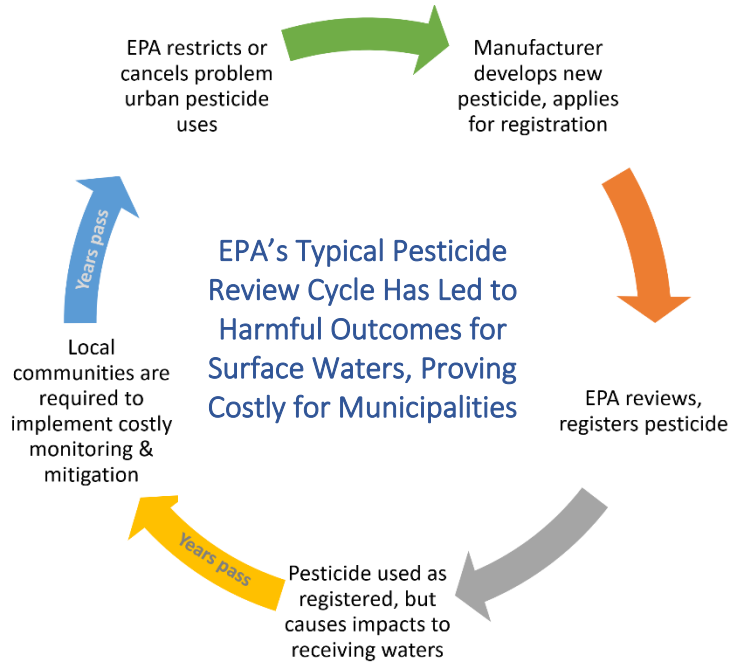
BACWA and CASQA Have Effectively Collaborated to Reduce Urban Pesticide Pollution Since 2011

Urban Pesticides Threaten Ecosystem Health in California Watersheds

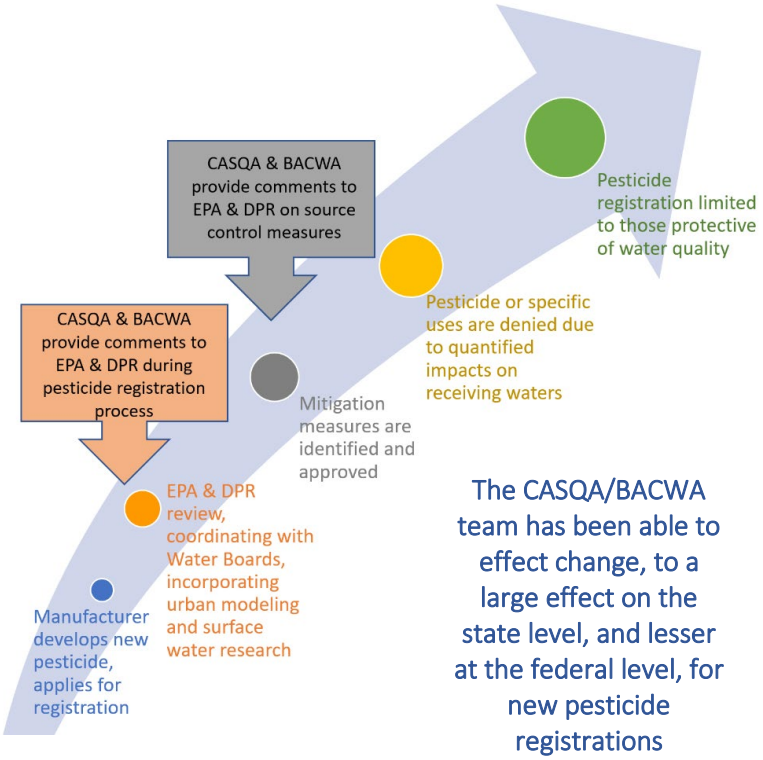
Pesticides including insecticides, herbicides, antimicrobials, fungicides, and rodenticides are a threat to aquatic ecosystems when they reach waterways through wastewater and stormwater. The Clean Water Act holds local agencies responsible for pollutant toxicity (including pesticides) in surface water, including the cost of monitoring and mitigation. Agencies also face substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs), Basin Plan Amendments, California State Water Board Toxicity Provisions, and additional permit requirements. Compliance costs for public agencies can continue years after a pesticide is banned (e.g. diazinon, chlorpyrifos) as the pesticides can remain in the aquatic environment long after they are used.

