

Annual Reporting for FY 2024-2025

Supplement for Tracking and Participating in Pesticide Regulatory Efforts

Bay Area Municipal Stormwater Collaborative Phase II Subcommittee



September 2025

Supplement for Tracking and Participating in Pesticide Regulatory Efforts Annual Reporting for FY 2024-2025

INTRODUCTION

This report provides information on regionally implemented activities complying with portions of the Small Municipal Separate Storm Sewer System (MS4) Phase II Permit issued by the State Water Resources Control Board (Water Board). The Phase II Permit covers stormwater discharges from 24 municipalities and special districts (Permittees) in the North San Francisco Bay Area. This report covers pesticide toxicity regulatory modernization activities implemented through the California Stormwater Quality Association (CASQA) related to the following Phase II Permit provisions:

- E.7.a.(ii)(i) – Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers
- E.11.h. – Permittee Operations and Maintenance Activities (O&M)
- E.11.j. – Landscape Design and Maintenance
- E.15.a. / Attachment G – Implement Pesticide-Related Toxicity Control Program

Effecting regulatory modernization occurs at the State and Federal level. Recognizing that fact, the Permittees have taken an approach to modernizing pesticide regulations that involves cooperating through the California Stormwater Quality Association (CASQA), and/or the Urban Pesticide Pollution Prevention Project (UP3 Project). All of these entities have determined this cooperative approach is not only the most likely approach but is likely the only approach for local agencies to effect meaningful change in the State and Federal regulatory environments.

Activities and Accomplishments during FY 2024-2025

The actual work of tracking and participating in the ongoing regulatory efforts related to pesticides was accomplished through CASQA. CASQA conducted its activities on behalf of members and coordinated funding contributions and activities through its True Source Control Subcommittee (encompassing the former Pesticide Subcommittee, a group of stormwater quality agencies affected by pesticides or pesticides-related toxicity listings, TMDLs, or permit requirements, as well as others knowledgeable about pesticide-related stormwater issues). The CASQA 2025 Pesticide Annual Report and Effectiveness Assessment (Attachment 1) provides a comprehensive and detailed accounting of efforts to track and participate in relevant regulatory processes as well as accomplishments related to pesticides and stormwater quality.

Attachments

Attachment 1

**2025 Pesticide Annual Report and Effectiveness Assessment
California Stormwater Quality Association
Final Report
September 2025**



California Stormwater Quality Association®

Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

2025 Pesticides Annual Report

Prepared by the California Stormwater Quality Association

August 2025

Preface

ADVANCING SUSTAINABLE STORMWATER MANAGEMENT

The California Stormwater Quality Association (CASQA) is a nonprofit corporation that advances sustainable stormwater management protective of California water resources. With well over 2,000 members, CASQA's membership is comprised of diverse range of stormwater quality management organizations and individuals, including cities, counties, special districts, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, industries, and consulting firms throughout the state. Collectively, CASQA represents over 34 million people in California.

CASQA's [Vision for Sustainable Stormwater Management](#)¹ (Vision) defines the actions needed to manage stormwater as an essential component of the state's water resources, support human and ecological needs, protect water quality, and enhance and restore California's waterways. There are four guiding principles to achieve this Vision. Like the legs of a chair, each Principle is essential and all four must be in place to support the whole.

Principle #1: Program Implementation: Projects and programs that use stormwater as a resource, protect water quality and beneficial uses, and efficiently minimize pollution are critical for sustainable stormwater management. Stormwater capture and true source control (identifying and mitigating a pollutant at its source) are the primary drivers of these solutions, with effective BMPs providing an important supportive role.

Principle #2: Permits, Regulations, and Legislation: Permits, regulations, and legislation need to focus on effectiveness and desired outcomes to support sustainable stormwater management. Regulatory and legislative actions must align with and support the other components of the Vision – advancing stormwater capture, true source control, effective BMPs, increasing public education and awareness focused on stormwater as a resource, and securing funding to support these solutions.

Principle #3: Public Education: Public awareness, understanding, and support is essential to sustainable stormwater management. The key shift is viewing stormwater as a resource that must be protected and integrated into overall water resource management.

Principle #4: Funding: Significant financial investment is required to achieve sustainable stormwater management. Stormwater is the most underfunded portion of the water sector and substantial funding is needed to bring these solutions forward.

2025 PESTICIDES ANNUAL REPORT

This report, *2025 Pesticides Annual Report*, advances Principle #1 by addressing pesticide pollution through source control solutions. CASQA has identified Current Use Pesticides as a [Water Quality Priority](#), requiring solutions at a statewide scale. To advance true source control for pesticides, CASQA is actively engaged with state and federal regulators in an effort to develop an effective pesticide regulatory system, based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes. This report describes CASQA's regulatory engagement activities from July 2024 through June 2025.

¹ <https://www.casqa.org/wp-content/uploads/2022/10/final-vision-for-sustainable-stormwater-management-10-07-2020.pdf>

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Section 1. Introduction

1.1 IMPORTANCE OF CASQA'S EFFORTS TO IMPROVE PESTICIDE REGULATION

For decades, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently, several pesticides are present in California urban water bodies at concentrations above aquatic toxicity thresholds.² Our member agencies face substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs), California State Water Board Toxicity Provisions, and additional permit requirements. Throughout California, more municipalities will be subject to similar requirements, as additional TMDLs and Basin Plan Amendments are adopted (Table 1). Meanwhile, while local agencies in California have authority over their own use of pesticides, they are pre-empted by state law from regulating pesticide use by consumers and businesses to address these sources of pollution in stormwater.

Consistent with CASQA's [Vision for Sustainable Stormwater Management](#) (Vision), our efforts focus on reducing pesticide pollution at the source. Minimizing pesticide pollution before it can occur, as opposed to attempting to remove pesticides from the environment, is essential to sustainable stormwater management. True source control (the elimination of a pollutant at its source) and the use of alternative products offers the most effective and economical approach to eliminating pesticides that impair the beneficial uses of California's waterways.

² 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

Table 1. California TMDLs, Statewide Water Quality Control Plans, and Basin Plan Amendments Addressing Currently Registered Pesticides and/or Toxicity in Urban Watersheds^{3, 4, 3}

Water Board Region	Water Body	Pesticide	Status
Statewide	Statewide Water Quality Control Plan amendments for urban pesticides reduction ["Urban Pesticides Amendments"] (Inland Surface Waters, Enclosed Bays & Estuaries, and Ocean)	All Pesticides/All pesticide-related toxicity	In preparation
	Sediment Quality Objectives (Enclosed Bays & Estuaries)	Sediment Toxicity ⁶	Approved
	Toxicity Provisions (Inland Surface Waters and Enclosed Bays & Estuaries)	Toxicity	Approved May 2023 ⁷
San Francisco Bay (Region 2)	All Bay Area Urban Creeks	All Pesticide-Related Toxicity	Approved
Central Coast (Region 3)	Santa Maria River Watershed	Pyrethroids, Toxicity	Approved
	Lower Salinas River Watershed	Pyrethroids, Toxicity, Malathion, Chlorpyrifos, Diazinon ⁹	Amended by Central Coast Water Board, June 2024 ⁸
	San Lorenzo River Watershed (Santa Cruz)	Chlorpyrifos ⁹	Approved
Los Angeles (Region 4)	Marina del Rey Harbor	Copper (Marine antifouling paint) ¹⁰	Approved
	Oxnard Drain 3 (Ventura County)	Bifenthrin, Toxicity	EPA-Adopted Technical TMDL
	Calleguas Creek, its Tributaries and Mugu Lagoon	Water & Sediment Toxicity ⁷	Approved

³ Excludes pesticides that are not currently registered in California, such as organochlorine pesticides.

⁴ https://www.waterboards.ca.gov/water_issues/programs/tmdl/

³ https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_final/apx_d_adopted_tmdls_list.pdf

⁶ These TMDLs/Plan provisions can trigger toxicity testing stressor source identification studies, and additional follow up, even when toxicity is linked to current pesticides.

⁷ https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.html

⁸ https://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/salinas/oppesticides/

⁹ Use prohibited in urban areas (diazinon) or no meaningful use due to use limitations (chlorpyrifos).

¹⁰ Primarily addresses pesticides that are directly discharged and should not ordinarily appear in stormwater (marine antifouling paint).

