

# Pyrethroids Basin Plan Amendment Strawman Regulatory Approach

## JUNE 2016 DRAFT FRAMEWORK FOR DISCUSSION ONLY

### Phased Approach using a Conditional Prohibition, with TMDLs, and Category 4b Demonstrations to Address Current 303(d) listings

- Phased approach with reasonable implementation measures and data gathering required now to inform the Board on possible future actions.
  - Re-visitation of requirements and targets before the TMDL compliance date
  - Commitment by the board to consider adoption of basin-wide water quality objectives in the future
- DPR and EPA coordination (common elements)
- Main components of this approach:
  - A **conditional prohibition** of pyrethroid discharges to all waterbodies with aquatic life beneficial uses in the Sacramento River and San Joaquin River basins. Discharge would be prohibited unless management practices (see potential practices below) to reduce discharges of pyrethroids are being implemented.
  - **TMDLs** to address 9 impairments in urban waterbodies (Sacramento & Roseville)
  - Possible **Category 4b demonstrations** for impairments in 5 agricultural waterbodies, meeting the EPA requirements through implementation of the Irrigated Lands Regulatory Program.
  - Monitoring and data gathering to inform the Board's future actions
- **Conditional Prohibition**
  - a. Applies to permitted dischargers to all waterbodies with aquatic life beneficial uses (WARM/COLD) in the Sacramento River and San Joaquin River basins
    - Unless the discharger is covered by an approved management plan that is addressing pyrethroids
  - b. Discharges of pyrethroids above prohibition trigger would be prohibited unless dischargers implement management practices to reduce discharges of pyrethroids.
  - c. Initial Assessment Monitoring
    - Monitoring is needed to determine whether discharges exceed the prohibition trigger
    - Assessment monitoring may be representative – collaborative studies are encouraged
    - Management plans would be implemented following the initial assessment monitoring if prohibition trigger is exceeded
    - Water column chemistry and sediment toxicity, possibly water column toxicity
  - d. Agricultural dischargers

- If discharge exceeds prohibition trigger, dischargers must implement a management plan for pyrethroids. Can implement via ILRP, dairy orders.
- e. POTW and MS4 dischargers
  - If discharge exceeds prohibition trigger, dischargers must implement management practices (see list on p. 4) to reduce pyrethroid discharges
- f. Monitoring requirements to determine effectiveness of management practices and track trends
- **TMDLs**
  - a. Apply to 9 impaired waterbodies in Sacramento and Roseville urban areas
  - b. Only sources are point sources (MS4s/urban runoff)
  - c. Wasteload allocations are concentration-based (no load allocations because no nonpoint sources).
  - d. Numeric targets
    - UC-Davis water quality criteria with bioavailability and additivity
    - Sediment toxicity (based on 10-d toxicity test with *Hyaella azteca*)
  - e. Monitoring requirements to determine effectiveness of management practices and track trends
    - Water column chemistry and sediment toxicity, possibly water column toxicity
  - f. WQBELs based on the wasteload allocations in the form of BMPs
    - TMDL dischargers would be required to actively engage with DPR on urban pesticide issues in addition to other BMPs
  - g. 20 year timeline for achieving the numeric targets
- **Category 4b demonstrations:**
  - a. Applies to 5 impaired waterbodies in San Joaquin Valley agricultural areas
  - b. Only sources are nonpoint sources (agricultural runoff)
  - c. Would require a numeric trigger in order to qualify for category 4b
    - UC-Davis water quality criteria with bioavailability and additivity
    - Sediment toxicity (based on 10-d toxicity test with *Hyaella azteca*)
  - d. Trigger would likely be established in the ILRP monitoring and reporting program, but could be put in the Basin Plan or in WDR's
  - e. Implementation of management practices through the ILRP
  - f. Monitoring requirements to determine effectiveness of management practices and track trends
    - Water column chemistry and sediment toxicity, possibly water column toxicity
  - g. 10 year timeline to achieve triggers as consistent with WDRs for irrigated ag
  - h. The numeric triggers and implementation requirements would need to provide adequate assurance that the triggers will be achieved for EPA to approve moving listings to category 4b – this is not guaranteed

- **Water quality triggers**
  - Used as prohibition triggers, TMDL numeric targets, and numeric triggers for category 4b waterbodies
  - UC Davis criteria
    - 5<sup>th</sup> percentile criteria
    - Bioavailability
    - Additivity of 6 pyrethroids
- **Phased water quality objective adoption**
  - Reopener after 15 years to assess data collected and determine if appropriate to adopt numeric water quality objectives
  - Data from paired sampling of water column chemistry and toxicity would be used to validate and/or adjust bioavailability and additivity assumptions
- **Project objectives**
  - Met with this approach:
    - Addressing existing impairments from pyrethroids
    - Reasonable and attainable implementation provisions
    - Provisions for addressing alternative pesticides
  - NOT met with this approach:
    - Establishing measurable limits for pyrethroids in waters of the state (except in TMDL and 4b waterbodies)
    - Efficient process to address future impairments (partially met)

## Project schedule

Date	Milestone
1 June 2016	Stakeholder meeting to discuss strawman regulatory approach and seek feedback
23/24 June 2016	Board workshop on monitoring and data collection for pyrethroids
18/19 August 2016	Board workshop to present strawman regulatory approach and seek Board feedback
September 2016	Stakeholder meeting – release Draft Staff Report and draft Basin Plan language prior to this meeting
13/14 October 2016	Board hearing to hear comments on the proposed Basin Plan Amendment
5/6 December 2016	Board hearing to consider adoption

**Potential management practices for MS4 and/or POTW dischargers:**

Education and outreach activities

1. Targeted outreach programs to encourage communities within a discharger's jurisdiction to reduce their reliance on pesticides that threaten water quality, focusing efforts on those most likely to use pesticides that threaten water quality;
2. Work with DPR, County Agricultural Commissioners, and the University of California Statewide Integrated Pest Management Program to coordinate education and outreach programs to minimize pesticide discharges.
3. Encourage public and private landscape irrigation management that minimizes pesticide runoff;
4. Encourage public and private pest management practices that minimize pesticides from entering sewer systems and coordinate education and outreach programs to minimize pesticide discharges with the DPR, County Agricultural Commissioners, the University of California Statewide Integrated Pest Management Program, or other entities as appropriate;
5. Facilitate appropriate pesticide waste disposal, and conduct education and outreach to promote appropriate disposal.

Pesticide pollution prevention activities

1. Reduce reliance on pyrethroids and other pesticides that threaten water quality by adopting and implementing policies or procedures that minimize the use of pesticides that threaten water quality in the discharger's operations and on the discharger's property;
2. Track progress by periodically reviewing the discharger's pesticide use and pesticide use by its hired contractors;
3. Train employees to use integrated pest management techniques and require that they adhere to integrated pest management practices to the maximum extent practicable;
4. Require contractors to practice integrated pest management;
5. Track USEPA and DPR pesticide evaluation and registration activities as they relate to surface water quality and encourage these agencies to accommodate water quality concerns within their pesticide registration processes. This may include assembling and submitting available information (such as monitoring data) to USEPA and DPR during public comment periods as needed to assist in their pesticide evaluation and registration activities and in ensuring that pesticide applications within the Basin comply with water quality standards. This best management practice would be implemented most effectively through a cooperative, regional or statewide approach.
6. Report violations of pesticide regulations (e.g., illegal handling) to County Agricultural Commissioners.