



## REPORT TO CITY COUNCIL

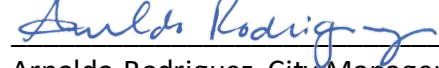
**Approved by:**

**Council Meeting of:** October 19, 2022



**Agenda Number:**       B-8      

Keith Helmuth, City Engineer



Arnaldo Rodriguez, City Manager

**SUBJECT:**

Pyrethroid Management Plan for the San Joaquin River Basin

**RECOMMENDATION:**

Adopt a resolution approving a Pyrethroid Management Plan (PMP) in accordance with California Regional Water Quality Control Board (CRWQCB) Water Quality Basin Plan Amendment (BPA) for the San Joaquin River Basin

**SUMMARY:**

In 2017, the CRWQCB amended the existing Water Quality Control Basin Plan, establishing a Pyrethroid Pesticide Control Program (PMP) to reduce the discharge of pyrethroid pesticides to surface waters. As a municipality regulated pursuant to the Phase II Municipal Separate Storm Sewer System (MS4) permit, the City of Madera (City) is subject to this requirement by way of stormwater discharges to the Fresno River. Adoption and establishment of a PMP plan will allow the City to follow State regulations.

**BACKGROUND:**

Pyrethroids are a class of synthetic insecticides found in household pesticides sold in common retail locations and are approved for use by the California Department of Pesticide Regulation. Pyrethroids remain in the environment significantly longer than naturally derived pyrethrin, which, means they are susceptible to being transported by surface runoff into surrounding river systems. A recent report has found that pyrethroids concentrations in urban storm drain discharges frequently exceeded water quality standards, and these elevated concentrations were determined to be toxic to aquatic life.

To be in compliance with the BPA requires the City to develop and implement a PMP to manage pesticide use and to control water discharges to water bodies of the State. This PMP will be submitted to the State as a part of the existing State required storm water management plan

reporting requirements, which are submitted to the State annually. The PMP must identify a set of management practices that will control urban pesticides discharges, assign staff to coordinate discharger activities, adopt an Integrated Pest Management (IPM), provide resident outreach and education materials, and ensure that the IPM policy is implemented.

On June 8, 2017, the CRWQCB adopted Resolution R5-2017-0057, the BPA for the Control of Pyrethroid Pesticide Discharges throughout the Sacramento and San Joaquin River Basins to protect aquatic life. 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 BPA established a Pyrethroid Control Program that subjected the City to a variety of actions including:

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

The City is subject to the conditional prohibition. As a municipality regulated pursuant to the Phase II Municipal Separate Storm Sewer System permit, the City may, as an alternative, acknowledge that the existing data are representative of the discharges from the City, forego baseline monitoring, and develop a Management Plan. The City has communicated to the Regional Water Board that the existing data used for the development of the BPA and TMDL are representative of the City's urban discharges and, thus, has decided to forego the baseline monitoring and move forward with the development of a PMP.

On July 13, 2020, The CVRWQCB ordered the City to submit technical and monitoring reports and to establish a Pyrethroid Pesticide Control Program. The PMP also included a requirement for development of an Integrated Pest Management Plan (IPM) to control the use of pesticides. This IPM is included in the PMP as Attachment A. The order stipulated the City must comply with this order by August 19, 2021, or face fines of \$1,000/day. Due to staffing shortages, the City requested time extensions in compliance with the provisions of the order.

The City developed a PMP policy in compliance with the order. The PMP was developed with input from both Parks and Community Services and Public Works Departments, who are the main users of pesticide products and will be the primary departments required to implement this program.

Key elements of the proposed PMP include:

1. Public Education and Outreach Activities;
2. Pesticide Pollution and Prevention Activities;

3. Progress Reporting and Documentation; and
4. Implementation of Integrated Pest Management Policies and Practices.

The City will implement targeted outreach programs that convey messages to 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 implemented by the City that specifically support this messaging includes Residential Outreach, Point-of-Purchase Outreach, Outreach to Landscape Professionals and Development of a IPM policy for Landscape and Irrigation Practices.

Staff developed an auxiliary page for the City website that will provide an overview of the PMP policy and a link to the PMP document. The website will also be used to share information about the PMP implementation schedule (public notice, annual reporting, etc.). Information flyers will be developed and will be distributed at local retail businesses and community events.

The BPA includes a range of pollution prevention activities that reduce reliance on pesticides which adversely impact water quality. Through the stormwater management program, the City implements several activities that address pesticide management via pollution prevention. Consistent with the BPA, the City 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

The PMP identifies natural and organic pest control methods that can be used by the City to address insect, rodent and weed pest issues. Allowed products include physical barriers such as caulking agents and crack sealants; use of borates, silicates, and diatomaceous earth; soap-based products; and biological controls, such as parasites and predators. Natural (non-synthetic) products that include only active ingredients are allowed, as well as cruelty-free baits and traps for rodents and other mammals.

The Policy identifies the following categories of high health-risk pest management products to be discontinued from use on City property:

- Pesticides on the California Proposition 65 list (materials known to the State to cause cancer or reproductive or development toxicity) including mutagens and teratogens,
- Pesticides that are known, probable or possible carcinogen identified by USEPA,
- Known endocrine disruptors listed by the USEPA Endocrine Disruptor website,
- Organophosphate; and
- Organochlorines, such as DDT (Dichlorodiphenyltrichloroethane)

The IPM Policy calls for designating an IPM Manager, who will oversee and coordinate implementation of the Policy with each City department and all pesticide applicator contractors. To achieve this goal, the IPM Manager will coordinate the development of pesticide Best Management Practices and standard operating procedures. The IPM Manager will also oversee the tracking and reporting of the quantity of pesticides used and annual use reductions.

**FINANCIAL IMPACT:**

Implementation of the Policy will have fiscal impacts related to additional costs incurred to maintain park and street landscape areas. Park staff and contractors anticipate the need for additional resources for increased mulching and more frequent manual weeding and mowing. Using other specified organic pesticide products will also require a larger volume of product and more frequent application to achieve desirable results.

**CONSISTENCY WITH THE VISION MADERA 2025 PLAN:**

*Action 101.6* - This entire effort supports this strategy to ensure infrastructure can sustain population growth in the development of the General Plan.

**ALTERNATIVES:**

No alternative is provided. The City discharges stormwater to the Fresno River which is regulated by the State.