Water Board Region	Water Body	Pesticide	Status
		Diazinon & Chlorpyrifos ⁹	
	McGrath Lake (Ventura County)	Sediment Toxicity ⁶	Approved
	Colorado Lagoon (Long Beach)	Sediment Toxicity ⁶	Approved
	Dominguez Channel; Greater Los Angeles & Long Beach Harbor	Sediment Toxicity ⁶	Approved
	Ballona Creek Estuary	Sediment Toxicity ⁶	Approved
Central Valley (Region 5)	Sacramento River and San Joaquin River Basins	Pyrethroids	Approved
	Sacramento-San Joaquin River Delta Waterways	Diazinon & Chlorpyrifos ⁹	Approved
	Sacramento & Feather Rivers	Diazinon & Chlorpyrifos ⁹	Approved
	Sacramento County Urban Creeks	Diazinon & Chlorpyrifos ⁹	Approved
	Lower San Joaquin River	Diazinon & Chlorpyrifos ⁹	Approved
Lahontan (Region 6)	Pesticide Discharge Prohibition	All Pesticides	Approved ¹¹
Santa Ana (Region 8)	Newport Bay	Copper (Marine antifouling paint) ¹⁰	Adopted by Santa Ana Water Board ¹²
	San Diego Creek, and Upper and Lower Newport Bay	Toxicity (Diazinon & Chlorpyrifos) ⁹	EPA-Adopted Technical TMDL
San Diego (Region 9)	Shelter Island Yacht Basin (San Diego Bay)	Copper (Marine antifouling paint) ¹⁰	Approved
	Chollas Creek	Diazinon ⁹	Approved

¹¹ https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/pesticidebpa.shtml

¹² https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/tmdl_metals.html

Section 2. Pesticide Program Activities

The following pesticide program activities support the development of an effective pesticide regulatory system based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes.

2.1 REGULATORY TRACKING

CASQA actively tracks a range of regulatory activities to identify potential issues and opportunities for engagement. This effort includes reviewing Federal Register and DPR notices to flag regulatory actions that may affect high priority active ingredients requiring further review. Through this tracking, CASQA can identify gaps in current procedures and highlight potential urban runoff-related impacts. CASQA also reviews relevant regulatory actions, guidance documents, and work plans from EPA and DPR to assess their alignment with urban runoff concerns and determine whether additional input is warranted.

Activities at the State and Regional Water Boards are monitored to identify opportunities for improving TMDLs, Basin Plan Amendments, and National Pollutant Discharge Elimination System (NPDES) permits. A monthly summary titled *Pesticides Regulatory Action Items* documents regulatory tracking efforts and informs future engagement. This summary is distributed to the CASQA True Source Control Subcommittee. See Attachment 1: Pesticides Regulatory Action Items for the most recent update.

2.2 REGULATORY COMMUNICATIONS

To maintain strong working relationships and to provide early input, CASQA maintains communications with both EPA and DPR. These communications may be formal through comment letters in response to regulatory actions or informal to share areas of concern or collaboration. The purpose is to provide information sharing about immediate issues or ongoing efforts and inform EPA and DPR about issues confronting the stormwater community. Early communication on upcoming proceedings can reduce the need for time-intensive letters and add context.

2.3 EDUCATION

Through presentations and discussions with EPA, DPR, Water Boards, and CASQA members, CASQA provides education on the urban runoff-related challenges of the existing pesticide regulatory process, educational efforts to support process improvements, and report on achievements. Through these educational activities, CASQA encourages research and monitoring programs to address urban runoff data needs and priorities, stimulate academic, government, or private development of analytical and toxicity identification methods to address anticipated urban runoff monitoring needs, and inform development of new pesticides by manufacturers and selection of pesticides by professional users.

2.4 PARTICIPATION IN FEDERAL AND STATE ADVISORY GROUPS

When opportunities allow, CASQA may serve on policy and scientific advisory committees convened by EPA, DPR, and the Water Boards. Through this participation, CASQA can contribute technical information, identify data gaps, and foster collaboration in the development of more effective pesticide regulatory system. CASQA closely follows relevant advisory groups such as EPA's Pesticide Program Dialogue Committee (PPDC) and DPR's Pest Management Advisory Committee (PMAC).

2.5 PESTICIDE WATCH LIST

To prioritize pesticide regulatory efforts, CASQA updates its Pesticide Watch List annually based on a combination of new scientific and regulatory literature and data analysis of the California Water Boards Statewide Ambient Monitoring Program, DPR, the U.S. Geological Survey (USGS), DPR, and MS4 monitoring. The Pesticide Watch List prioritizes pesticides based on their current and potential impacts to water quality from urban uses.

2.6 PARTNERSHIPS

CASQA and the Bay Area Clean Water Agencies (BACWA) continue to work on parallel efforts to effect long-term systemic changes in the pesticide regulatory process. CASQA and BACWA combine resources to track stormwater and wastewater priorities into a unified monthly Pesticides Action Plan. Partnering with BACWA to coordinate the review of EPA and DPR pesticide regulatory actions allows for increasing the capacity and value of our collective pesticide program activities.

Section 3. Annual Program Implementation

3.1 REGULATORY ENGAGEMENT

At any given time, there are dozens of pesticides with current or pending actions before EPA or DPR. Addressing these regulatory concerns is critical because some pesticides may pose an immediate threat to water quality and create compliance risks for MS4s. In addition, regulatory decisions made by EPA and DPR often remain in place for many years – typically revisited only once every fifteen years – making early engagement essential to avoid long-term consequences for stormwater programs. Our engagement with EPA and DPR seeks to reinforce source control measures and alternatives as an effective strategy to reduce pesticide pollution.

Table 2 summarizes recent CASQA and partner activities in responding to regulatory actions, along with the latest outcomes. For additional details on ongoing pesticide registrations, see Attachment 2: Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables.

