STANISLAUS COUNTY

Draft Pyrethroid Management Plan

PUBLIC WORKS DEPARTMENT & OFFICE OF THE AGRICULTURAL COMMISSIONER
AUGUST 2021

This Pyrethroid Management Plan Framework was developed by Larry Walker Associates, Inc. in collaboration with the following agencies:

- *City of Ceres*
- *City of Escalon*
- *City of Grass Valley*
- *City of Lathrop*
- *City of Lincoln*
- *City of Lodi*
- *City of Manteca*
- *City of Newman*
- *City of Patterson*
- *City of Ripon*
- *City of Riverbank*
- *City of Roseville*
- *City of Stockton*
- *City of Tracy*
- *City of Turlock*
- *City of West Sacramento*
- *City of Yuba City*
- *County of San Joaquin*
- *El Dorado County*
- *Stanislaus County*
- *Mountain House*

Table of Contents

1 Introduction 1
1.1 Management Plan Approach 2
2 Education and Outreach Activities 3
2.1 Residential Outreach 4
2.2 Point-of-Purchase Outreach 7
2.3 Outreach to Pest Control and Landscape Professionals 8
2.4 Outreach for Landscape and Irrigation Practices 10
3 Pesticide Pollution Prevention Activities 12
3.1 Practices to Reduce Pesticide Use 13
3.2 Implementation of Integrated Pest Management Policies and Practices 15
3.3 Participation in Pesticide Regulatory Processes 17
4 Progress Reports and Adaptive Management 19
4.1 Reporting Requirements 19
4.2 Report Approach and Content 20
4.3 Adaptive Management 21

1 Introduction

On June 8, 2017, the Central Valley Regional Water Quality Control Board (Regional Water Board) adopted Resolution R5-2017-0057, the Basin Plan Amendment (BPA) for the Control of Pyrethroid Pesticide Discharges.[1] The BPA was subsequently approved by the State Water Resources Control Board on July 10, 2018 and the Office of Administrative Law (OAL) on February 19, 2019. The United States Environmental Protection Agency (USEPA) approved the Pyrethroid Total Maximum Daily Loads (TMDLs) for the nine urban creeks in Sacramento and Roseville on April 22, 2019. With these approvals, the TMDLs and BPA became fully approved and effective.

The BPA established a Pyrethroids Control Program that includes a variety of actions including, but not limited to:

- Monitoring requirements to assess baseline conditions, as well as continued trend monitoring.
- A conditional prohibition for pyrethroid discharges in exceedance of numeric triggers for Sacramento and San Joaquin River Basin water bodies with the aquatic life beneficial uses.
    - If the numeric triggers are exceeded, the conditional prohibition requires the development and submittal of a Pyrethroid Management Plan (Management Plan) to reduce pyrethroid levels in discharges to the maximum extent practicable.

All municipal stormwater permittees (Phase I and Phase II) are subject to the conditional prohibition, and all municipal stormwater permittees not subject to the TMDL are required to provide baseline monitoring to the Regional Water Board. However, municipalities regulated pursuant to the Phase II Municipal Separate Storm Sewer System (MS4) permit (Phase II Permit)[2] may, as an alternative, acknowledge that the existing data are representative of their discharge and forego baseline monitoring and develop a Management Plan.[3]

As such, this Management Plan is being developed on behalf of Stanislaus County, as a Phase II Stormwater Permittee. *The County is currently in negotiations to hire a consultant to create an Implementation Plan for the Management Plan.*

[1] Resolution R5-2017-0057, approved by OAL on February 19, 2019. Available at: https://www.waterboards.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/

[2] Order WQ 2013-0001-DWQ as Amended by Order WQ 2015-0133-EXEC, Order WQ 2016-0069-EXEC, WQ Order 2017-XXXX-DWQ, Order WQ 2018-0001-EXEC, and Order WQ 2018-0007-EXEC (or subsequent renewals).

[3] Letter from Regional Water Board to All MS4 Dischargers in the Sacramento and San Joaquin River Basins, *Pyrethroid Control Program Baseline Monitoring Requirements for Municipal Stormwater Dischargers in the Sacramento and San Joaquin River Basins*, July 30, 2019.

