

Central Valley MS4 Contaminants of Emerging Concern Coordination



May 2, 2017

MS4 Coordination Group

- Regional Board facilitated several coordination meetings, including Central Valley MS4 General Permit implementation meetings
- Sacramento Stormwater Quality Partnership, Stockton, San Joaquin, Port of Stockton, and Roseville participated
- Delta RMP provides potential governance structure
- Smaller group Sacramento Stormwater Quality Partnership (SSQP) MS4 + consultants convened to develop strawman proposal

Background and Guidance Materials

- Historical monitoring by MS4s and coordinated monitoring programs (pesticides, NTA, PAHS, pthlatates)
- State Water Board Statewide Pilot Study Monitoring Plan (January 2016)
- SCCWRP Technical Report and Guidance
- SF Bay Monitoring Results for Urban Runoff (CEDEN), reports, and MRP 2.0 requirements

Objective and Approach

- Perform Central Valley-wide evaluation specified in Section 1.1.2 of the Statewide Pilot Study Monitoring Plan to inform MS4 management programs
- Coordinate with other efforts by State Water Board, POTWs, and the Delta RMP
- Utilize current monitoring stations that have well understood hydrology, water quality, sources, and sample collection equipment

Section 1.1.2 Monitoring Questions

- Which CECs are detected in waterways dominated by stormwater?
- What are their concentrations and loadings in the dry vs. wet seasons?
- What is the relative contribution of CECs in WWTP effluent vs. stormwater?
- What is the spatial and temporal variability in loadings and concentrations (e.g. between storm variability during the wet season; in stream attenuation rate during low flow, dry season conditions)?

Approach Outline

- Phased approach with ambient monitoring in the first year, and follow-up sources in following two years
- Three coordinated ambient sites (two if not coordinated)
- Utilize long-term urban creek and/or discharge monitoring stations for source monitoring
- Bay Area work to inform MS4 constituent list, but coordinate with POTWs
- Coordination for sediment, tissue, and bioanalytical

Possible Water Quality Locations

- Additional MS4 participation increases potential funding
- Possible Ambient Locations
 - American River at Discovery Park
 - Sacramento River at Veterans Bridge, Hood, and/or Freeport
 - San Joaquin River at Vernalis and Buckley Cove
- Possible Urban Runoff (source characterization)
 - Historic locations including pump stations, urban tributaries, and drainage channels

Constituents

- Tiered approach in Bay Area to focus urban runoff evaluations
- Historic sample collection, variability, and matrices
- Coordinate ambient sites with POTWs and reconcile constituent lists for both
- Clarification needed on targeted lists and process for future modifications

Matrices

- **Water column** understood through Bay Area MS4 work – flame retardants and PFOS
- **Sediment** useful for long term trend characterization and not as variable as urban runoff water column for key constituents
- **Tissue** samples can be coordinated with other programs
- **Bioanalytical** can be coordinated with water column sample collection

Coordination

- Critical for cost-effective and useful program
- Project administration and decision making
- Many opportunities, including Delta RMP, POTW, SPoT, etc.
- Fun(ding) mechanism

Challenges

- Large group of Central Valley MS4s (near 100)
- Planning with limited direct coordination with other groups
- Reconcile historical programs with guidance document recommendations
- Urban runoff pathways and control strategies

Key Questions

- What will the data tell us and what can we do about it?
- Is fate and transport important from upstream sources?
- Is the State Board list of constituents in the Pilot Monitoring Plan (Appendix I, Table A) appropriate for Central Valley MS4s?
- Does the proposed MS4 monitoring plan meet the Pilot Monitoring Plan goals when considered along with the POTW, State Board, and other proposed efforts?

Analytical Questions

- How accurate are analytical chemistry methods at the low effect levels?
- Do the low levels of interest change how the analytical chemistry data are interpreted relative to accuracy and precision, the availability of standards, commercial vs. research analytical labs, etc.?
- What is the process for introducing new analyses or analytical test methods?

Delta RMP

Current Pesticide Monitoring Locations