Table 2. Recent Regulatory Activities and Outcomes

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
General Services Administration (GSA) Regulation.gov website	Comment Letter: January 29, 2021	BACWA	Success. The 2021 version of Regulations.gov limited public access and impaired CASQA's ability to access data and provide comments. CASQA submitted a comment letter to GSA identifying four issues with the regulations.gov website. While two issues were handled promptly in 2022, two issues remained that significantly hindered docket searches. In 2024, GSA updated the system to respond to all CASQA's comments. All EPA OPP documents are now accessible and searchable on Regulations.gov.
Carbaryl Proposed Interim Decision	Comment Letter: February 14, 2023		Success. CASQA provided comment in support of EPA's proposed label language mitigations for carbaryl. These mitigations include use deletions, general environmental protection measures (including water protection statements), and updated environmental hazard statements. Further, CASQA recommended label mitigation measures for consistency. These recommendations included clarification of application statement on pervious surfaces. CASQA also recommended that EPA correct the application rates in the PID mitigations to be consistent with the mitigations stated in the November 2022 Biological Evaluation Memorandum. EPA included all label language mitigation and clarifications in the Final Biological opinion as well as the application rate correction.
Carbendazim (Thiophanate methyl) Interim Decision	Comment Letter: March 23, 2023		Partial Success. EPA included many of the proposed mitigation measures outlined in the PID and our comment letter. This included a reduction in active ingredient in paint and building materials from 3,450 ppm to 2,000-2,500ppm. CASQA also recommended that EPA adapt its existing standard surface water quality modeling approach by modifying the Residential Scenario to enable risk assessment for antimicrobial pesticides, such as carbendazim, that are used outdoors for protection of building materials. However, EPA did not respond to our recommendation.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Endangered Species Act (ESA)	Comment Letter: February 13, 2023 & June 16, 2023	BACWA	Partial Success. Endangered species habitats frequently overlap with urban areas, and the ESA plays a critical role in shaping mitigation measures to protect these species. Historically, EPA has focused its ESA implementation efforts on agricultural pesticide use. In 2023, CASQA submitted two comment letters addressing ESA implementation and pesticide registrations. In 2024, the EPA announced a targeted analysis of residential pesticide use and issued a proposed guidance for antimicrobial pesticides, which included considerations for outdoor urban applications. This marks a notable shift toward incorporating residential and urban pesticide uses into the ESA review process, reflecting a longer-term evolution in EPA's approach. Furthermore, on January 15, 2025, the EPA and the U.S. Fish and Wildlife Service (USFWS) signed a joint statement of cooperation to support data sharing and process alignment. This interagency collaboration is expected to improve coordination and outcomes under the ESA.
DPR Draft Strategic Plan	Comment Letter: November 9, 2023		Partial Success. CASQA provided comment in support of DPR's plan for greater engagement, collaboration, and transparency, including a commitment to Diversity, Equity, and Inclusion (DEI). In addition, CASQA recommended that DPR revise their pesticide prioritization process to reflect a group-based approach, such as by pest or application type, rather than by active ingredient. The final DPR Strategic Plan kept all goals and details related to engagement and transparency, and DEI. The section of the plan related to pesticide prioritization was revised to focus on a science-based approach, which can be considered consistent with our recommended group-based approach. DPR is actively meeting goals within its updated strategic plan. In 2025, DPR held a pesticide prioritization process workshop and added transparency by creating a Continuous Evaluation and Mitigation webpage detailing its current actions to continuously evaluate pesticides and mitigations to protect people and the environment.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Chlorothalonil	Comment Letter: January 17, 2024		Partial success. EPA agreed that consumer product directions should be in smaller units that make sense to consumers rather than pounds active ingredient per acre. However, EPA did not extend the rain advisory from 24-hour to 48-hour, as requested by CASQA. CASQA requested EPA to include mitigation measures for the antimicrobial uses of chlorothalonil, specifically uses that occur outdoors, with potential exposure to rain, such as paints, coatings, and wood treatments. EPA responded that they do not regulate product labels for pesticide-treated products, because these are part of a “treated article exemption” for pesticide active ingredients that are intended to present the article itself. EPA stated that the “treated article exemption” gap is an area they will consider in the future.
Pesticides Label White Paper	Comment Letter: March 13, 2024	BACWA, NACWA, SFBRWQCB	Pending. CASQA is recommending that EPA: • Harmonize pesticide labeling practices with those developed by the World Health Organization and United Nations, including standards for font and pictogram usage and sizing. • Simplify pesticide label language to better accommodate the reading level of adults in the United States. Provide pesticide labels in multiple languages.
IPBC (3-Iodo-2-propynyl butylcarbamate) Draft Risk Assessment (RA)	Comment Letter: July 19, 2024	BACWA	Pending. The Draft RA acknowledged several data gaps in the IPBC ecotoxicity dataset: • Chronic ecotoxicity endpoints for freshwater invertebrates • Ecotoxicity endpoints for aquatic vascular plants • Ecotoxicity endpoints for benthic species CASQA recommended that EPA require registrants to submit the missing ecotoxicity data as noted above for freshwater invertebrates, aquatic vascular plants, and benthic species, and reevaluate risk to aquatic life with this information included.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Malathion PID	Comment Letter: September 16, 2024		Pending. The Proposed Interim Decision's (PID's) ecological risk assessment conclusions were based on a limited analysis included in the March 2024 Memorandum. While the March 2024 Memorandum was primarily focused on endangered species, but did address non-listed species, the aquatic risk assessment was limited to environmental exposure and risk associated with only three crops: corn, cotton, and citrus. The PID does not address urban and residential uses, even though residential uses account for 24 percent of overall malathion annual use. In a comment letter, CASQA recommended EPA prepare a comprehensive ecological risk assessment that is consistent with EPA's Guidelines for Ecological Risk Assessment and incorporate the findings into a revised PID. CASQA further recommended that EPA identify mitigation measures to effectively address the risks posed to aquatic life from registered outdoor, non-agricultural uses of malathion, with special attention on pollutant fate and transport in runoff from impervious surfaces to surface waters. Lastly, CASQA commented that the toxicological endpoints in the March 2024 Memorandum did not match EPA's Aquatic Life Benchmarks (ALBs) for malathion. In each case, the listed ALB is lower than the March 2024 Memorandum toxicity endpoint. The use of higher-than-recommended toxicological endpoints would likely result in underestimation of potential risk to aquatic life.
Comparison of Aquatic Life Protective Values Developed for Pesticides Under the FIFRA and the CWA	Comment Letter: January 30, 2025 & March 3, 2025		Pending. In March 2025, CASQA submitted a letter describing the need for EPA OPP actions to better align with water quality criteria in the Clean Water Act, noting that incongruence can impact permit compliance for stormwater agencies.
DPR Pesticide Prioritization Process	Comment Letter: May 7, 2025		Pending. In May 2025, CASQA submitted a comment letter in support of DPR's proposed pesticide prioritization process, including recommendations to develop a work plan-like approach to prioritization similar to Department of Toxic Substances Control's Safer Consumer Products Program.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Isocycloseram Proposed Registration if a New Active Ingredient	Comment Letter: June 10, 2025	BACWA	Pending. Isocycloseram, a new pesticide with proposed urban outdoor uses, appears to be more toxic than existing pesticides (including pyrethroids) with parallel uses. The proposed perimeter band spray label language for around structures allows for a seven-foot application band, irrespective of the permeability of the surface type surrounding the structure. For context, from 2019 to 2020, EPA worked extensively with pyrethroid registrants to develop perimeter band label language that was both effective against pests as well as protective of aquatic life. This reduced the band spray width for some applications on impervious surfaces to be just 1-inch wide. CASQA has recommended that EPA require pesticide registrants to submit revised labels for urban pesticides, using a process similar to the development of the pyrethroid labels. Further, because the proposed labels for isocycloseram allow product use in and around sewers and do not prohibit use in storm drains, CASQA recommended that EPA clarify urban labels so that isocycloseram is not applied in or around storm drains.

3.2 PARTICIPATION IN FEDERAL AND STATE ADVISORY GROUPS

As presented in Table 3, CASQA remains actively involved with various agencies and advisory groups that affect urban pesticide use and pest management. In addition to the PPDC and PMAC, new advisory groups are currently being proposed by DPR, such as a Scientific Advisory Committee and an Environmental Justice Advisory Committee.

Table 3. Participation in Federal and State Efforts to Support CASQA's Goals

Agency or Conference	Latest Outcomes
EPA's Pesticide Program Dialogue Committee (PPDC)	The 40-person committee, chaired by the Director of OPP, includes representatives from growers, industry, environmental, public health, farmworkers, as well as state/local/tribal government. The PPDC holds biannual public meetings. At the June 2025 meeting, key CASQA topics included: • OPP provided an extensive update on their 2025 goals, including proposed new active ingredients and priority and process improvements; • An update from the PPDC Label Reform Workgroup, with recommendations to support improvements to the review and approval process, quality and consistency of review and approval of labeling, and adoptability by industry and consumers; • An update on ESA Outreach and Education.
DPR's Pest Management Advisory Committee (PMAC)	Victoria Kalkirtz (co-chair of the True Source Control Subcommittee) participates on the PMAC. Participation on the PMAC has resulted in expanded focus by DPR on urban pest management and water quality issues and generated funding for urban IPM research and implementation programs. In February 2025, the PMAC considered 21 research grant proposals.

3.3 UPDATED PESTICIDE WATCH LIST

A key tool for identifying near-term regulatory concerns is the Pesticide Watch List. To maintain the Pesticide Watch List, scientific literature, government reports, and monitoring studies are reviewed as they are published. This information is used to prioritize pesticides based on the most up-to-date understanding of urban uses, pesticide characteristics, monitoring, and surface water quality toxicity (for pesticides and their degradates). The Pesticide Watch List, as shown on Table 4, serves as a management tool to help focus efforts on the most important pesticides from the perspective of MS4 agencies.¹³ The Pesticide Watch List serves as a benchmark to prioritize activities, but it is not based on a comprehensive review of all pesticides. As a result, during regulatory tracking, CASQA watches for additional pesticides that appear to have any of the following characteristics: proposed urban, outdoor uses with direct pathways for discharge to storm drains, high aquatic toxicity, or containing a priority pollutant.

The 2025 investigation assessed Watch List chemicals, incorporating information from the following surface water monitoring programs:

- **DPR:** (1) Study 329. *Surface Water Monitoring for Pesticides in Urban Areas of Northern California (FY2023-2024)*, McClanahan 2025 and (2) Study 320. *Ambient Surface Water and Mitigation Monitoring in Urban Areas in Southern California (FY2022-2023)*, Nepal 2024.

¹³ The first Watch List was published by the UP3 in 2005.