**ATTACHMENTS:**

1. Resolution
2. PMP Policy

**ATTACHMENT 1**

Resolution

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA  
APPROVING AN PYRETHROID MANAGEMENT PLAN IN ACCORDANCE  
WITH THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL  
BOARD WATER QUALITY BASIN PLAN AMENDMENT FOR THE SAN  
JOAQUIN RIVER BASIN**

**WHEREAS**, the use of chemical pesticides can be reduced by using integrated pest management principles that rely primarily on mechanical, physical, cultural, and biological measures to control pests and the application of the lowest risk pesticide products when needed; and

**WHEREAS**, the California Regional Water Control Board (RWQCB) adopted National Pollution Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharge Elimination System from Municipal Separate Storm Sewer Systems to water bodies of the State; and

**WHEREAS**, RWQCB Resolution R5-2017-0057 established a Pyrethroid Pesticide Control Program Basin Plan Amendment (BPA) to control discharges of pyrethroid pesticides to water bodies of the State; and

**WHEREAS**, the City of Madera is a permitted Municipal Separate Storm Sewer Systems (MS4s) municipality that regularly discharges stormwater to the Fresno River, is subject to these requirements; and

**WHEREAS**, the BPA requires development, adoption and implementation of a Pyrethroid Management Plan and a jurisdiction-wide Integrated Pest Management (IPM) program to reduce pesticide use in landscape, parks, and recreation facilities management; and

**WHEREAS**, adequate funds are available in the project budget for additional costs related to the Pyrethroid Management Plan.

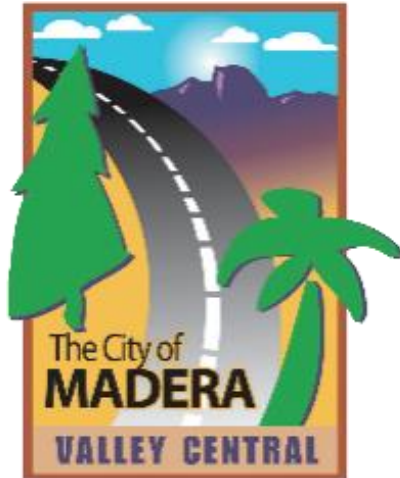
**NOW, THEREFORE, THE COUNCIL OF THE CITY OF MADERA** hereby resolves, finds, determines and orders as follows:

1. The above recitals are true and correct.
2. The City Council hereby approves the City of Madera Pyrethroid Management Plan, a copy of which attached hereto as Attachment 2; and
3. This Resolution is effective immediately upon adoption.

\* \* \* \* \*

**ATTACHMENT 2**

**PMP Policy**



# **CITY OF MADERA PYRETHROID MANAGEMENT PLAN**

**October 2022**

Prepared by:  
City of Madera  
Engineering Department  
428 East Yosemite Avenue  
Madera, CA 93637



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- Appendix F. Landscape Design & Maintenance Program
- Appendix G. Integrated Pest Management Policy

## List of Acronyms

IPM	Integrated Pest Management
BMP	Best Management Practice
MEP	Maximum Extent Practicable
LID	Low Impact Development
CVRWQCB	Regional Water Quality Control Board
OWOW	Our Water our World
UC IPM	University of California Integrated Pest Management
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
BPA	Basin Plan Amendment
DPR	Department of Pesticide Regulation
ECI	Environmental Compliance Inspector
CASQA	California Stormwater Quality Association
EPA	Environmental Protection Agency
UCANR	University of California Agricultural and Natural Resources
PMP	Pyrethroid Management Plan
PAPA	Pesticide Applicators Professional Association
SMARTS	Storm Water Multiple Application Tracking System

# 1 Introduction

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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 throughout the Sacramento and San Joaquin River Basins to protect aquatic life beneficial uses. 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 BPA established a Pyrethroid 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 the 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.

The City of Madera (City) is subject to the conditional prohibition. As a municipality regulated pursuant to the Phase II Municipal Separate Storm Sewer System (MS4) permit (Phase II Permit), the City may, as an alternative, acknowledge that the existing data are representative of the discharges from the City, forego baseline monitoring, and develop a Management Plan. The City has communicated to the Regional Water Board that the existing data used for the development of the BPA and TMDL are representative of the City's urban discharges and, thus, has decided to forego the baseline monitoring and move forward with the development of a Pyrethroid Management Plan (Management Plan).

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## **1.1 MANAGEMENT PLAN APPROACH**

The City has developed this Management Plan to meet the requirements of the BPA and specifically, the conditional prohibition. As part of the Phase II Permit requirements, the City 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; the implementation of a stormwater pollution prevention plan (SWPPP) and best management practices (BMPs) for operations and maintenance activities. 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, could effectively

reduce pyrethroid levels in the municipal stormwater discharges.

The Management Plan is organized as follows:

- Section 1 - Introduction
- Section 2 – Education and Outreach Activities
- Section 3 – Pesticide Pollution Prevention Activities
- Section 4 – Progress Reports and Adaptive Management

An implementation schedule for the activities outlined in this Management Plan is provided as Appendix A.

## **2** Education and Outreach Activities

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

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

### **2.1 RESIDENTIAL OUTREACH**

The BPA requires the following Education and outreach activity (Order E.1.i.1):

*Undertake targeted outreach programs to encourage communities within a discharger’s authority 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 CDPR, County Agricultural Commissioners, and the University of California Statewide Integrated Pest Management Program, or other entities as appropriate.*

The City has developed and will implement targeted outreach programs that convey messages to 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 implemented by the City that specifically support this messaging includes the following:

- Website – <https://www.madera.gov/home/city-services/stormwater/> The City will provide pesticide-specific outreach on the *Residents: Gardening & Pesticides* section of its stormwater website. The section will include an overview of IPM and tips for a healthy garden, home, and environment, as well as the following:
  - A discussion of beneficial insect’s links to an OWOW webpage on “Pesticides and Water Quality”. A typical flyer is shown in Appendix B.

- The City will include a flyer containing pest control-related information. The flyer will list the following:
  - Tips on Using Pesticides
  - How to Purchase Less Toxic Pesticides
  - Choosing to Go Less Toxic In Your Yard
  - Less Toxic Ways to Handle Aphids
  - Where to properly dispose of unused Pesticides
- The City’s website will include a link to the “Our Water – Our World” website <http://ourwaterourworld.org>, a statewide program specifically designed to address water quality impacts of urban use pesticides. The website provides information regarding the potentially adverse impacts of pesticides on water quality, proper pesticide uses and disposal, and less toxic methods of pest control.
- The City’s website will include a link to the UC Master Gardeners website <http://mg.ucanr.edu> to help inform the community about organic gardening, substitutes for chemical pesticides, and other pesticide-related topics. Madera County also has a Master Gardener program. City staff will provide outreach to this group concerning Pest use information.
- A Household Hazardous Waste Flyer showing the location where residents can safely dispose of excess/unused pesticides is listed in Appendix C. This flyer is currently distributed by mail yearly to all residents.
- Community Events – When COVID-19 restrictions are lifted and public events are allowed, the City will provide pesticide-related outreach to residents at local and regional community events (e.g., Relay for Life, Madera County Fair, Madera Parade). These events will be advertised on the City’s website <https://www.madera.gov/home/departments/parks-community-services/activity-guide>. A listing of planned events is listed in Appendix D.