1.1 MANAGEMENT PLAN APPROACH

This Management Plan has been developed by Stanislaus County (County) to meet the requirements of the BPA—specifically, the conditional prohibition. The County acknowledges that the existing data, such as the data used to characterize municipal separate storm sewer system (MS4) concentrations in the BPA Staff Report, are representative of the stormwater discharges and, as such, is forgoing the baseline monitoring and submitting this Management Plan.

As part of the Phase II Permit requirements, the County currently implements a stormwater program with several components that address pesticide management and reduction. These components include, but are not limited to, public education and outreach; inventory, assessment, and stormwater pollution prevention plan (SWPPP) development for Permittee-owned and operated facilities; best management practices (BMPs) for operations and maintenance activities; and a landscape design and maintenance program. The Management Plan builds on these efforts so that it leverages the currently implemented activities, while comprehensively addressing the requirements of the BPA.

The Management Plan includes a set of management practices that, taken as a whole, may reasonably be expected to effectively reduce pyrethroid levels in the municipal stormwater discharges. The management practices identified in Section 6c of the BPA were considered for inclusion within the Management Plan. If a particular management practice or activity will not be implemented, justification is provided for the omission.

The Management Plan is organized as follows:

- Section 2 – Education and Outreach Activities
- Section 3 – Pesticide Pollution Prevention Activities
- Section 4 – Progress Reports and Adaptive Management

2 Education and Outreach Activities

The BPA includes a range of education and outreach activities for the general public that encourage management practices that minimize pesticide runoff. Through the stormwater management program, the County implements several activities that address pesticide management via education and outreach. Consistent with the BPA, the County will build on the existing stormwater program activities to implement the following education and outreach activities:

- Residential Outreach
- Point-of-Purchase Outreach
- Outreach to Pest Control and Landscape Professionals
- Outreach for Landscape and Irrigation Practices

2.1 RESIDENTIAL OUTREACH

The BPA requires the following residential outreach activity:

> *Undertake 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, potentially by working with DPR, County Agricultural Commissioners, and the University of California Statewide Integrated Pest Management Program, or other entities as appropriate.*

The County has developed and implemented targeted outreach programs that convey messages to the residents specific to the proper use and application of pesticides in an urban context, as well as encouraging the use of less toxic options to help reduce reliance on pesticides that threaten water quality. The residential outreach activities that are implemented (or will be developed and implemented) by the County include the following:

- Outreach Materials – The County will distribute the Our Water Our World BMP fact sheets to residents on the safe use of pesticides. These will be available in several locations including the Department of Environmental Resources and Public Works. They will also be distributed at various County outreach events.
- E-Newsletters – The Office of the Ag Commissioner sends a weekly gardening e-newsletter titled *Stanislaus Sprouts* to residents that addresses stormwater-related topics, including proper pesticide use and disposal, as well as encouraging the use of less toxic pest control products and IPM methods.
- Website – The County provides pesticide-specific outreach on several of its websites such as the Office of the Ag Commissioner at *www.stanag.org* and the County's Public Works Department at *www.stancounty.com/publicworks/storm* The websites include links to pesticide-related information and options for less toxic methods of pest control, as well as links to the following:
    - Our Water – Our World (OWOW) Fact Sheets: http://ourwaterourworld.org
    - University of California Statewide Integrated Pest Management Program (UC IPM): http://ipm.ucanr.edu/PMG/menu.homegarden.html
- Coordinated Outreach – The County coordinates with other County departments/divisions to provide outreach to residents.
    - The Department of Environmental Resources is responsible for Public Education and outreach for the County's Stormwater Program, which has a pesticide component. They run newspaper ads, send out mailers, visit local schools, and distribute materials at sporting events, fairs and other countywide events such as Earth Day.
- Household Hazardous Waste – The County encourages public participation in pesticide reduction efforts by coordinating with the Household Hazardous Waste (HHW) program. to encourage proper storage and disposal of pesticides. The website can be found at www.stancounty.com/er/hazmat