- **San Francisco Estuary Institute (SFEI):** Vuckovic, D et al. Pharmaceuticals, pesticides, and ultraviolet filters in wastewater discharges to San Francisco Bay as drivers of ecotoxicity. Environmental Pollution 336. SFEI Contribution No. 1153. San Francisco Estuary Institute, 2023.
- **Delta Regional Monitoring Program:** Current Use Pesticides monitoring data (available from CEDEN).
- **MS4/NPDES monitoring:** the Bay Area Municipal Stormwater Collaborative and the Southern California Stormwater Monitoring Coalition.
- **Additional study:** Li, Zhong-Min et al. 2025. A survey of 27 quaternary ammonium compounds in surface water, drinking water, stormwater runoff, swimming pool water, and rainwater from New York State, USA. Water Research 282 (2025) 123736.

The available data were compared to aquatic toxicity thresholds, represented by Aquatic Life Benchmarks established by EPA based on Ecological Risk Assessments. For the DPR data sets, this comparison was performed by DPR and reported in the associated study reports. Following the review of monitoring data, additional factors were checked, including section 303(d) impaired waters listings and pesticide product uses. Based on the review, the following Watch List updates were implemented:

- **Confirmation of Priority 1 pesticides.** All of the pesticides listed under Priority 1 exceeded EPA's Aquatic Life Benchmarks in the latest monitoring data provided by DPR for Southern California and Northern California urban watersheds. These pesticides continue to be the highest concern.
- **Quaternary Ammonium Compounds (QACs).** QACs are antimicrobial pesticides that are used in many products, including disinfectants and algicides. The previous Watch List focused on one key QAC family, ADBAC.¹³ Since then, several studies have looked more closely at QACs in stormwater, including Lin, et al. 2025. These studies identified numerous additional QAC families in stormwater, often at concentrations higher than swimming pool water or wastewater. In response, the Watch List has been updated to include the general category of QACs, with specific QAC families of interest listed in the footnote.
- **Removal of Dacthal (DCPA) from Watchlist.** In August 2024, EPA issued an emergency order to remove all registered uses of Dacthal due to significant concerns for human health.
- **Addition of Isocycloseram to “Keep Watching” section of the Watch List.** Isocycloseram is a new pesticide that appears to be more toxic to aquatic invertebrates than existing pesticides for parallel uses. Its approved use on outdoor impervious surfaces – including applications up to seven feet wide for structural perimeter treatments – is of particular concern.
- **Addition of Veratridine to “Keep Watching” section of the Watch List.** Veratridine is a new pesticide that is expected to be a pyrethroid replacement. The limited data available indicates that veratridine may have aquatic toxicity characteristics.

¹³ Alkyl Dimethyl Benzyl Ammonium Chlorides (ADBAC) include a family of 21 different quaternary ammonium pesticides.

Table 4. Pesticide Watch List

Priority	Basis for Priority Assignment	Pesticides	
1	Monitoring data exceeding benchmarks; linked to toxicity in surface waters; urban 303(d) listings	Diuron Fipronil Imidacloprid Malathion Pyrethroids with significant monitoring data: • Bifenthrin • Cyfluthrin • Cyhalothrin (lambda • Cypermethrin • Deltamethrin/Tralomethrin • Esfenvalerate/Fenvalerate • Permethrin	
2	Monitoring data approaching benchmarks; modeling predicts benchmark exceedances; very high toxicity and broadcast application on impervious surfaces; urban 303(d) listing for pesticide, degradate, or contaminant that also has non-pesticide sources	Carbendazim/Thiophanate-methyl Chlorantraniliprole Clothianidin (Neonic) Copper pesticides ¹⁴ Creosote (PAHs) Indoxacarb Pendimethalin Polyhexamethylenebiguanidine (PHMB) ^{Error! Bookmark not defined.} Pyrethroids with little or no monitoring data ¹⁵ Simazine Thiamethoxam (Neonic, degrades into Clothianidin) Zinc pesticides (including Ziram) ^{Error! Bookmark not defined.} 2,4-D ¹⁶	
3	Pesticide contains a Clean Water Act Priority Pollutant; 303(d) listing for pesticide, degradate, or contaminant in watershed that is not exclusively urban	Arsenic pesticides Bensulide Chromium pesticides Dichlorvos (DDVP)	Naled Naphthenates Silver pesticides ^{Error! Bookmark not defined.} Trifluralin
4	High or unknown toxicity (parent or degradate) and urban use pattern associated with water pollution; synergist for higher tier pesticide; on DPR priority list	Antimicrobials in paints/coatings Abamectin Quaternary Ammonium Compounds (QACs) ^{Error! Bookmark not defined.} ¹⁷ Azoxystrobin <i>Bacillus sphaericus</i> ^{Error! Bookmark not defined.}	Methoprene ^{Error! Bookmark not defined.} Mineral bases, weak ^{Error! Bookmark not defined.} Mineral oil (aliphatic) ^{Error! Bookmark not defined.} Methoxyfenozide Methyl anthranilate ^{Error! Bookmark not defined.}

¹⁴ Used in pools, spas, and/or fountains.

¹⁵ Pyrethroids *with little or no* urban monitoring data include Allethrin, Cyphenothrin, Etofenprox, Flumethrin, Imiprothrin, Metofluthrin, Momfluorothrin, Prallethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate, Tefluthrin, and Tetramethrin. Etofenprox is included in SoCal analytes but has not been detected; there continue to be no NorCal monitoring data for etofenprox.

¹⁶ These pesticides may have dioxins as contaminants; there are several bay and estuary 303(d) listings for dioxin compounds.

¹⁷ QACs found in stormwater include DDACs, ADBAC, ATMACs, BACs, EBAC, and others. Discharges from pools, spas, and fountains can be a source of QACs in stormwater but the main sources of QACs in stormwater are undetermined at this time.

Priority	Basis for Priority Assignment	Pesticides	
		<i>Bacillus thuringiensis</i> (Bt) Error! Bookmark not defined. Bromacil N-Bromosulfamates Error! Bookmark not defined. Busan-77 Error! Bookmark not defined. Carbaryl Chlorinated isocyanurates ² Chlorine Error! Bookmark not defined. Chlorine dioxide Error! Bookmark not defined. Chlorfenapyr Chlorothalonil ¹⁶ Chlorsulfuron DCOIT Error! Bookmark not defined. DDAC Error! Bookmark not defined. Dichlobenil Dithiopyr Halohydantoins Error! Bookmark not defined. Hydramethylnon Hypochlorites Error! Bookmark not defined. Imazapyr Isoxaben Mancozeb Methomyl	MGK-264 Novaluron Oryzalin Oxadiazon Oxyfluorfen PCNB Peroxyacetic acid Error! Bookmark not defined. Phenoxy herbicides ¹⁸ Piperonyl butoxide (PBO) Prodiamine Propiconazole Pyrethrins Pyriproxyfen Error! Bookmark not defined. Sodium bromide Error! Bookmark not defined. Sodium chlorite ² Sodium percarbonate Error! Bookmark not defined. Sodium tetraborate Error! Bookmark not defined. Spinosad/Spinetoram Sulfometuron-methyl Tebuconazole Terbutylazine Error! Bookmark not defined. Triclopyr Triclosan Trimethoxysilyl quats
5	Frequent questions from partners ¹⁹	Glyphosate Metaldehyde	
Keep Watching	Urban pesticides that may threaten water quality depending on approved urban use patterns.	Acetamiprid (Neonic) Cyantraniliprole Dinotefuran (Neonic) Flupyradifurone (Neonic-like) Sulfoxaflor (Neonic-like)	Isocycloseram Veratridine (pyrethroid replacement)
None	Based on review of available data, no approved urban use or no tracking trigger as yet identified.	Most of the >1,000 existing pesticides	
Unknown	Lack of information. No systematic screening has been completed for the complete suite of urban pesticides.	Unknown	

¹⁸ MCPA, 2,4-DP, MCPP(Mecoprop), Dicamba. 2,4-D is listed separately.

¹⁹ Chlorpyrifos and Diazinon, while often asked about, have near zero or no urban uses, respectively.

3.4 PARTNERSHIPS

CASQA and BACWA continued to combine resources to track stormwater and wastewater priorities into a unified monthly pesticide action plan (see Attachment 1: Pesticides Regulatory Action Items for the most recent update). In July, CASQA and BACWA jointly met with DPR to strengthen relationships and receive updates to their Sustainable Pest Management (SPM) initiatives. CASQA will continue to seek opportunities to support DPR's efforts across the SPM focus areas, and work with BACWA on areas of shared priority.