## **2.2 POINT-OF-PURCHASE OUTREACH**

The BPA requires the following point-of-purchase outreach activity (Order E.1.i 2):

*Make available point-of-purchase outreach materials to pesticide retailer(s) in or near the Permittee’s authority. 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 City will develop and implement an approach to provide point-of-purchase

outreach materials to local retailer(s) 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 City include the following:

- City staff will visit the Madera Home Depot and Lowe's semi-annually to provide public outreach. Activities at the store visits will include the following:
  - Interacting with customers and store employees to answer questions regarding less toxic and stormwater-friendly methods of pest control for a variety of pests.
  - Replenishing the literature rack with materials, including "shelf-talkers" fact sheets in English and Spanish that address specific pests, gardening and pesticide-related topics, and pocket guides.

### **2.3 OUTREACH REGARDING PEST CONTROL AND LANDSCAPE PROFESSIONALS**

The BPA requires the following outreach activity regarding pest control and landscape professionals (Order E.1.i.3):

*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 City will provide pesticide-related outreach to residents and businesses who may use structural pest control and/or landscape professionals. The outreach to pest control and landscape professionals that is implemented by the City includes the following:

- Website – The City will provide outreach on its website and as shown in Appendix E, regarding “How to Choose a Pest Control Operator,” helping residents and businesses ensure that whoever is hired utilizes IPM and has the required licenses, registration, certificate, and insurance at <https://www.madera.gov/home/city-services/stormwater>
- Community Events – When COVID-19 restrictions are lifted and public events are allowed, the City will provide pesticide-related outreach to residents at local and regional community events (e.g., Love Madera, Relay for Life, Movies in the Park, July 4<sup>th</sup> Event, Madera Parade). The City will host a table at these events and be available to provide recommendations regarding hiring pest control, landscape professionals who use IPM and understand the connection between pesticide usage and water quality. These events will be advertised on the City’s website <https://www.madera.gov/home/departments/parks-community-services/activity-guide>.

### **2.4 OUTREACH FOR LANDSCAPE AND IRRIGATION PRACTICES**

The BPA requires the following outreach activity for landscape and irrigation practices (Order E.1.i.4):

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

The City will develop and convey messages specific to landscape design and irrigation management that minimize pesticide runoff, including the following:

- City staff will visit the Madera Home Depot and Lowe’s and provide public outreach semi-annually concerning landscape design and pesticide best practice use. Activities at the store visits will include the following:



- Interacting with customers and store employees to answer questions regarding proper landscape design practices to control runoff and stormwater-friendly methods of pest control for a variety of pests.
- Replenishing the literature rack with materials, including “shelf-talkers,” fact sheets in English and Spanish that address specific pests, gardening and pesticide-related topics, and pocket guides.

- Website – The City’s website will encourage public and private management practices to minimize pesticide runoff:
- Residents can find water conservation tips, management practices regarding irrigation and landscape design specifically to reduce runoff, and a linkage between water conservation and reduction of irrigation runoff that may contain pesticides at <https://www.madera.gov/home/departments/engineering/IPM-policy>.
  - Information will also be provided to residents regarding "Be Water Wise" <https://www.bewaterwise.com> and "UC Master Gardeners" <http://mg.ucanr.edu>.
  - In addition, the City's website will provide targeted outreach to landscape contractors regarding pesticide application practices, and IPM use at: <https://www.madera.gov/home/city-services/stormwater>
- Community Events – When COVID-19 restrictions are lifted and public events are allowed, the City intends to provide pesticide-related outreach to residents at local and regional community events (e.g., Love Madera, Relay for Life, Movies in the Park, July 4<sup>th</sup> Event, Madera Parade). The City will host a table at these events and be available to answer questions and provide advice regarding pesticide management. These events will be advertised on the City’s stormwater website <https://www.madera.gov/home/departments/parks-community-services/activity-guide>

### **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 City implements several activities that address pesticide management via pollution prevention. Consistent with the BPA, the City 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 (Order E.1.ii.1):

*Reduce reliance on pyrethroids and other pesticides that threaten water quality by adopting and implementing policies or procedures that minimize the use of pesticides that threaten water quality in the discharger's operations and on the discharger's property.*

The activities to reduce pesticide use that will be developed and implemented by the City include the following:

- Pesticide-Related Policies and Procedures – The City will implement pesticide-related policies and procedures, including the following:
  - The City's *Landscape Design and Maintenance Program* (Appendix F) specifies (practices to reduce the amount of water, pesticides, herbicides, and fertilizers used during operations on City-owned or operated facilities, including park sites, athletic fields, golf courses, landscaped medians, and other landscaped areas.
  - The City's *Stormwater Pollution Prevention Plan (SWPPP)* (April 2015) includes practices to prevent spills or leaks during chemical use, including pesticides.
- Staff Training – The City will train its staff on pesticide-related policies and procedures using existing, internal training modules or external training resources. University of California Statewide IPM Program <http://ipm.ucanr.edu/training> is one such resource for training modules and materials (e.g., *Urban Pesticide Runoff and Mitigation*).

### **3.2 IMPLEMENTATION OF INTEGRATED PEST MANAGEMENT POLICIES AND PRACTICES**

The BPA requires the implementation of IPM policies and practices, as follows (Order E.1.ii.2):

*Develop and implement an Integrated Pest Management policy that:*

- *Is consistent with IPM as defined by the University of California Statewide 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 developed and implemented by the City include the following:

- The City's IPM Policy is located in Appendix G. The City will implement and

*Pyrethroid Management Plan*

enforce the policy to promote the use of IPM and minimize the use of pesticides within its authority. The IPM Policy is:

- 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 City staff who conduct or contract for pest management and to pest management vendors under contract to the City.
  - Assign responsibilities to a designated staff position and/or department to coordinate the City's activities and ensure that the IPM policy is implemented.
- Other IPM-related policies and practices to be developed and implemented, either as standalone documents or included in the IPM Policy, will include items such as contracting requirements for pesticide applicators and purchasing specifications that include consideration of less-toxic options.

### **3.3 PARTICIPATION IN PESTICIDE REGULATORY PROCESSES**

The BPA requires support of pollution prevention through participation in pesticide regulatory processes, as follows (Order E.1.iii.1):

*Track USEPA and CDPR 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 CDPR 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.*

The City is a member of the California Stormwater Quality Association (CASQA). One of CASQA's subcommittees, the Pesticides Subcommittee (PSC) currently conducts several 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 practices, 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. The UPAs is expected to contain 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 City 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 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 City 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 City will evaluate the implementation of the required management practices and present the results in narrative, tabular, and/or graphical form, as appropriate. The City anticipates that the annual progress report may include, but not be limited to, the following:

1. 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 present the implementation results most usefully.
  - Evaluation of pyrethroid concentrations with respect to the pyrethroid triggers and identification of effective actions to be taken in the future.

