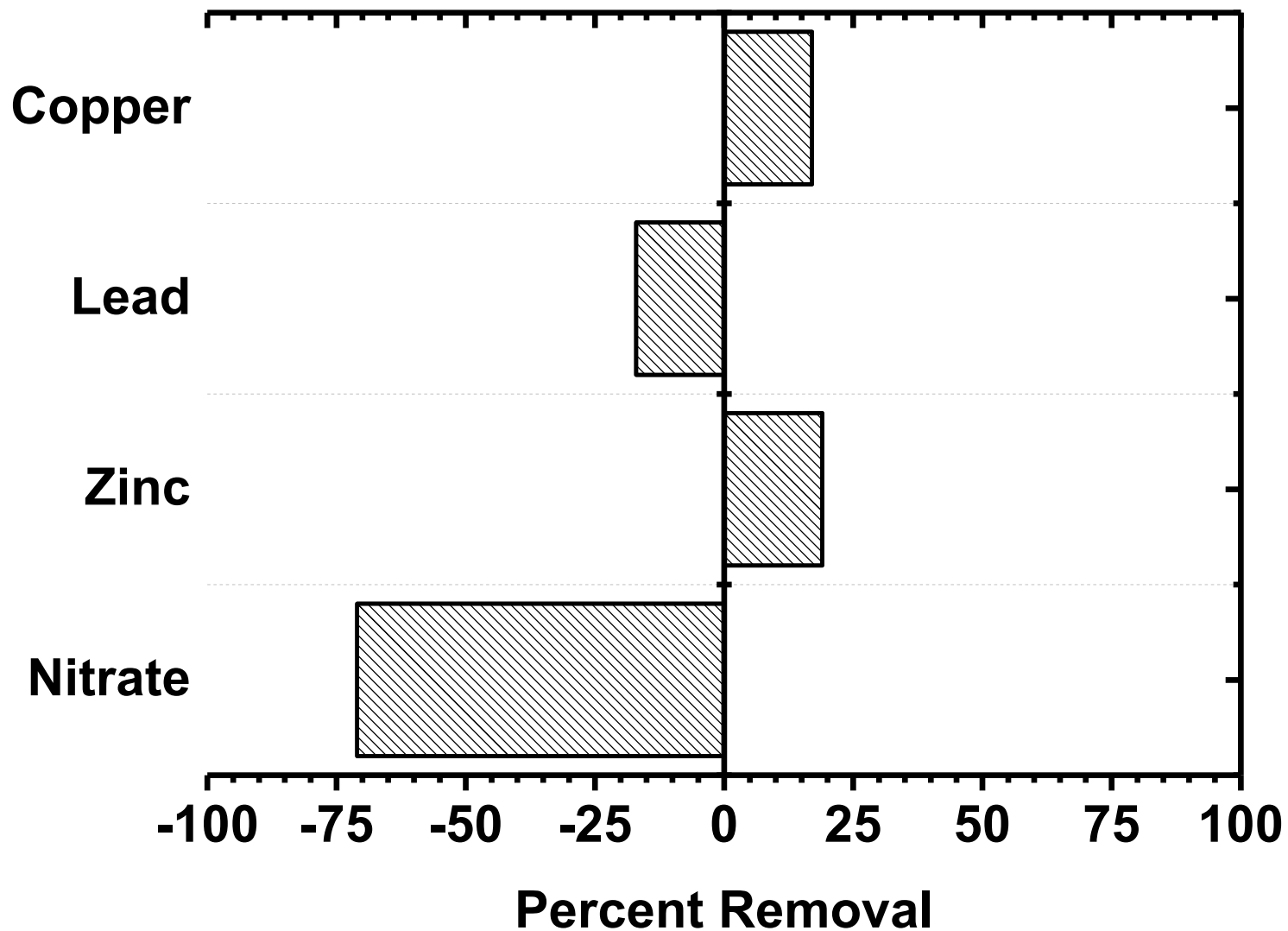
# Inventory of BMP Data from Across California

Type of BMP	Number of BMPs				Number of Storm Events
	Background Info	Design Specs	Flow Data	Water Quality Data	
Vegetated Swale	45	22	24	27	380
Media Filter	65	19	16	28	366
Dry Pond	7	6	8	6	99
Wet Pond	48	3	5	5	125
Constructed Wetland	5	1	1	2	657
Permeable Pavement	22	6	0	2	2
Bioretention System with Underdrain	23	12	3	13	71
Total	214	69	57	81	1,700