Section 4. Assessment of Progress

Since the mid-1990s, CASQA (and its predecessor organization the Stormwater Quality Task Force) has worked toward a future in which the pesticide regulatory structure at the state and federal level regulates pesticide uses to protect water quality. CASQA's long-term pesticide program activities focus less on specific pesticides and more on instilling systematic process improvements. A central aspect of achieving these changes involves supporting key initiatives at EPA, DPR, and the Water Boards that make progress toward these changes

4.1 STATE-LEVEL PROGRESS

At the state level, significant progress has been made by DPR in addressing current problems with pesticides in surface waters receiving urban runoff. DPR continues to implement improved registration processes and responses to observed water quality problems. DPR also continues to implement and evaluate mitigation measures for observed problems with pyrethroids and fipronil.

DPR's transition to Sustainable Pest Management (SPM) offers promising opportunities to reshape how pesticides are used and evaluated in California. SPM is a holistic, systems-based approach that integrates pest control with broader goals related to environmental protection, public health, and economic vitality. DPR released its final SPM Roadmap in January 2023, outlining four key leverage points for urban implementation:²⁰

1. Enhance data and information collection for urban pesticide use
2. Advance research and outreach on urban pest management issues
3. Make SPM the preferred choice for both licensed and unlicensed users
4. Refocus urban design, building codes, and regulations to enhance pest prevention

Furthermore, in 2014, the State Water Board established an urban pesticides reduction project (now titled the Statewide Urban Pesticide Provisions or UPP) as a top priority under the comprehensive stormwater strategy, known as "Strategy to Optimize Resource Management of Stormwater" or STORMS. CASQA has been actively supporting the development of the UPP since their inception.

Overall, DPR has a system in place that is reasonably effective at addressing pesticide toxicity in urban water bodies, although improvement is needed to better coordinate this process with the requirements of the Clean Water Act and MS4 permits. The goal is to embody this process in the State's UPP and the Management Agency Agreement (MAA) between DPR and the Water Boards

4.2 FEDERAL-LEVEL PROGRESS

CASQA's engagement with EPA focuses on promoting the standardization in labeling, enhancing modeling of pesticide use and water quality impacts, and ensuring Endangered Species Act (ESA) considerations are incorporated into regulatory decisions. Our regulatory activities, as described by Table 2, show moderate success in addressing pesticide registration decisions. However, EPA analyses do not show a clear understanding of key urban uses, and it is still unclear if upcoming risk management decisions for pyrethroids, fipronil, and imidacloprid and other neonicotinoids will provide any additional protection of urban water bodies. Consequently, further engagement on pesticide registration decisions is necessary to effectively communicate the impacts of urban use pesticides to water quality.

²⁰ https://www.cdpr.ca.gov/docs/sustainable_pest_management_roadmap/spm_executive_summary.pdf

Section 5. Looking Forward

In the coming year, CASQA will continue to address near-term pesticide concerns and seek long-term regulatory change. In the coming year, CASQA will continue engagement on specific regulatory actions for priority pesticides at the federal level, while continuing to support DPR in their rollout of the SPM initiative and their proposed Pesticide Prioritization Process. The pesticide program's priority focus areas include:

(1) Seek near-term changes in pesticide regulatory actions:

- Support completion of DPR action on fipronil water pollution, including implementation of effective education for professional users regarding restrictions on its outdoor urban use.
- Advocate for the enforcement of DPR's existing mitigation measures for pyrethroids and fipronil and recommend adoption of additional mitigation measures as warranted.
- Support completion of DPR's evaluation of the impacts of neonicotinoid pesticides on aquatic organisms.
- Continue to respond to EPA pesticide registration decisions, including the eight proposed new active ingredients slated for review in the coming fiscal year.

(2) Seek long-term changes in the pesticide regulatory structure:

- Continue engagement with EPA regarding incorporating their ESA obligation in registrations and re-registrations, including recommending the use of pictograms in labels, and seeking opportunities in California for EPA's future regional and vulnerable species pilot programs.
- Continue engagement with DPR regarding the SPM Roadmap specific to urban implementation programs and opportunities.
- Support DPR's proposed pesticide prioritization process as an effective pathway to prioritize pesticides under their continuous reevaluation process.
- Encourage and assist the Water Boards to continue to implement its MAA with DPR to prevent and mitigate pesticide impairments through more effective pesticide regulation.

CASQA will continue to seek opportunities to coordinate on high-priority regulatory actions with the Water Boards and other water quality stakeholders to take advantage of efficiencies and increased effectiveness. Attachment 1: June Pesticides Regulatory Action Items details the prioritization and estimated schedule of future pesticide regulatory items, which serves as the basis for planning future pesticide regulatory activities.

Attachment 1: Pesticides Regulatory Action Items

Estimated CA DPR Schedule (Next 12 months):

Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
2	Non-agricultural neonics (acetamiprid, clothianidin, dinotefuran, & thiamethoxam)	Q2 2025	 	DPR Draft Human Health Assessment	High toxicity, monitoring data, 303(d) listings
2	Non-agricultural neonics (acetamiprid, clothianidin, dinotefuran, & thiamethoxam)	Q3 2025	 	DPR Draft Environmental Assessment for aquatic organisms	High toxicity, monitoring data, 303(d) listings

Estimated US EPA Schedule (Next 12 months):

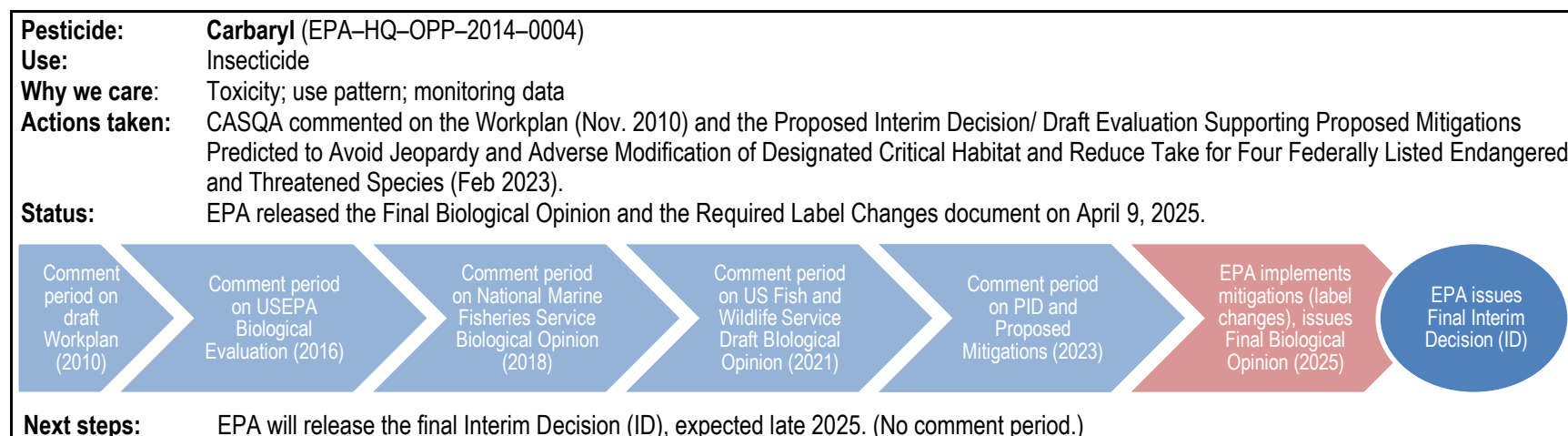
Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
unknown	New Antimicrobials	various	 	various	Varied; many of these pesticides are showing up for the first time at the PID level; review is needed to screen these for water quality issues
2	2,4-D	2025		PID	Pesticide with dioxins impurity
1	Fipronil	2025	 	PID	Monitoring data; Anticipated 303(d) listings
1	Imidacloprid	2025	 	Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
2	Thiamethoxam	2025		Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
2 3	Clothianidin	2025	 	Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
3	Bioban P-1487	2025		RA	Antimicrobial
3	Bronopol	2025		RA	Antimicrobial
3	Dichlorvos (DDVP)	2025		PID	Organophosphate insecticide
3	Naled	2025		PID	Degrades to DDVP
3	Diuron	2025		PID (Re-release of PID)	303(d) listings
3 4	Isothiazolinones (includes DCOIT, BBIT, BIT, MIT, OIT)	2025	 	RA	Antimicrobials. Uses include paints.
3 5	Dinotefuran	2025	 	PID	Neonicotinoid. Toxicity.
4	Dicamba	2025		PID	Toxicity, stormwater monitoring data
4	Peroxy Compounds (peroxyacetic acid)	2025	 	PID (re-release)	Fountain chemical
4	Sodium percarbonate	2025		PID	Pool chemical
4	Bacillus thuringiensis (Bt)	2025		Draft RA	Used in pools, spas, and fountains.
4	Piperonyl butoxide (PBO)	2025		PID	Pyrethroid synergist

Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
4	Pyrethrins	2025		PID	Related to pyrethroids, but less stable and less toxic
4	Tebuconazole	2025		PID	Fungicide
4	MGK-264	Reissue in 2025		PID	Pyrethroid synergist
5	Acetamiprid	2025		PID	Neonicotinoid. Toxicity.