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## 4.3 ADAPTIVE MANAGEMENT

The BPA acknowledges that during Management Plan implementation, if the 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 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 the City 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:

1. Analysis of trend monitoring results (5-year period of record).

2. Completion of the UPAs expected to formalize proactive regulation of pesticides management and identify cost-effective activities that can be implemented or supported by the regulated entities, including the City. Identification by the City of changes to improve the effectiveness of specific management plan activities, based on it experiences in implementing the stormwater program and the activities.

**Appendix A**  
**PMP Implementation Schedule**

City Council approves PMP – October 19, 2022

City Implements PMP Program within 30 days of Central Valley Water Board approval.



## Appendix B

### Pesticides and Water Quality Pamphlet



Commonly used pesticides can be harmful to people and pets. They also pollute our water, air, and soil. While pesticides are used heavily in agriculture, more than half of California pesticide use is in urban and suburban areas—in and around our homes, schools, and businesses.

#### THREATS TO WILDLIFE AND WATER QUALITY

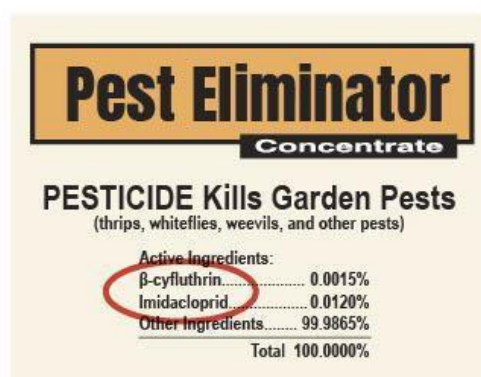
Commonly used pesticides have been detected in urban creeks and waterways throughout California and around the country. In our waters they poison birds, fish, and sensitive aquatic wildlife. In some locations, water contaminated with pesticides can migrate from creeks and surface waters into drinking water wells. We all need to do what we can to keep pesticides out of our creeks, streams, rivers, bays, and lakes.

**Chlorpyrifos** and **diazinon**, organophosphate pesticides, have been banned for residential use because they are so toxic to humans and the environment. These pesticides were either replaced or reformulated using other chemicals ("active ingredients"), that also cause water quality problems, including:

- **Pyrethroids**

Pyrethroids are long-lived, synthetic pesticides that interfere with the function of an organism's nervous system. They kill a wide variety of insect pests, including ants, cockroaches, and lawn grubs, but also earthworms and beneficial insects such as ladybugs and lacewings. When pyrethroids end up in our waters, they can kill crustaceans, aquatic insects, and fish.

Products containing pyrethroids have active ingredient names typically ending in "**-thrin**," including **permethrin**, **bifenthrin**, **cyfluthrin**, **beta-cyfluthrin**, **cypermethrin**, **deltamethrin**, **lambda-cyhalothrin**, and **tralomethrin**. An exception is **esfenvalerate**.



Check the label for active ingredients.



#### PYRETHRINS — DIFFERENT FROM PYRETHROIDS

Pyrethrins are short-lived pesticides made from pyrethrum chrysanthemum flowers. They are toxic to birds, fish, and beneficial insects until they break down after a few hours in sunlight. If you use a pesticide or insecticidal soap containing pyrethrin, use it on a dry day when you're not planning to water for the next few hours. Prevent pyrethrins from running off to a street, gutter, or storm drain.



Choose eco-friendly products for your home and garden. Look for this symbol before you buy.

## Fipronil

This is another widely used insecticide for controlling ants, beetles, cockroaches, fleas, ticks, termites, mole crickets, thrips, rootworms, weevils, and other insects. It is associated with bee colony collapse disorder. Fipronil is toxic to aquatic life, and to rabbits and ground-feeding birds such as chickens and turkeys.



Beneficial insects are often far more sensitive to pesticides than the pests you might be trying to kill.

Once pesticides eliminate the beneficial insects, pests multiply without a natural check.

## Imidacloprid



One of the most widely used pesticide in the world, imidacloprid is a neonicotinoid pesticide also linked to honey-bee colony collapse disorder. In Jan 2013, the European Food Safety Authority

stated that neonicotinoids pose an unacceptably high risk to bees. Many local garden centers have taken neonicotinoid pesticides off their shelves voluntarily because of the current honeybee crisis.

## Malathion and Carbyry! (Sevin)

These pesticides are water-soluble-which means that rain and over-watering can easily cause them to run off lawns and gardens, into storm drains and on to local creeks, bays, and the ocean. They are twice as toxic in salt water as in fresh water. Both are toxic to honeybees and other pollinators.

## DISPOSING OF EXTRA PESTICIDES

In California, it's illegal to dispose of any amount of unused pesticide (or any hazardous waste) in the trash, despite what the label may say. Take pesticides you won't be using to a local household hazardous waste collection facility or event. For a list of county household hazardous waste programs, visit [www.calrecycle.ca.gov/HomeHazWaste/Directory/](http://www.calrecycle.ca.gov/HomeHazWaste/Directory/).

Never dispose of pesticide rinse water in any indoor or outdoor drain or in the gutter. Water used to rinse out a sprayer or applicator should be applied like the pesticide

## MANAGING PESTS WHILE PROTECTING PEOPLE, PETS, AND THE ENVIRONMENT

1. When you apply pesticides, you're treating the symptom, rather than the cause of pest problems. Barriers (window screens and caulking to keep pests out), biological controls (encouraging beneficial insects), and cultural controls (keeping a clean house and a healthy garden that attracts beneficial insects) are always preferable to pesticide use. In situations where a pesticide is necessary, the best products for the environment are less toxic, less persistent, and target pests - not beneficial insects.



2. Follow the suggestions on pest prevention and less-toxic pest control in the Our Water Our World fact sheet series, online at [www.ourwaterourworld.org/FactSheets.aspx](http://www.ourwaterourworld.org/FactSheets.aspx) and in participating stores.

3. Find detailed information on pests and integrated pest management (IPM) approaches at [ipm.ucanr.edu](http://ipm.ucanr.edu).