# BMPs With Available Water Quality Data

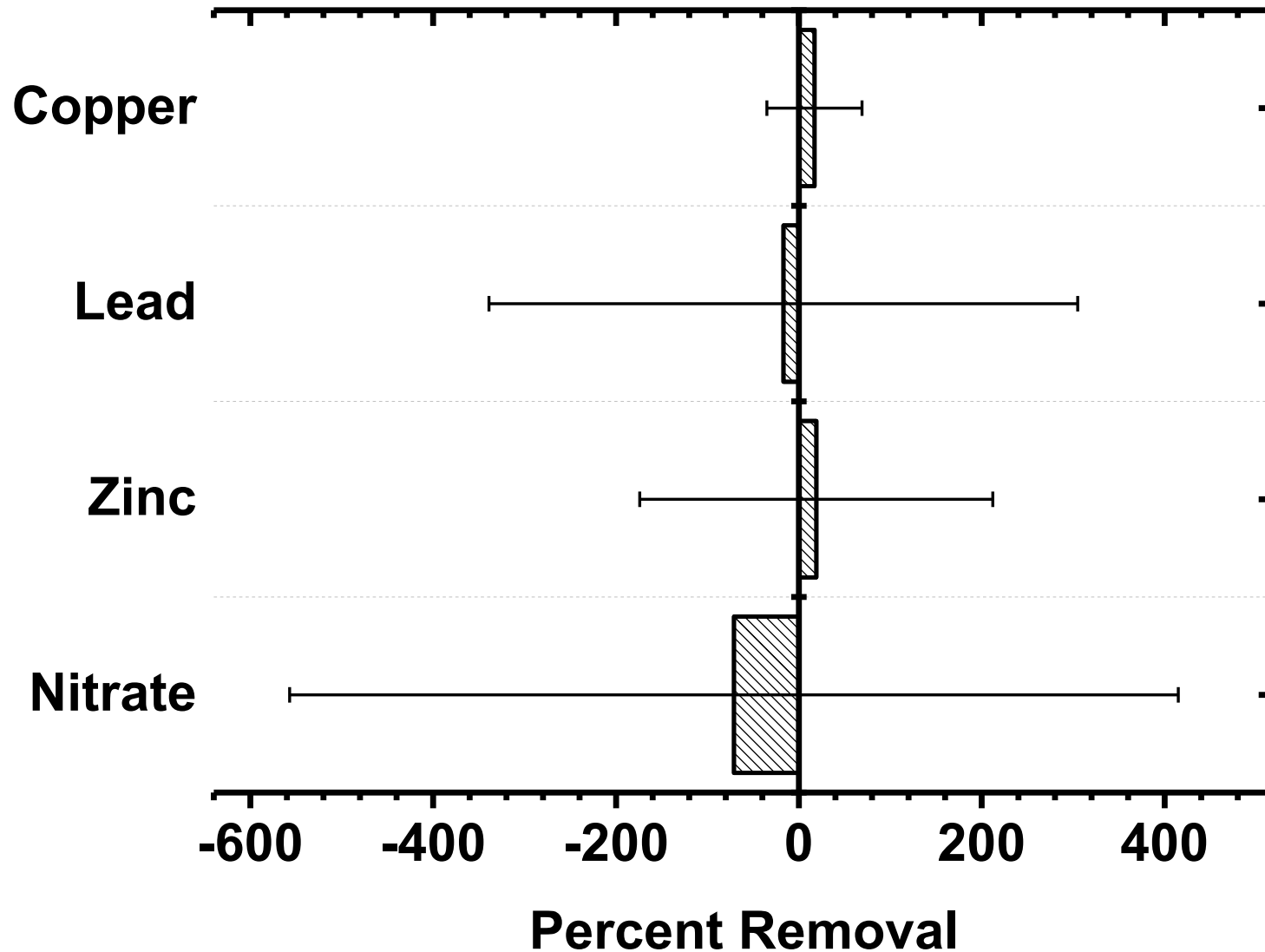


# Vegetated Swale BMPs: Average Effectiveness Statewide

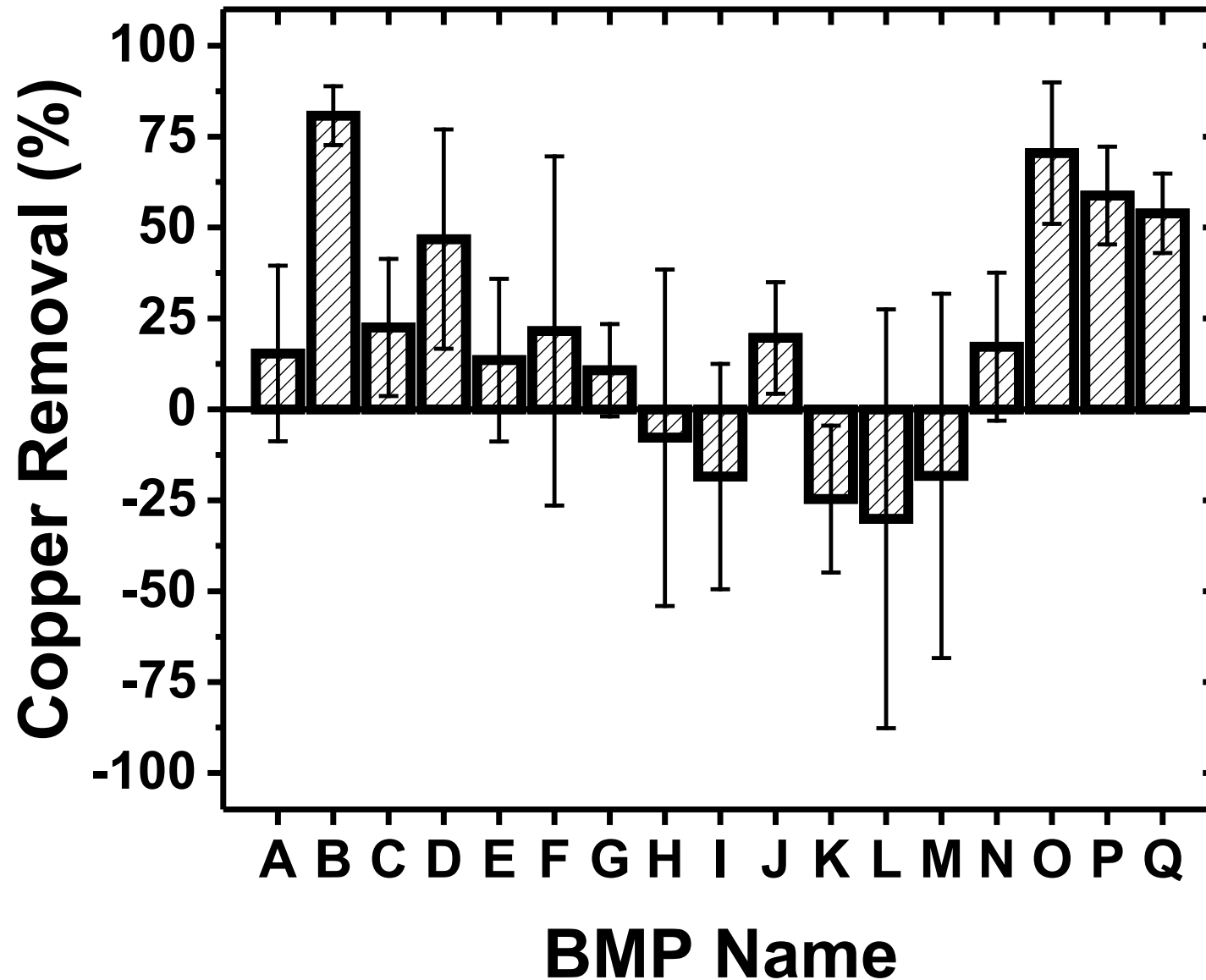




# Vegetated Swale BMPs: Average Effectiveness Statewide ( $\pm$ SD)



# Vegetated Swale BMP: Individual Effectiveness



# The Two Approaches Share Similar Technical Challenges

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- BMP performance
- Assuring BMPs will improve receiving water quality and achieve beneficial uses
  - Mantra for multiple uses

# Non-Technical Implementation

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## Alternative Compliance for Receiving Water

- **Good news:** Most watershed units have Management Plans adopted by the RWQCBs
- **Bad News:** Implementation progress has been slow

## Alternative Compliance for Land Development

- **Good news:** Water quality equivalency framework started
- **Bad news:** Not many land developers or municipalities are using it