- Our Water – Our World – The County has reached out to Our Water – Our World (OWOW) to begin the process of contracting with them to obtain an IPM Advocate that will provide outreach at local stores. Such outreach will include store mentoring and training for store employees, which allows the stores and its employees to better educate the public. IPM Advocates will also host in-store public outreach events to talk directly with potential customers about options and recommendations for less toxic methods of pest control. The IPM Advocate will be responsible for filling and maintaining in-store racks with OWOW outreach materials and literature.
- Community Events – The County provides pesticide-related outreach to residents at community-wide events. The outreach includes the Our Water Our World - Use and Disposal of Pesticides fact sheets in English and Spanish. Such events include the following:
    - Earth Day in Graceda Park during the month of April
    - 12 Household Hazardous Waste Temporary Events, County-wide year around
    - Hughson Fruit & Nut Festival Car Show in April
    - Modesto American Graffiti event in August
    - 2 Turlock Swap Meet events in the Spring and Fall
    - Oakdale Car Show in August
- Regional Outreach – The Permittee participates in regional outreach efforts by leveraging relationships with other agencies to provide outreach to residents.
    - The County participates in the regional San Joaquin Valley Stormwater Quality Partnership. The group hosts a website and runs Radio ads at 2 local stations for a total of 550,000 total impressions per year according to Nielson Rating Service. The group also runs a Stormwater Online Campaign on two local radio stations reaching 531,154 persons with 4 hours streamed and 173,453 session starts per year, according to Cumulus Radio.
- UC Master Gardeners – The County coordinates with UC Master Gardeners to provide workshops and training to the community regarding integrated pest management (IPM) and other pesticide-related topics. Online classes are held monthly from 6:00 to 7:30 pm. Classes are archived so they can be viewed by residents on demand. The website can be found at:

  https://ucanr.edu/sites/stancountymg/Classes/

  Recent class topics have been:

    - Pest Management in Vegetable Gardens
    - Sustainable Landscaping
    - Butterflies in your Garden

- Stanislaus County Ag Commissioner's Office & the Stanislaus County Farm Bureau – The Ag Commissioner's Office has formed a Partnership with the Farm Bureau to host a wide variety of topics in their 2021 Continuing Education Series. The following pesticide related Zoom classes were presented in August 2021 at: http://www.stanag.org/pdf/ce-schedule.pdf

    - August 5, Rodent Control Using IPM Practices
    - August 12, Pest Pressure With Shrinking Water Availability

  In person classes are scheduled to resume shortly. All classes are translated to Spanish.

2.2 POINT-OF-PURCHASE OUTREACH

The BPA requires the following point-of-purchase outreach activity:

> *Make available point-of-purchase outreach materials to pesticide retailer(s) in or near the Permittee's jurisdiction. These materials shall provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control.*

The County is in the process of developing and will implement an approach to provide point-of-purchase outreach materials to local retailers that convey messages to the residents specific to the proper use and disposal of pesticides, potential adverse effects on water quality, and less toxic methods of pest control. The point-of-purchase outreach activities that will be implemented by the County include the following:

- Our Water – Our World – The County has reached out to Our Water – Our World (OWOW), a statewide program specifically designed to address water quality impacts of urban use pesticides and will contract with an OWOW IPM Advocate who will provide outreach at local stores. The IPM Advocate will be responsible for setting up and maintaining in-store racks containing OWOW outreach materials. These materials and literature will provide customers with information regarding the potentially adverse impacts of pesticides on water quality, proper pesticide use and disposal, and less toxic methods of pest control. Additional information is available on the OWOW website: http://ourwaterourworld.org

2.3 OUTREACH TO PEST CONTROL AND LANDSCAPE PROFESSIONALS

The BPA requires the following outreach activity regarding pest control and landscape professionals:

> *Conduct outreach to Permittee's residents and businesses who may hire structural pest control and landscape professionals that contains messages that (a) explain the links between pesticide usage and water quality; and (b) provides information about structural pest control IPM certification programs and IPM for landscape professionals.*

The County will develop and provide pesticide-related outreach to residents and industrial and/or commercial businesses who may hire structural pest control and/or landscape professionals. The outreach to pest control and landscape professionals that will be developed and implemented by the County includes the following:

- Outreach Materials – The County will make available the following BMP fact sheets to residents and businesses through the Public Works Department, Development Services Division and the Department of Environmental Resources:
  - Our Water – Our World (OWOW):
    - Hiring A Pest Control Company https://ourwaterourworld.org/hiring-a-pest-control-company/ and Pesticides and Water Quality https://ourwaterourworld.org/pesticides-and-water-quality/
  - University of California Statewide Integrated Pest Management Program (UC IPM):
    - Hiring a Pest Control Company: http://ipm.ucanr.edu/PMG/PESTNOTES/pn74125.html
- E-Newsletter –The County's Office of the Ag Commissioner sends a weekly gardening e-newsletter to its community titled Stanislaus Sprouts that addresses stormwater-related topics, including the links between pesticide usage and water quality, as well as considerations when hiring structural pest control and/or landscape professionals.
- Website – The County provides pesticide-specific outreach on its website www.stancounty.com/publicworks/storm/storm.shtm

  The website includes links to pesticide-related information, including:
  - Our Water – Our World (OWOW):
    - Hiring A Pest Control Company https://ourwaterourworld.org/hiring-a-pest-control-company/
  - University of California Statewide Integrated Pest Management Program (UC IPM):
    - Hiring a Pest Control Company: http://ipm.ucanr.edu/PMG/PESTNOTES/pn74125.html
  - BMP fact sheets are being developed by the County for industrial and commercial businesses. They will address the links between pesticide usage and water quality, as well as considerations when hiring pest control or landscape professionals.

- Coordinated Outreach – The County coordinates with other County departments/divisions to provide outreach to residents. The Office of the Ag Commissioner distributes fliers titled: Home to Ocean – Keep Your Home & Garden Green and Our Water Clean, which encourage the use of IPM measures over the application of pesticides. They also distribute an Our Water Our World booklet titled the Healthy Home and Garden For You, Your Family & Your Pets.
- Community Events – The County's Department of Environmental Resources provides pesticide-related outreach to residents at community-wide events. The outreach includes the Our Water Our World – *Hiring a Pest Control Company* and *Pesticides & Water Quality* fact sheets. Such events include the following:
    - Earth Day in Graceda Park during the month of April
    - 12 Household Hazardous Waste Temporary Events, County-wide year around
    - Hughson Fruit & Nut Festival Car Show in April
    - Modesto American Graffiti event in August
    - 2 Turlock Swap Meet events in the Spring and Fall
    - Oakdale Car Show in August
- Regional Outreach – The County participates in the San Joaquin Valley Stormwater Quality Partnership which hosts a website. There is information on the website about limiting pesticide and fertilizer use. The group is in the process of hiring a consultant to update the website to comply with the Pyrethroid BPA. http://sjvswqp.org/

2.4 OUTREACH FOR LANDSCAPE AND IRRIGATION PRACTICES

The BPA requires the following outreach activity for landscape and irrigation practices:

> *Encourage public and private management practices (e.g., landscape design, irrigation management, etc.) that minimize pesticide runoff.*

The County does not own or control any water systems, but each municipally-owned water system located in Stanislaus County has developed and conveys messages specific to landscape design and irrigation management that minimize pesticide runoff. The outreach for landscape and irrigation practices activities that is implemented by the County includes the following:

- Outreach Materials – The Office of the Ag Commissioner distributes the Our Water Our World booklet titled *The Healthy Home and Garden For You, Your Family & Your Pets*.
- Our Water – Our World –The County is in the process of contracting with Our Water – Our World (OWOW), a statewide program specifically designed to address water quality impacts of urban use pesticides, and will have an OWOW IPM Advocate who provides outreach at local stores. Such outreach will include store mentoring and training for store employees, which will allow the store and its employees to better educate the public. IPM Advocates will also host in-store public outreach events to talk directly with potential customers about landscape management recommendations, including irrigation practices optimized for plant health and minimal runoff. The IPM Advocate will also be responsible for filling and maintaining in-store racks with OWOW outreach materials and literature. Additional information is available on the OWOW website: http://ourwaterourworld.org
- E-Newsletter – The Office of the Ag Commissioner sends a weekly e-newsletter titled *Stanislaus Sprout* to its community that addresses stormwater-related topics, including minimizing runoff through proper landscape design and irrigation practices. http://ucanr.edu/blogs/StanislausSprout Recent newsletters have included:
  - Water Wise Tips on Your Home and Garden July 6, 2021
  - Being Water Wise June 14, 2021
  - Sustainable Landscaping Can Garner Big Results and Savings Oct 22, 2020
  - Sustainable Landscaping Oct 8, 2020
  - Make Every Day Earth Day, Use IPM April 22, 2020
- Website – The County provides outreach on landscape design and irrigation practices via its website www.stancounty.com/publicworks/storm/storm.shtm