Bee photo: Paul Stein, licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license; Storm drain photo: SCVURPPP

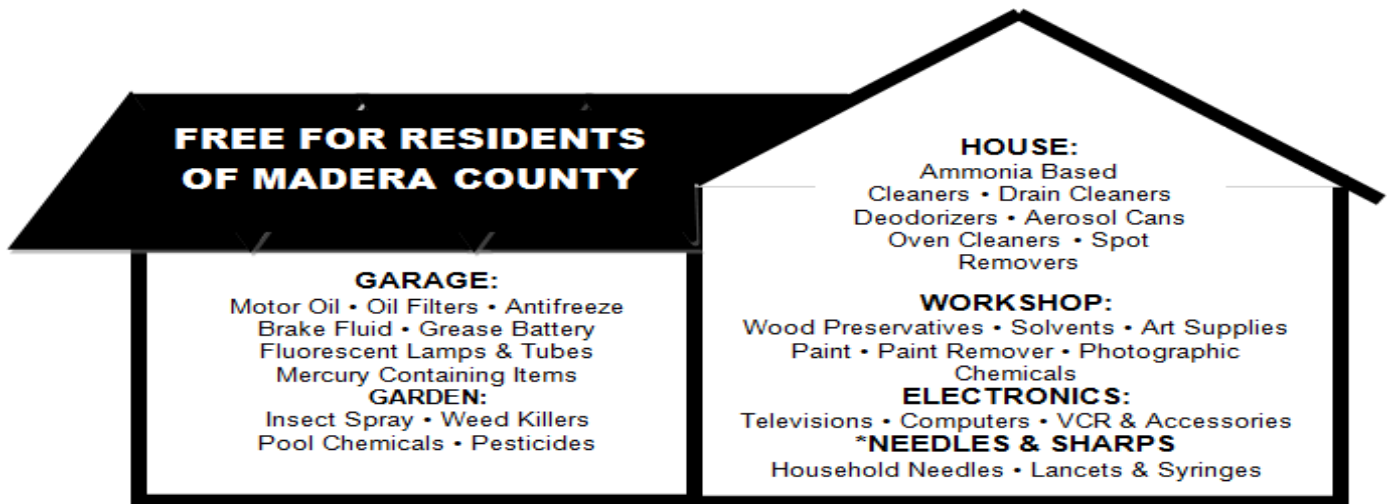
[WWW.OURWATEROURWORLD.ORG](http://WWW.OURWATEROURWORLD.ORG)

Appendix C  
Pesticide Disposal  
Poster

# HOUSEHOLD HAZARDOUS WASTE EVENT

At the Madera County Household Hazardous Waste  
Collection Facility (Located at the Fairmead Landfill) • 21739  
Road 19 • Chowchilla, CA FOR MORE INFORMATION CALL:  
(559) 665-7300

Facility Open  
Saturdays 9 AM to 1  
PM  
(Except on Major Holidays)



Quantities Limited to 15 gallons  
liquids or 125 pounds solids per

trip

NOT ACCEPTED:  
\*MEDICAL WASTE, RADIOACTIVE  
MATERIAL, LARGE COMPRESSED GAS  
CYLINDERS

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Appendix D  
**Projected Summary of City Events**

City Events				
Name	Date	Host/location	Contact	Website
Relay for Life	First week of May	Lions Town and Country Park	559-661-5418	<a href="https://www.madera.gov">https://www.madera.gov</a>
Love Madera	Mid-April	Court house Park	559-661-5418	<a href="https://www.madera.gov">https://www.madera.gov</a>
Senior Celebrate	3 <sup>rd</sup> week of September	Rotary Park	559-661-5418	<a href="https://www.madera.gov">https://www.madera.gov</a>

## Appendix E

### Professional IPM Pamphlet



Sometimes a pest problem is so bad that you don't want to tackle it yourself. Or sometimes, as with bed bugs or a yellowjacket nest, it's more efficient to get professional help.

Just as *Our Water Our World* promotes products that are eco-friendly and effective, we also believe that the best pest control services use **integrated pest management practices (IPM)**.

#### FINDING A PEST CONTROL COMPANY THAT USES IPM

Most pest control companies recognize that IPM solves pest problems more permanently than repeated spraying, because IPM emphasizes keeping pests out of buildings and working with residents on prevention. It's still very important, though, to ask specifically for IPM services when you interview or hire a pest management company, or discuss services with your regular provider. In California, three programs certify and list pest control companies that provide IPM services.

- **EcoWise Certified** ([www.ecowisecertified.org](http://www.ecowisecertified.org)), based in California, administers a rigorous test to make sure licensed pest management professionals understand and can provide prevention-based pest control practices. They certify both companies and individuals.
- **GreenPro** ([www.whatisgreenpro.org](http://www.whatisgreenpro.org)), a program of the National Pest Management Association, certifies companies and IPM services that are "reduced risk, comprehensive, and effective."

#### WHAT IS IPM?

Integrated Pest Management (IPM) relies on (1) locating and identifying pests, (2) getting rid of pests using traps, vacuuming, or other physical or mechanical means, (3) keeping pests out by blocking entry points such as cracks and holes, and (4) when necessary, using eco-friendly pesticides such as cockroach gel baits.

- **Green Shield Certified** ([www.greenshieldcertified.org](http://www.greenshieldcertified.org)), operated by the nonprofit IPM Institute of North America, certifies companies and services.

Even when you call a certified business, insist on IPM! Many certified companies offer both conventional spray programs and IPM services. Many companies that aren't certified have their own green service options.

#### QUESTIONS TO ASK A PEST CONTROL COMPANY

- Is your company certified by EcoWise, Green Pro, or Green Shield?
- Can I count on you to deliver IPM services?
- Will you send a person who specializes in IPM?
- Do you try other steps before using a pesticide?
- Will the services you provide keep pests from coming back?

#### WHAT'S WRONG WITH ROUTINE SPRAYING?

Conventional pest control often relies on routine spraying of pesticides inside and around buildings, and along walkways. This may give temporary relief from visible pests, but pests that are hiding behind appliances or in wall spaces will survive and keep breeding. Pests can also become resistant to the pesticides. This means the non-IPM service provider will have to come back and spray again—treating the symptoms of a pest infestation, but not curing the problem. You may be both paying for services that are less effective than IPM, and living with pests.



Choose eco-friendly products for your home and garden. Look for this symbol before you buy.

Can I see a typical service ticket? Make sure the ticket shows specific kinds of pests and where they were found on your property; structural conditions that should be corrected to keep pests away; and the recommended length of time before the next visit.

### **WHAT TO EXPECT FROM PM SERVICES?**

The first visit will usually include inspection of your home or building, inside and out, to find out what kinds of pests are there; where they find food, water, and shelter; and how they get inside. The service person may leave sticky traps behind to confirm you have pests and learn where they're hiding.

The technician should give you a list of structural issues with the building that may provide places for pests to live and breed. IPM companies will often make simple structural repairs ("pest exclusion repairs") as a service. You and the service provider should make an agreement about who is going to fix what, and when.

The service person may suggest that you clear up clutter so that pests have fewer hiding places and are easy to

spot. Don't take it personally! IPM is a team effort.

With clutter reduced and pest exclusion repairs complete, future IPM services are likely to be brief and limited to monitoring for pests (checking sticky traps). But if you see pests, be sure to call the IPM service company!



### **DOES IPM COST MORE?**

IPM may cost more than conventional spray treatments at first, because of the time it takes to make a thorough inspection and the cost of repairs to keep pests out. Over time, IPM services should happen less often, take less time, and cost less. Studies show that IPM saves money in the long run.