Key: RA = Risk Assessment; PID = Proposed Interim Decision; BE (ESA) = Biological Evaluation (Endangered Species Act)

Attachment 2: Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables

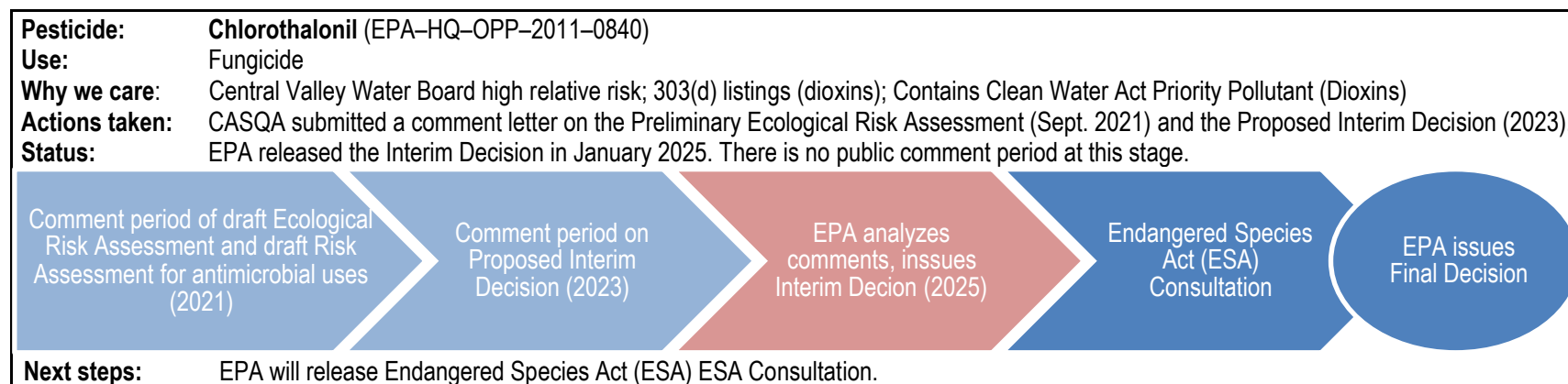
Carbaryl Regulatory Participation Outcome and Effectiveness Assessment Summary Table



CASQA Feb 14, 2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
Comment #1: CASQA Supports EPA's Proposed Mitigation Measures for Carbaryl CASQA provided support for EPA's proposed label language mitigations for carbaryl. These mitigations include use deletions, spray drift management measures, general environmental protection measures (including water protection statements), and updated environmental hazard statements.	EPA included the Proposed Interim Decision (PID) agreements in the Final Biological Opinion (BiOp).	Yes.
Comment #2: CASQA Suggests Label Mitigation Measures for Consistency CASQA recommended edits to label mitigation measures for consistency. These recommendations included clarification of	EPA included the reduced rates of application for turf, golf courses, and ornamental plants/trees in the Final BiOp. (Final BiOp, p.40-41)	Yes.

CASQA Feb 14, 2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
application statement on pervious surfaces. CASQA also asked that EPA correct the application rates in the PID mitigations to be consistent with the mitigations stated in the November 2022 Biological Evaluation Memorandum titled, Draft Evaluation Supporting Proposed Mitigations Predicted to Avoid Jeopardy and Adverse Modification of Designated Critical Habitat and Reduce Take for Four Federally Listed Endangered and Threatened Species: • The PID notes [p.41] that: "Reducing the maximum annual application rate for turf to 16 lbs. ai / acre (currently labeled maximum annual application rate for residential turf and golf courses is 36 lbs. ai / acre and 32 lbs ai / acre for sod)" • However, the BE Memo documents the pesticide registrants' recommendations [Appendix C. Summary of Mitigations from Carbaryl Registrants for Listed Species, p. 85]: ○ Ornamental Trees and Plants 1. Maximum Annual Amount: 4 lbs. ai / acre (currently 6 lbs. ai / acre) 2. Maximum Annual Number of Applications: 4 (currently 6 lbs. ai / acre) ○ Turfgrass (Golf Turf, Sports Fields, Sod Farms, Domestic and Commercial Lawns, Cemeteries, Parks, Campsites, Recreational Areas) 1. Maximum Annual Amount: 10 lbs. ai / acre (currently 16 lbs. ai / acre) 2. Maximum Application Rate: 5 lbs. ai / acre (currently 8 lbs. ai / acre)		

Chlorothalonil Regulatory Participation Outcome and Effectiveness Assessment Summary Table



CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
Comment #1: Include mitigation measures for antimicrobial uses - Include mitigation measures for the antimicrobial uses of chlorothalonil, specifically uses that occur outdoors, with potential exposure to rain, such as paints, coatings, and wood treatments. Label mitigations, similar to those for conventional uses, could include: - Advisory Statement: "This product is toxic to fish, aquatic-phase amphibians, and aquatic invertebrates." (PID, Appendix B, p.80) - Surface Water Advisory Statement: "Surface Water Advisory. This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils"	"EPA thanks CASQA for their comment on the PID. Due to chlorothalonil's niche use as one of the few remaining preservatives for solvent-based paints, low risks to human health and the extremely conservative nature of the ecological risk assessment for chlorothalonil treated products, EPA did not identify a need to include additional mitigation language on labels for chlorothalonil-treated products. Additionally, EPA does not regulate language on product labels for exempt pesticide-treated products, including chlorothalonil-treated paints or building materials. These products fall under the "treated article exemption" as long as the inclusion of the pesticide active ingredient is only intended to preserve the	The EPA noted that the "treated article exemption" gap is an area they will consider in the future. However, EPA did not include the requested additional mitigation language on chlorothalonil-treated products.