  . The website includes links to sites focusing on water conservation and landscape design, including:
  - Save Our Water: https://saveourwater.com

- California Department of Water Resources, Water Efficient Landscaping: https://water.ca.gov/Water-Basics/Conservation-Tips/Plant-and-Landscape-Guide
- Be Water Wise: http://www.bewaterwise.com
- USEPA Water Sense: https://www.epa.gov/watersense

- UC Master Gardeners – The Office of the Ag Commissioner coordinates with UC Master Gardeners to provide workshops and training to the community regarding water conservation and irrigation management. http://mg.ucanr.edu
- Community Events – The County does not provide landscape design and irrigation management outreach to residents at community-wide events. This outreach is conducted more efficiently by the local municipalities within Stanislaus County who own water systems.
- Coordinated Outreach – The County does not coordinate with other County departments/divisions to provide outreach to residents. This outreach is conducted more efficiently by the local municipalities within Stanislaus County who own water systems.
- Regional Outreach – The County participates in the San Joaquin Valley Storm Water Quality Partnership regional outreach efforts by leveraging relationships with other agencies to provide outreach to residents.
  - The Partnership is in the process of hiring a consultant to update the Partnership's website to comply with the Pyrethroid BPA.

3 Pesticide Pollution Prevention Activities

The BPA includes a range of pollution prevention activities for public agencies that reduce reliance on pesticides that adversely impact water quality. Through the stormwater management program, the County implements several activities that address pesticide management via pollution prevention. Consistent with the BPA, the County will build on the existing stormwater program activities to implement the following pollution prevention BMPs:

- Practices to Reduce Pesticide Use
- Implementation of Integrated Pest Management Policies and Practices
- Participation in Pesticide Regulatory Processes

3.1 PRACTICES TO REDUCE PESTICIDE USE

The BPA requires the following practices to reduce pesticide use:

> *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.*

The County developed and implements a landscape design and maintenance program and specific practices to reduce the amount of water, pesticides, herbicides, and fertilizers used during County operations and activities on County-owned or operated facilities, including park sites, athletic fields, golf courses, landscaped medians, and other landscaped areas.

The activities to reduce pesticide use that are currently implemented by the County include the following:

- Pesticide-Related Policies and Procedures –The following Standard Operating Procedures implemented by County Parks facilities include the following:

STANISLAUS COUNTY PARKS AND RECREATION DEPT LANDSCAPE DESIGN & MAINTENANCE PROGRAM STORMWATER BEST MANAGEMENT PRACTICES:

LANDSCAPE:

1. Mow with recycling blades (grass cycling) in all park lawn and large field areas.
2. Mow streetscapes 1 out of 3 times with recycling blades.
3. Use mulch and / or bark in streetscapes and tree wells to retain water and act as a weed barrier.
4. Control vegetation by mowing in effort to reduce the use of herbicides.
5. Control vegetation and fire hazards with cattle grazing in one of our Regional Parks.
6. Control vegetation and fire hazard control with harvesting cut and bale in one of our Regional parks.
7. Plant native and climate appropriate plants.
8. Reduce amounts of turf areas by converting to natural setting trails and group camp area.
9. Compost green waste.
10. Recycle grass collected from streetscapes as green waste at Recology.
11. Remove leaves and grass clippings from street surfaces and storm drain catch basins that are a result of parks maintenance work. Keep all cut vegetation that results from parks maintenance work from entering local waterways or the storm drain system.

IRRIGATION:

1. Shut off irrigation during the rainy and winter months.
2. Replace irrigation controllers with Hunter I-Core and Pro C with Solar Sync (weather system) that monitors hourly readings at site locations. Make necessary adjustments to reduce overwatering, evaporation and shut off if rain falls or temps fall below 37*F.
3. Change sprinkler nozzles for more efficient coverage and conservation.