### **WHAT ABOUT BED BUGS?**



Bed bugs are tiny brown or red crawling insects. They can be hard to see unless you're looking for them. The first sign of bed bugs may be people getting bitten at night. Bites can cause an itchy red rash... or not show up at all. Bed bugs or the brown or reddish stains they leave behind are usually found in mattress seams, furniture, upholstery, or cracks around baseboards close to where people sleep.

Providers may use heat treatment to end an infestation. This requires moving items that may be damaged by heat out of the living space, doing laundry, and staying away for several hours while heaters are brought in to raise the temperature up to 150° F. Bed bugs in clothes are generally killed after 20 minutes in a hot clothes dryer.

California state law requires that landlords must treat units infested with bed bugs. The landlord must pay for pest control services and cannot raise the rent or cause problems for a tenant who complains. The tenant must follow the pest control professional's instructions on how to get ready for treatment. Nearby units may also be inspected and treated if bed bugs are found.



[WWW.OURWATEROURWORLD.ORG](http://WWW.OURWATEROURWORLD.ORG)

## **Appendix F**

### **Landscape Design & Maintenance Program**

#### **INTRODUCTION:**

The Phase II Permit requires the implementation of a Landscape Design and Maintenance Program to reduce the amount of water, pesticides, herbicides, and fertilizers used during City of Madera (City) operations and activities. This Landscape Design and Maintenance Program was prepared to meet the requirements of Provision E.11.j and summarizes the City's practices to implement the tasks of this permit provision within the area of the City governed by the Phase II Permit.

The objective of the Landscape Design and Maintenance Program is to provide a summary of the City's practices to reduce the amount of water, pesticides, herbicides, and fertilizers in a single document to facilitate communication of the compliance activities within the City and to the public and interested regulators.

#### **GOALS:**

1. The requirements in the Phase II Permit are intended to discourage conventional landscaping practices, particularly the application of pesticides, herbicides, and fertilizers. To this end, the Phase II Permit requires the City to do the following within the area of the City governed by the Phase II Permit:
  - a. Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.
  - b. Implement practices that reduce the discharge of pesticides, herbicides, and fertilizers.
  - c. Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area.

**PERMIT REQUIREMENTS:**

Program Category	Related Permit Requirement E.11.j(ii)
Soil Health	(b) 2.a – Create drought-resistant soils by amending soils with compost.
	(b) 2.b – Create soil microbial community using compost, compost tea, or inoculation.
	(b) 2.d – Practice grass-cycling on decorative turf landscapes to reduce water use and the need for fertilizers.
Plantings and Landscaping	(b) 2.c – Use native and/or climate appropriate plants to reduce the amount of water, pesticides, herbicides, and fertilizers used.
	(b) 2.e – Keeping grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling.
	(b) 2.i – Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety.
Pesticide, Herbicide, Fertilizer Use	(a) – Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.
	(b) 2.f – Preventing application of pesticides, herbicides, and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50% probability as predicted by National Oceanic and Atmospheric Administration (NOAA).
	(b) 2.g – Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal).
	(b) 2.h – Prohibiting application of pesticides, herbicides and fertilizers as required by the regulations DPR 11-004 Prevention of Surface Water Contamination by Pesticides enacted by the Department of Pesticide Regulation.
	(b) 3 – Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
	(c) – Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area
Irrigation Management	(b) 4 – Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.
Staff Education	(b) 1 – Implement educational activities for municipal applicators and distributors.



## SOIL HEALTH

### GOAL:

3. Establish healthy soils where possible on City properties. Healthy soils are better able to absorb runoff and to help in the reduction of pollutant levels in runoff.
  - Reduce the need for fertilizers, pesticides, and herbicides on City properties, as healthy soils foster populations of beneficial insects and microbiota which deter problem pests and provide needed nutrients to vegetation without supplement.
  - Reduce the need for irrigation, as healthy soils are better able to retain irrigation water and thus reduce the need for additional watering, also reducing mid-irrigation runoff and associated pollutant transport.

### PERMIT REQUIREMENTS:

4. (b) 2.a – Create drought-resistant soils by amending soils with compost.
5. (b) 2.b – Create a soil microbial community using compost, compost tea, or inoculation.

### CITY PRACTICES AND ACTIONS:

6. Mowers are equipped with mulching blades and decks.
7. Heavily used turfed areas are aerated and/or de-thatched to increase water absorption and retention.
8. Vehicle traffic on turf is avoided or reduced to reduce compaction.
9. Shrub and ground cover areas at key City facilities are mulched as needed to help retain soil moisture, improve the soil profile, and aid in weed suppression. The use of mulch reduces water use. Improving the soil profile increases plant health and minimizes the need for fertilization. Mulch also creates a weed barrier which helps to minimize herbicide use.
10. Grass-cycling and aeration is routinely performed in turf areas (i.e., primarily in parks) to reduce the need for fertilization and improve the soil profile.

### PLANNED ACTIONS:

11. When the necessary equipment becomes available, top dressing will be applied as needed to amend soil, flatten uneven surfaces, fill in bare spots and to hold air, water, and nutrients in the root zone.
12. As funds become available, the City will increase mulching at shrub and ground cover areas.

## PLANTINGS AND LANDSCAPING

## **GOAL:**

Foster the alteration of City landscaping practices to reduce irrigation needs and chemical supplements.

13. Increase the use of native plants, as they are adapted to local conditions and thus more likely to thrive, reducing their susceptibility to pests and disease, as well as their need for fertilizers and pesticides.
14. Increase grass-cycling or leaving the clippings on the lawn after mowing.

## **PERMIT REQUIREMENT:**

15. (b) 2.c – Use native and/or climate appropriate plants to reduce the amount of water, pesticides, herbicides, and fertilizers used.
16. (b) 2.e – Keeping grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling.
17. (b) 2.i – Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety.
18. (b) 2.d – Practice grass-cycling on decorative turf landscapes to reduce water use and the need for fertilizers.

## **CITY PRACTICES AND ACTIONS:**

19. New landscaping incorporates the use of drought tolerant or California native plants and trees whenever possible to reduce water and fertilizer use. Plantings are designed and spaced appropriately to discourage weed growth thereby reducing herbicide use.
20. Climate and soil appropriate turf varieties are installed.
21. New landscapes are installed with climate and soil appropriate plant material.
22. Adjust mowing height of turf to accommodate season and use.

## **PESTICIDE, HERBICIDE, FERTILIZER USE**

### **GOAL:**

23. Reduce the quantity of pesticides, herbicides, and fertilizers used by the City in its operations and activities.

24. Establish new practices that reduce the reliance on pesticides, herbicides, and fertilizers for landscaping success and foster sustainable landscapes that are healthier, more resistant to pests, and use less water.