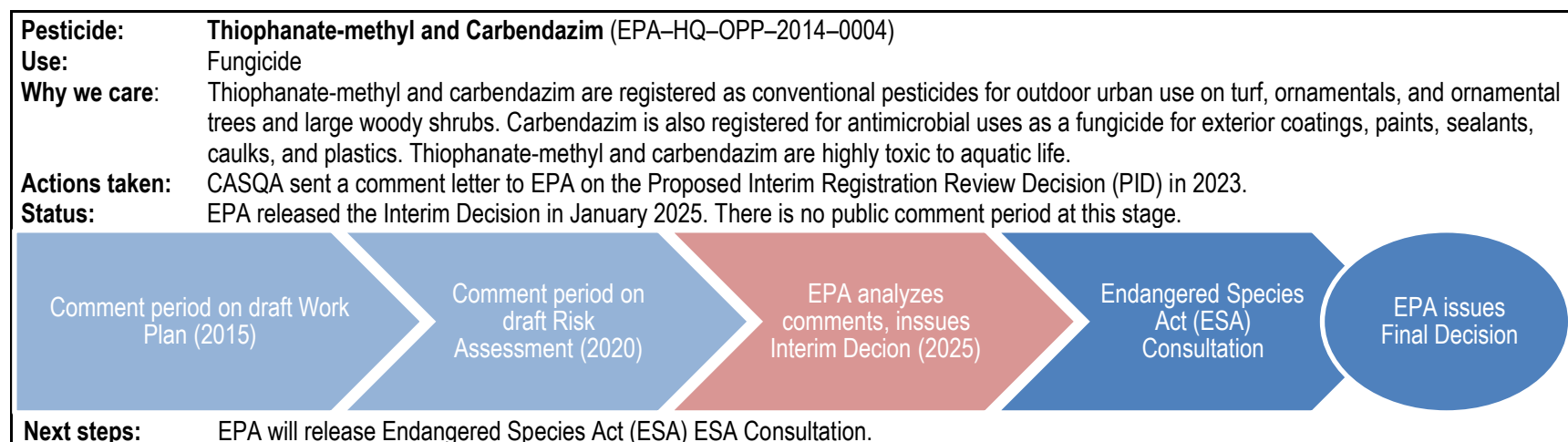
CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
and soils with shallow ground water. This product is classified as having a [medium/large] potential for reaching both surface water and aquatic sediment via runoff for several months or more after application.” (PID, Appendix B, p.80) - Ecological Incidents Statement: “REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA’s Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call (registrant phone number).” (PID, Appendix B, pp.83-84) - Consistent with other recent EPA pesticide label updates, all warning and advisory labels should be provided in both English and Spanish.	material itself and not objects that may be painted with or otherwise come into contact with the treated articles. However, EPA has solicited comments on the issue of including label language on treated paint cans in a recent Advanced Notice of Proposed Rulemaking (ANPRM) that was released for public comment. The Office of Pesticide Programs (OPP) continues to look into this issue. Finally, EPA does not require registrants to use specific units when describing application rates of antimicrobial pesticide products. As these products are often being used in the manufacture of chlorothalonil-treated products, EPA defers to product registrants who are more familiar with the manufacturing settings to choose how application rates should be communicated. That being said, EPA converts all application rates to parts per million (PPM) for the purposes of assessing risk, so product application rates may be compared to one another.” (ID, pp.37-38)	
Comment #2: For both conventional and antimicrobial uses, revise label language for consumer use - Revise the proposed label improvements for the maximum annual application rate for consumer products to be stated in square feet instead of acreage. - Revise the proposed label improvements for the maximum annual application rate for consumer	“EPA appreciates CASQA’s feedback on the annual application rate for non-agricultural/ consumer products containing chlorothalonil. EPA agrees that lbs a.i./acre is not a meaningful unit of measure for residential non-commercial agriculture products. However, the Agency notes that the application rates are not listed in lbs a.i./ acre on these types of products, and that products intended for	EPA agreed that consumer product directions should be in smaller units that make sense to consumers. Individual manufacturers of these consumer products can include these smaller units in their registration/ reregistration applications or label updates to EPA.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
products to be stated fluid ounces instead of pounds for liquid formulations. Revise antimicrobial labels to units that are more intelligible for consumers. For example, instead of 0.12 pounds of pesticide product per 100 pounds of adhesive [EPA Reg #:53883-186], we suggest that this be scaled to amounts used by consumers, in the units proportional to that amount, such as ounces instead of pounds of pesticide product.	residential use express the application rate in smaller units, such as ounces, teaspoons/gallon, or pounds/square foot." (ID, pp. 28-29)	
Comment #3: Adopt a 48-hour warning instead of the proposed 24-hour warning for conventional uses Use a 48-hour rain advisory instead of the proposed 24-hour rain advisory in following label sections: - For Liquid Concentrate Products: "To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 - 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems." - For Granule Products: "To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Sweeping any product that lands on a driveway,	"EPA appreciates CASQA's proposal to extend the period prior to rainfall where application is prohibited from 24 hours to 48 hours and acknowledges that 24-hour rainfall statement included in this ID for chlorothalonil is inconsistent with the 48-hour rainfall statements included in registration review decisions for other active ingredients. Rainfall statements, like other mitigation measures, are developed on a case-by-case basis by considering the risks and benefits of the pesticide. EPA identified that a 24-hour interval was appropriate for chlorothalonil. Fungicides, including chlorothalonil, are often used as protectants and require applications be made immediately prior to anticipated rain events to prevent disease from occurring or worsening due to wet conditions. The rainfastness, or the interval between a fungicide application and a rain event for which a pesticide product maintains effectiveness, for most fungicides varies from	EPA did not adjust the 24-hour warning as requested. EPA noted that it makes exceptions to the typical 48-hour warning on a case-by-case basis.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems.” For Ready to Use Products: “To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area.”	15 minutes to 24 hours. For this reason, EPA modified the interval from the standard 48 hours to 24 hours for chlorothalonil to maintain fungicidal effectiveness while also providing protection against runoff.” (ID, p. 29)	
Comment #4: CASQA supports proposed label improvements for conventional uses CASQA supports EPA’s proposed label improvements for conventional uses of chlorothalonil (PID, Appendix B, pp.79-98), including: - Updated Non-Target Organism Advisory Statement: “This product is toxic to fish, aquatic-phase amphibians, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.” - Ecological Incidents Statement: “REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA’s Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call (registrant phone number).” - Updated Surface Water Label Advisory: “Surface Water Advisory. This product may impact surface water quality	“EPA thanks SRSWPP and CASQA for their support of the mitigation measures proposed in the PID.” (ID, p.28)	The supported mitigation measures remain in the final ID.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several months or more after application.”		

Thiophanate-methyl and Carbendazim Regulatory Participation Outcome and Effectiveness Assessment Summary Table



CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
EPA's proposed mitigation measures for Thiophanate-methyl and Carbendazim are appropriate and necessary to protect aquatic life. Ornamental commercial spot treatment restriction for thiophanate-methyl (TM): "Broadcast uses of TM for ornamentals with rates of 26 lbs ai/A and 20 lbs ai/A are limited in application to spot treatment only. Spot treatment is defined as a small, localized area (not to exceed 1,000 sq ft per acre where pests are found)." [PID, p.88]	"EPA thanks CASQA and SSQP for their comments on CWA compliance and comments supporting the proposed mitigation." (ID, pp.17-18) EPA made considerable changes to the list of mitigations since the PID was published in 2022. (ID, p.7 and pp. 103-124) Changes relevant to CASQA include: Updated mitigation for use on turf (now allows a higher use rate [0.1232 lbs.	EPA included many of the proposed mitigation measures outlined in the PID and our comment letter. Although the reduction in active ingredient in paint and building materials is not as large as expected, it still results in a significant reduction given that these materials are currently being sold at 3,450 ppm. (The new requirements will reduce materials down to 2,000-2,500ppm.)

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
2. Maximum application rates and numbers of applications. "Set the maximum annual application rates and number of applications for the following to: Turf: 0.78 lbs ai/A at 2 applications per year. Residential ornamentals: 1.8 lbs ai/A at 2 applications per year." [PID, p.88] 3. Updated Environmental Hazard Statement and Surface Water Advisory Statement. "For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwater or rinsate". and "This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching aquatic sediment via runoff for several months or more after application. A level, well-maintained buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of TM and MBC. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff." [PID, p.93] 4. Deletion of Use of MBC Materials Preservative in Vinyl Flooring (includes outdoor vinyl flooring). "This product is not to be used as a material preservative intended for use in polyvinyl	ai/A] if resident applies once per year instead of twice per year) (See #2 in column to the left) - Updated mitigation for use on ornamentals to reduce the concentration of pesticide allowed but to allow it to be used over a greater area. [Reduce the maximum application rate from 26 lb ai/A to 12.5 lb ai/A and increase the size of the treatment area from 1,000 to 5,000 sq ft. Add new directions to label: (1) Don't apply more than 0.287 lb ai/A to a 1,000 sq ft treatment area, (2) Don't apply more than 5,000 sq ft treatment area in an acre and (3) Don't apply more than 1.435 lb in an acre per year. (See #1 in column to the left) - Updated rate reductions in paints, caulks, plasters, sealants, and adhesives. Instead of reducing the concentration of the pesticide in paints and caulks/plasters/sealants/adhesives (See #5 in column to the left), EPA instead reduced the concentration in paints to 2,500 ppm and the concentration in caulks/plasters/sealants/adhesives to 2,000 ppm. EPA stated that, "Although risk remains with this change, the risk considerations are balanced with the results of the benefits assessment and	

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
chloride (PVC) flooring." Remove all references (including, but not limited to, all use directions) to polyvinyl chloride (PVC) flooring within material preservation section." [PID, p.101] 5. Rate reduction to 1,265 ppm for paint preservative uses. "Maximum application rate for paint, caulk, plaster, sealants, and inks must not exceed 1,265 ppm (or equivalent)." [PID, p.101]• "Treat surfaces to ensure thorough coverage but avoid runoff."	the Agency has determined that lowering the rate to 1,265 ppm as previously proposed would create undue burden to end-users." (ID, p.20) • Added incident reporting language for ecological incidents with EPA's new incident reporting website as well as a placeholder space for the pesticide registrant's phone number. • Removed MBC use in <u>all</u> plastic, not just vinyl flooring. EPA stated that, "In order to mitigate risks from MBC-treated vinyl flooring, the Agency determined that the plastics (PVC) use needs to be deleted from registered products." (ID, p.93) • EPA kept the same environmental hazard statement and surface water advisory statement as drafted in the PID. (See #3 in column to left)	
As noted in Sacramento County's 2020 comment letter, MBC is commonly detected in California surface waters. As summarized in that letter, California DPR's surface water quality (SURF) database contains numerous water quality monitoring detections of carbendazim in urban creeks, including many approaching or exceeding the lowest Aquatic Life Benchmark (0.99 ppb, for fish/chronic).	EPA acknowledged that MBC is often detected in California surface waters. (ID, p. 18)	EPA acknowledged CASQA's comment about monitoring data.