PESTICIDES:

1. Follow all state and federal Department of Pesticide Regulations and guidelines for application of pesticide products.
2. Follow all pesticide label requirements of pesticide products.
3. Follow all state and federal Department of Pesticide Regulations and guidelines on pesticide container disposal.
4. Check weather conditions 48 hours in advance of applying pesticide and NO spraying if a 50% chance or higher of precipitation within the next 48 hours unless recommended by label.
5. Report all monthly pesticide usage, product and area applied to the County Ag Commissioner Department.
6. Report all monthly pesticide, herbicide and fertilizer used (types and amounts) to Stormwater Program Manager.
7. Keep on site records of all pesticide usage, product and areas applied to for 5 years.
8. Review products used in an effort to reduce amount of pesticide use. Use less-toxic or non-toxic pesticide options wherever possible.

* Monthly Pesticide Use Reports to be scanned and emailed to:

Stanislaus County Stormwater Program Manager
giltond@stancounty.com

- IPM Policy – Please see Section 3.2. for a description of the County's IPM Policy.

3.2 IMPLEMENTATION OF INTEGRATED PEST MANAGEMENT POLICIES AND PRACTICES

The BPA requires the implementation of integrated pest management (IPM) policies and practices, as follows:

> *Develop and implement an Integrated Pest Management policy that:*
>
> - *Is consistent with IPM as defined by the University of California Statewide IPM Program (UC-IPM) or the California Structural Pest Control Board definition.*
> - *Applies to all Permittee staff who conduct or contract for pest management and to pest management vendors under contract to the Permittee.*
> - *Assigns responsibilities to a designated staff position and/or department to coordinate Permittee activities and ensure that the IPM policy is implemented.*

The IPM policies and practices that will be developed and implemented by the County Parks include the following:

- The County will develop and adopt an IPM Policy by June 30, 2022. The County will implement and enforce the policy to promote the use of IPM and minimize the use of pesticides within its jurisdiction. The IPM Policy will be:
    - Consistent with IPM as defined by the University of California Statewide IPM Program (UC-IPM) or the California Structural Pest Control Board definition.
    - Apply to all Permittee staff who conduct or contract for pest management and to pest management vendors under contract to the Permittee.
    - Assign responsibilities to a designated staff position and/or department to coordinate the Permittee's activities and ensure that the IPM policy is implemented.

3.3 PARTICIPATION IN PESTICIDE REGULATORY PROCESSES

The BPA requires support of pollution prevention through participation in pesticide regulatory processes, as follows:

> *Track USEPA and DPR pesticide evaluation and registration activities as they relate to surface water quality and encourage these agencies to accommodate urban 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 to assist in their pesticide evaluation and registration activities. This best management practice would be implemented most effectively through a cooperative regional or statewide approach.*

Participation in pesticide regulatory processes by the County includes the following:

The County is a member of and participates in the California Stormwater Quality Association (CASQA). One of CASQA's subcommittees, the Pesticides Subcommittee (PSC) currently conducts a number of activities that assist in tracking and reporting on the USEPA and DPR pesticide evaluation and registration activities. These have generally included the following:

- Regulatory-Related Activities – The PSC addresses pesticide uses that impact stormwater discharges, provides input to EPA and DPR to improve regulations, compiles relevant information, assists members with compliance strategies, and coordinates its activities with other agencies statewide. The types of activities include:
    - Support for the development of the Urban Pesticides Amendment;
    - Support for the formation of the Urban Pesticides Coordinated Monitoring Program (potential statewide monitoring program);
    - Review of scientific literature to update and prioritize the Pesticide Watch List;
    - Prepared written comments to EPA on its Endangered Species Act Pesticides Risk Assessment proposed procedures and other pesticide evaluations and re-registrations.
- Annual Report – This report provides a summary of the CASQA efforts that were conducted on behalf of the membership during that reporting year to prevent pesticide pollution in urban waterways. In addition, the report has provided an effectiveness assessment regarding the activities that were conducted.