#### **PERMIT REQUIREMENT:**

25. ii)(a) – Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.
26. (b) 2.f – Preventing application of pesticides, herbicides, and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50% probability as predicted by National Oceanic and Atmospheric Administration (NOAA).
27. (b) 2.g – Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal).
28. (b) 2.h – Prohibiting application of pesticides, herbicides and fertilizers as required by the regulations DPR 11-004 Prevention of Surface Water Contamination by Pesticides enacted by the Department of Pesticide Regulation.
29. (b) 3 – Collect and properly dispose of un-used pesticides, herbicides, and fertilizers.
30. (c) – Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area

#### **CITY PRACTICES AND ACTIONS:**

31. Municipal staff and/or contractors responsible for landscape chemical applications routinely monitor NOAA for weather conditions and schedule applications accordingly. All pesticides, herbicides, and fertilizers are applied according to the label requirements and in compliance with federal, state, and local regulations.
32. Municipal staff and/or contractors assigned to apply herbicides and pesticides are required to record type, amount, applicator and that they have reviewed the “NOAA” weather report before applying pesticides or herbicides. All usage is reported to Madera County.
33. The staff follow the Integrated Pest Management model for all herbicide and pesticide use. Applications are made only when warranted and when manual weed, or insect removal is impractical.

#### **PLANNED ACTIONS:**

None shown.

## IRRIGATION MANAGEMENT

### GOAL:

34. Foster practices that will result in the conservation of water resources.
35. Foster practices that will result in less irrigation run-off from City properties and reductions in water discharges from City activities into local water bodies.

### PERMIT REQUIREMENT:

36. (b) 4 – Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.

### CITY PRACTICES AND ACTIONS:

37. Irrigation requirements are outlined in the water efficient landscaping ordinance for the City.
38. Rain sensors shut down irrigation if measurable rain is detected.
39. Irrigation is done using cycle soak to reduce run off.
40. Conventional spray nozzles are upgraded to rotatory nozzles at key City facilities to reduce runoff.
41. Flow sensors are utilized to detect leaks or line failures.
42. All new construction is designed to utilize smart controllers that uses evapo-transpiration (ET) and rain sensors.

### PLANNED ACTIONS:

43. A centralized City weather station will be used to irrigate based on daily ET information.

## STAFF EDUCATION

### GOAL:

44. Develop practices to ensure that City staff responsible for conducting landscaping activities are sufficiently trained to conduct these activities in full compliance with permit requirements and with the intent of protecting water quality.

### PERMIT REQUIREMENT:

45. (b) 1 – Implement educational activities for municipal applicators and distributors.

#### **CITY PRACTICES AND ACTIONS:**

46. Staff and contractors engaged in the use of pesticides and/or herbicides hold a valid Pesticide Applicator's Certificate issued by the California Department of Pesticide Regulation and attend a minimum of 20 hours of pesticide education classes every two (2) years.
47. Annual pesticide, herbicide and fertilizer training is provided to staff responsible for landscape chemical applications. Training topics include proper protective gear, storing, mixing, application, and the requirements of all federal, state, and local laws.
48. Staff attend the appropriate stormwater training sessions hosted by the stormwater coordinator.
49. Staff receive annual pesticide training covering all chemicals, pesticides, and herbicides that are used in the City by a Pest Control Adviser.
50. Staff attend external training and meetings related to the stormwater permitting requirements.

# Appendix G

## City of Madera Integrated Pest Management Policy

### PREAMBLE

The City of Madera (City) is committed to implementing an Integrated Pest Management (IPM) approach to guide the management of its facilities, landscaped areas, and rights-of-way. The IPM approach promotes the protection of the residents and visitors, as well as the local waterways, and utilizes a pest management strategy that promotes the long-term suppression of pest problems with minimum impact on non-target organisms and the environment as well as a reduction in use of pesticides. Least toxic pesticides are used only after an assessment indicates such a need, consistent with the provisions of this IPM Policy.

The adoption of this IPM Policy facilitates compliance with the Phase II Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit and the Basin Plan Amendment (BPA) for the Control of Pyrethroid Pesticide Discharges (Resolution R5-2017-0057).

### APPROACH

For the purposes of its IPM policy, the CITY adopts the following University of California Statewide Integrated Pest Management<sup>1</sup> (UC-IPM) definition:

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.

### PURPOSE

It is the purpose and intent of this IPM Policy to:

- a) Reduce reliance on and minimize the use of pesticides<sup>2</sup> as a part of CITY operations and on CITY property and rights-of-way that may adversely impact water quality; and
- b) Outline how CITY departments are to perform pest management so that it is consistent with this IPM Policy.

### SCOPE

The IPM Policy governs CITY employees and contractors hired by CITY departments and persons acting under the authority of the CITY in the care and maintenance of CITY facilities, landscaped areas, and rights-of-way.

The term “pesticides” is a general term that includes herbicides, insecticides, fungicides, and rodenticides.

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<sup>1</sup> <https://www2.ipm.ucanr.edu/what-is-IPM/>

<sup>2</sup> As defined in Section 12753 of Chapter 2 of Division 7 of the California Food and Agricultural Code.

## POLICY

It is the policy of the CITY that:

1. Departments performing pest management will conform with the CITY's IPM Policy.
2. The CITY's IPM approach will include the following:
  - a) Educate and train CITY staff in the IPM program, practices, and policy.
  - b) Require CITY staff and pesticide application contractors to implement the IPM Policy on all CITY facilities, landscaped areas, and rights-of-way and to maintain records on and report the types and amounts of pesticides used, as well as IPM methods considered and used to prevent and control pests.
  - c) Reduce to the maximum extent practicable the use of pesticides.
  - d) Consider taking a "no-action" approach in addressing certain pest control issues.
  - e) Review and consider available non-chemical options before using a chemical pesticide.
  - f) Identify pests and least toxic methods to control pests.
  - g) Identify, evaluate, and minimize or eliminate conditions that encourage pest problems.
  - h) Conduct careful and efficient inspection, monitoring, and assessment of pest problems by designated personnel or contractor knowledgeable of IPM methods.
  - i) Maintain records on IPM methods considered and used to prevent and control pests.
  - j) Comply with all applicable local, state, and federal regulations, including pesticide use and reporting.
  - k) Conduct decision-making based on the best available science and data.
  - l) Refer residents and pest control operators to the CITY's stormwater program and Madera County Department of Agricultural Weights and Measures for information on less toxic methods of pest control.
  - m) Provide public access to the CITY's IPM Policy.
3. IPM Policy General Requirements
  - a) Eliminate the use of Category I pesticides.
  - b) Minimize the use of Category II, III, and IV pesticides.
  - c) Eliminate the use of pesticides that are classified by government agencies as known carcinogens, reproductive toxicants (teratogens, mutagens), endocrine disruptors, carbamates, organophosphates, or ground water contaminants.
  - d) Use pesticides only when necessary and select a pesticide that is both effective and least toxic.
  - e) Designate playgrounds on CITY property as pesticide-free.
  - f) Develop pest-specific plans to prevent or reduce the incidence of pest problems.
  - g) Require CITY staff and pesticide application contractors to comply with the Phase II Permit requirements to reduce the number of pesticides and herbicides used during municipal operations and activities by implementing the CITY's Landscape Design and Maintenance and Program.