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
EPA should develop PRZM modeling scenario to quantitatively assess risks to aquatic life from antimicrobials used in building materials preservation EPA should adapt its existing standard surface water quality modeling approach by modifying the Residential Scenario running under PRZM/PWC to enable risk assessment for antimicrobial pesticides, such as carbendazim, that are used outdoors for protection of building materials.	No response.	EPA did not respond to this comment.

DPR Draft Strategic Plan Comment Letter Outcome Summary Table

Pesticide-related issue:	California Department of Pesticide Regulation (DPR) Draft 2024-2028 Strategic Plan
Why we care:	The Strategic Plan, updated every 5 years by DPR, sets the priorities for pesticide-related work for the State of California.
Actions taken:	CASQA submitted a comment letter to DPR on November 10, 2023.
Status:	DPR released a final 2024-2028 Strategic Plan in December 2024.
Next steps:	No action needed at this time. The next strategic plan update is expected in 2028.

CASQA 11/10/2023 Comments to DPR	Did DPR incorporate CASQA's comment?
CASQA SUPPORTS DPR'S PLAN FOR GREATER ENGAGEMENT, COLLABORATION, AND TRANSPARENCY. CASQA appreciates that collaboration is a core value in the Draft Strategic Plan. Collaboration is demonstrated throughout the document, with goals for greater engagement and transparency. Similarly, CASQA has identified potential partners, including DPR, whose missions are complementary to achieving CASQA's Vision. As a collaborative partner, CASQA can provide stormwater-sector expertise and perspective, especially as it relates to the development of a SPM advisory group (Goal 1.1). Furthermore, we are also encouraged by Goal 1.1 to "enhance and modernize the collection of information and data to improve program policies, procedures, and priorities" as doing so provides transparency to the pesticide regulatory process. Transparency is further established through the development of a SPM Certification program (Goal 1.1) and the issuance of timeline projections for scientific data evaluations (Goal 1.2). We support increased outreach to local urban communities outlined in Goal 3, including: • Goal 3.1: Broaden opportunities for regular, transparent, and meaningful access to DPR.	DPR kept all the goals and details on engagement, collaboration, and transparency from the draft plan in the final plan.

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• Goal 3.2: Improve information access and data sharing. • Goal 3.3: Launch a statewide restricted material pesticide application notification system. • Goal 3.4: Expand language access throughout California in collaboration with federal, state and local partners. CASQA hopes that this greater engagement, collaboration, and transparency will specifically include stormwater agencies since stormwater agencies may have primary responsibility for the adverse environmental impacts of pesticides in waterways.	
CASQA SUPPORTS DPR'S COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION (DEI). CASQA supports DPR's commitment to (DEI), especially as it relates to Goal 2.1 to increase access to information and data collection. DPR's support of sustainable pest management in disadvantaged communities has the dual effect of reducing pesticide-related health impacts within vulnerable populations and reducing the burden of pesticide run-off on aquatic life. CASQA encourages outreach to occur through local partners, who have established trust and understand community-specific needs, in collaboration with governmental agencies and County Agricultural Commissioners.	The final plan has a large section on DPR's commitment to DEI.
REVISE GOAL 1.3 TO REFLECT A GROUP-BASED PESTICIDE PRIORITIZATION PROCESS RATHER THAN BY ACTIVE INGREDIENT. CASQA recommends that DPR focus on categories of pesticides by use, rather than individual pesticide active ingredient. CASQA encourages DPR to move forward with a use group-based analysis for pesticide prioritization, rather than an individual analysis by active ingredient. As a result, CASQA recommends that Goal 1.3, 2nd, 3rd and 4th Bullets be revised to state: • By 202_, establish a <u>use group-based</u> pesticide prioritization process, informed by a diverse, cross-sector SPM advisory group and	DPR revised Goal 1.3 in the final plan: Goal 1.3: Develop and implement a science-based prioritization process for reviewing, identifying and evaluating high-risk pesticides, their alternatives and related mitigation measures. • By 2025, annually release a report that includes a list of pesticide risk assessments, reevaluations and mitigation efforts, and progress toward meeting their identified target completion dates.

CASQA 11/10/2023 Comments to DPR	Did DPR incorporate CASQA's comment?
consultation, external engagement, and public input, to take expeditious action on risk determinations and to identify and evaluate the availability of alternatives. • By 202_, begin an annual process of initiating formal mitigation for at least two identified priority pesticides <u>uses</u>. • By 202_, begin an annual process of completing formal mitigation for at least two identified priority pesticides <u>uses</u>.	• By 2025, establish a science-based pesticide prioritization process, informed by a diverse, cross-sector advisory committee, external engagement, and public input, to prioritize pesticide use risks, identify and evaluate the availability and feasibility of alternatives, and take expeditious action for completing mitigation. • By 2025, initiate reevaluation for at least one pesticide each year, increasing to at least two pesticides each year in 2029. • By 2025, where DPR has identified potential adverse effects through a reevaluation, adopt any necessary mitigation measures within two years.

GSA Regulations.Gov Comment Letter Outcome Summary Table

Pesticide-related issue:	Problems with Regulations.gov (website managed by the U.S. General Services Administration (“GSA”)) The 2021 version of Regulations.gov limits public access and impaired CASQA’s ability to access data and provide comments.
Why we care:	The federal government’s Regulations.gov website is where almost all the pesticide-related information is released by the EPA.
Actions taken:	CASQA submitted a comment letter to GSA on issues with the regulations.gov website on July 29, 2021.
Status:	GSA updated the regulations.gov website in late 2024.
Next steps:	No action needed at this time.

CASQA 7/29/2021 Comments to GSA	GSA Response
Docket subscription service termination. The subscription services feature formerly available on Regulations.gov is essential to CASQA, as it undoubtedly is to countless interested parties attempting to track changes in federal rules and regulations. Subscribing to a docket is the only reasonably efficient way to know when USEPA posts something on the docket, such as a comment period extension notice...The subscription feature is not currently functioning—no new subscriptions can be added. Subscriptions that CASQA enrolled in several years ago are still functioning, but there is no ability to add new subscriptions.	GSA docket subscription services resumed operations in 2022.
Search non-functional. The new Regulations.Gov docket’s search engine is essentially non-functional. CASQA has attempted many searches, including trying to look up historical comment letters on a pesticide docket. While the previous version of the Regulations.Gov site was easy to search, the new version’s search engine does not provide any results. We request that the search function be revised to provide meaningful search results	GSA fixed the search function in 2022.
Search cannot handle standard dash formats. In the prior version of Regulations.Gov, CASQA could easily cut and paste a docket number from the	GSA updated the system so that standard dash formats could be used in late 2024.

CASQA 7/29/2021 Comments to GSA	GSA Response
Federal Register to the Regulations.Gov site to search for that docket. The current Regulations.Gov site does not allow this easy cut and paste search, as it does not recognize the long dashes used in the Federal Register. This means that we must alter each and every long dash to a short dash to search just one docket number. Given that we monitor over 100 dockets, this can add a lot of extra time just to complete a simple search. We request that the search function be revised to correctly find dockets when either long or short dashes are used in the docket name.	
User Interface Hides Prior Comments and Obscures Access to All Documents in Dockets: The previous version of the Regulations.Gov docket had a straightforward user interface that allowed CASQA to quickly sort and view all files. The new version of the Regulations.Gov site has a confusing user interface where items like public comment letters and USEPA's multiple scientific analyses are essentially hidden in different tabs. In the new design the file organization structure is not easy to navigate and is not searchable. We have found that files that were previously available appear to be missing from the site, including historical public comments.	GSA updated the system so that previous comments and all documents can be accessed in 2024.