On an annual basis, CASQA identifies the highest priority activities and implements these activities based on available funding and membership needs. As such, implementation of past activities, such as those described above, is not a guarantee of continued implementation of similar activities in the future.

In addition, the State Water Resources Control Board (State Water Board) is developing Urban Pesticide Amendments (UPAs) to the Inland Surface Waters, Enclosed Bays, and Estuaries Plan and the Ocean Plan. This work effort is a part of the STORMS projects[4] and is anticipated to be completed in 2020 or 2021. The UPAs are expected to formalize proactive regulation of pesticides by the Department of Regulation (DPR) and identify cost effective activities that can be implemented or supported by the regulated entities. The County will continue to track the development of the UPAs and modify this Management Plan if efficiencies can be realized by including activities that are identified as a part of the UPAs.

[4] https://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/obj6_proj6a.shtml

4 Progress Reports and Adaptive Management

4.1 REPORTING REQUIREMENTS

The BPA requires an annual progress report to be developed to document the management practices that have been implemented, evaluate pyrethroid concentrations with respect to the pyrethroid triggers, and identify effective actions to be taken in the future. Accordingly, the County will prepare and submit a progress report by October 15 each year in conjunction with the Phase II Permit annual report submitted via Stormwater Multiple Application and Report Track System (SMARTS). Pending approval of this Management Plan, the first progress report is anticipated to be submitted in 2023, after a full year of Management Plan implementation.

4.2 REPORT APPROACH AND CONTENT

The BPA requires an annual progress report, as follows:

> *A progress report shall be provided to the Board annually or at a frequency consistent with the discharger's permit requirements to document the management practices that have been implemented, to evaluate pyrethroid concentrations with respect to the pyrethroid triggers, and to identify effective actions to be taken in the future. The progress report can be included in other reports submitted to the Board, as appropriate.*

The County will evaluate the implementation of the required management practices and present the results in narrative, tabular, and/or graphical form, as appropriate. The County anticipates that the annual progress report may include, but not be limited to, the following:

- Documentation of the management practices that have been implemented
    - A narrative summary of BMP implementation, by category (i.e., Education and Outreach Activities and Pesticide Pollution Prevention Activities)
    - Tabular and/or graphical presentations of BMP implementation, as well as summary statistics or other general descriptors to most usefully present the implementation results
- Evaluation of pyrethroid concentrations with respect to the pyrethroid triggers[5]
- Identification of effective actions to be taken in the future
    - This information will be identified through the adaptive management process (see **Section 4.3**).

[5] The approach for trend monitoring by the Phase II Permittees is undetermined at this time (August 2021). It is anticipated that the Regional Water Board will be providing further guidance on trend monitoring for these Permittees.

4.3 ADAPTIVE MANAGEMENT

The BPA acknowledges that during the course of Management Plan implementation, if the pyrethroid numeric triggers are not being met, adaptive management may be necessary:

> *If the management practices do not result in discharge concentrations at or below the pyrethroid numeric triggers, then the MS4 discharger shall either identify any available, reasonable and feasible additional/alternative practices for implementation, or provide a justification for why current practices are expected to result in achieving the triggers within a reasonable timeframe. This justification may include actions required by state and federal regulations.*

As a part of the reporting process, and on approximately a five-year timeframe (e.g., in conjunction with the "Year 5" Phase II Permit Annual Report, the Region-wide Permit End-Term Reports, or the equivalent), the Permittee will qualitatively evaluate the effectiveness of the Management Plan, as well as the experience that staff has had in implementing the Management Plan, to identify potential modifications and refine the Management Plan approach, as needed.

The Management Plan may be reviewed and revised in the future based on the following:

- Analysis of trend monitoring results (5-10 year period of record);[6]
- Completion of the UPAs expected to formalize proactive regulation of pesticides by the DPR and identify cost-effective activities that can be implemented or supported by the regulated entities, including the Permittee (see **Section 3.3**);
- Identification by the County of changes to improve the effectiveness of specific Management Plan activities, based on its experience in implementing the stormwater program and the activities described in **Section 2** and **Section 3**.

[6] The approach for trend monitoring by the Phase II Permittees is undetermined at this time (August 2021). The Regional Water Board will be providing further guidance on trend monitoring for these Permittees.