Unfortunately, local agencies only have authority over their own use of pesticides; they are pre-empted by state law from regulating pesticide sales or use by consumers and businesses. Instead, pesticides are regulated by the United States Environmental Protection Agency (EPA) and the California Department of Pesticides Regulation (DPR), which in some cases have not adequately protected urban discharges and water bodies from toxicity. Several pesticides are present in urban water bodies throughout California at concentrations above aquatic toxicity thresholds.[1]



CASQA and BACWA Provide Input to EPA and DPR at Crucial Intersections

Since 2011, BACWA and CASQA have collaborated to educate EPA and DPR staff regarding wastewater and urban stormwater obligations. Such collaborations require information sharing, coordination of communications with pesticide regulators, and contributing staff time and other resources in support of the shared goal. Both organizations coordinate with the State and Regional Water Boards (Water Boards) to address the impacts of pesticides efficiently and proactively through the statutory authority of DPR and EPA. Furthermore, we share our findings with other partner agencies and stakeholders so that our voices are magnified.[2]



[1] California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report) https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html

[2] Partners include National Association of Clean Water Agencies and National Municipal Stormwater Alliance.

CASQA and BACWA Accomplish Tasks that are Impractical for Individual Member Agencies

Since local agencies cannot locally regulate pesticides, BACWA and CASQA work to reduce pesticides in the aquatic environment by:

- **Educating Regulators Regarding Wastewater and Urban Stormwater Issues**. Half of all pesticide use occurs in urban areas, yet pesticides work at EPA is largely focused on agricultural uses. We educate EPA on the impacts of indoor and outdoor urban uses, and call attention to the pesticide-related challenges facing local public agencies.
- **Tracking and Prioritizing Pesticide Regulatory Action.** We use a multifaceted method for pesticide tracking and action, with the goal of reducing the impact of priority pesticides on the aquatic environment.
- **Sharing Science.** CASQA and BACWA share new scientific studies and monitoring data with EPA and DPR, essential to science-based regulation.
- **Identifying Data Gaps and Faulty Assumptions.** Due to its agricultural focus, EPA frequently omits key outdoor uses or indoor sources with direct paths to the sewer. EPA's pesticide use assumptions are sometimes incongruent with known use practices in California. Omitting key urban uses and associated aquatic risks prevents regulatory actions that would reduce toxicity in wastewater and stormwater.
- **Analyzing Monitoring Data**. We review urban watershed and POTW effluent monitoring data to identify pesticides that are exceeding or approaching aquatic toxicity thresholds.
- **Recommending Source Control Strategies to Prevent Harm.** Once EPA identifies potential for harm to aquatic organisms, it is open to discuss source control alternatives (which EPA refers to as mitigation) to prevent such harm. At that point we identify and recommend source control measures that could reduce such impacts.

Working Together, BACWA and CASQA Get Results

- **Through our cross-agency collaboration, DPR has improved pesticide registration.** DPR now has permanent stormwater and wastewater monitoring programs, and a permanent process to protect both stormwater and wastewater when new pesticides are registered.[3]
- **We offer unique insights.** Without CASQA and BACWA on the pulse of DPR and EPA's data analysis and modeling, the only feedback might be from manufacturers unaware of the regulatory and water quality challenges posed by their products.
- **BACWA/CASQA feedback has led to improved assessments and improved source control**:
  - EPA improved label language for hundreds of pyrethroid products, including a pictogram provided by a BACWA member agency (at right) (stormwater and wastewater)
  - DPR adopted pyrethroids regulations, including restrictions on outdoor residential use (stormwater)
  - DPR adopted fipronil restrictions that are expected to reduce fipronil in urban runoff more than 90 percent (stormwater)
  - EPA labeling requirements that protect urban water quality are consistently being required for pool and spa treatments (stormwater and wastewater)
  - EPA developed root control chemical POTW notification requirements (wastewater)
  - DPR required manufacturers to fund the POTW pyrethroids survey, providing monitoring data necessary for EPA's first-ever POTW-specific detailed evaluation in its Pyrethroids Registration Review (wastewater)
  - EPA improved evaluations for hydramethylnon, which resulted in label language mitigations: environmental hazards, rain advisory, and avoidance of broadcast applications on impervious surfaces (stormwater)

This Work Remains Essential

CASQA and BACWA have spent more than a decade seeking restrictions for the highest priority pesticides. The pesticides review process—driven by EPA—often lasts more than a decade, with each pesticide open for re-registration every 15 years. California does not have a periodic review process. While our actions may take years to see results, these tasks demonstrate our effort to influence State and federal regulators to adequately protect California's urban waterways.

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[3]Water Quality Impairments Due to Aquatic Life Pesticide Toxicity: Prevention and Mitigation in California, USA, Kelly Moran, Brian Anderson, Bryn Phillips, Yuzhou Luo, Nan Singhasemanon, Richard Breuer, Dawit Tadesse, *Environ Toxicol Chem* 2020;39:953–966. https://setac.onlinelibrary.wiley.com/doi/abs/10.1002/etc.4699