## IMPLEMENTATION

This IPM Policy shall be implemented by CITY departments and through an IPM Coordinator. Several areas important to the implementation of the IPM Policy are outlined below, including a description of the IPM Coordinator role.

## IPM Coordinator

The Parks Maintenance Supervisor is designated as the CITY's IPM Coordinator and is responsible for coordinating with the departments involved in pest management to ensure that the IPM Policy is implemented. The IPM Coordinator is assisted by the CITY's Deputy City Engineer /Stormwater Coordinator.

The primary responsibilities include the following:

1. Education and Training:
  - a) Communicate the goals and requirements of the IPM Policy to CITY departments.
  - b) Request and maintain information regarding the CITY's IPM trainings offered or attended.
  - c) Provide information to CITY staff performing pest management as needed to ensure that the requisite IPM practices are implemented.
2. IPM Applications and Guidelines:
  - a) Ensure CITY staff and pesticide application contractors are authorized as Pesticide Applicators and are complying with the CITY's IPM Policy.
3. Product Selection and Product Use Approval:
  - a) Work with CITY staff performing pest management to develop a form for exemption requests.
  - b) Ensure that no products on the prohibited use product list are applied unless CITY approves an exemption request.
4. Notification of Pesticide Applications:
  - a) Use a standardized design for a pesticide application notification sign that includes the date of application, the name and type of product used, the signal word, and a contact telephone number where the public may call for information about the proposed application on all school sites as required by the Healthy Schools Act.
5. Pesticide Application Contracts:
  - a) Ensure that contracted pesticide applicators are appropriately trained and certified, implement IPM, and follow the CITY's pesticide and herbicide standard operating procedures.
6. Record Keeping:
  - a) Work with CITY staff performing pest management to develop forms summarizing pesticide use.
  - b) Provide direction regarding the pesticide application recordkeeping and reporting of the methods and pesticides used/applied on the CITY's facilities, landscaped areas, and rights-of-way.
  - c) Review the pesticide application records (Pesticide Use Reports (PURs)) and follow-up reports to ensure that the activities are consistent with the IPM Policy.
  - d) Provide information to the CITY's Deputy City Engineer/Stormwater Coordinator for the stormwater Annual Report or other required reporting, as needed.

## Education and Training

Education and training of appointed personnel is critical to the success of the IPM Program. Key staff and contractors involved in pest management or application will be educated in IPM policies and procedures. Education may include classroom training, on-site training, or informal meetings and will typically be held once a year. IPM topics discussed may include, but not be limited to, pest control action thresholds; pest management decisions; pest monitoring and identification; prevention; control; and effectiveness evaluations.



### **IPM Applications and Guidelines**

Only persons specifically authorized by the IPM Coordinator as Pesticide Applicators will be permitted to bring or use pesticides on CITY property. Pesticide applicators must follow regulations and label precautions. Applicators will have training in IPM and must comply with the CITY's IPM Policy.

### **Product Selection and Product Use Approval**

Except for pesticides granted an emergency exemption, the CITY will not use any products on the prohibited use product list below. If it is determined that an EPA registered pesticide must be used, then the least-toxic material will be chosen.

1. Prohibited Use Products: Pesticides used by the CITY shall not contain the following ingredients:
  - a) Organophosphates, or organochlorines, or carbamates listed by the United States Environmental Protection Agency (Office of Pesticides Programs, Document 735-F-99-14, May 1999), or California Department of Pesticide Regulation Chemical Inquiries Database.
  - b) Glyphosate or glyphosate containing products.
2. Banned Use Areas: Except in the case of an emergency, no pesticides will be applied on CITY playground properties.

### **Notification of Pesticide Applications**

The CITY shall provide the public and its employees with notification of pesticide applications through the use of signs at all school sites as required by the Healthy Schools Act.

### **Pesticide Application Contracts**

Where pesticide management and/or applications are provided by contractors, the CITY will contract with IPM-trained and/or IPM-certified pest control applicators. A clause will be included within the contract to ensure that pesticide applicators implement IPM and follow the CITY's pesticide and herbicide standard operating procedures.

As detailed in the CITY's pesticide and herbicide standard operating procedures, contractors are responsible for the filing of all required records and reports, including, but not limited to, Notice of Intent to Apply and PURs, as specified by all county, state, and federal agencies.

### **Record Keeping**

The CITY shall maintain records of the IPM methods used and pesticide applications for a period consistent with the CITY's record retention policy. This information may also be reported within CITY stormwater Annual Reports or other required reporting. The information reported shall include the following:

1. All the information listed below will be documented on an official Pest Control recommendation form to be supplied by a Pest Control Adviser (PCA) annually prior to any pest control operation. The form will include:
  - a) Name of the entity responsible.
  - b) Specific site of the application.
  - c) The target pest.
  - d) The date the pesticide was used and re-entry period if applicable.
  - e) Date of expiration of the PCA recommendation.
  - f) Schedule, timing, and conditions.
  - g) The name and active ingredient of the pesticide to be applied and EPA registration number.

- h) The pesticide signal word.
- 2. The IPM Coordinator or PCA will prepare a follow-up record to include:
  - a) Prevention and other non-chemical methods of control used.
  - b) Chemical methods used.
  - c) The effectiveness of the pesticide or management action.
  - d) If application was undertaken in a pest control emergency, provide explanation of circumstances of the emergency.

**RECOMMENDED PEST CONTROL PRODUCTS**

The CITY recommends that the pesticides purchased for use on CITY facilities, landscaping, or rights-of-way follow the guidelines of the IPM Policy such that they are the most effective and present the lowest risk to the environment. Pesticide application should only be used when needed and in combination with other approaches to ensure effective, long-term control.

Our Water, Our World (OWOW), a program that partners with cities and counties to promote less-toxic, eco-friendly pest solutions and products, has developed lists of less-toxic pesticides that are organized by:

- Brand,
- Pest, and
- Active ingredients.

The products lists are intended to capture less-toxic products that are compatible with IPM policies and can be found on the “Active Ingredients” page of the OWOW website:

<https://ourwaterourworld.org/pesticide-ingredients/>.

Those purchasing pesticides on behalf of CITY should consult these lists prior to selecting a pesticide for purchase. Contracted pesticide applicators should also be encouraged to utilize the lists when purchasing materials for application on CITY property.

**PRACTICES**

Pest control chemicals are stored in a secure building at the CITY Public Works and Parks Department Warehouses.

<b>CHEMICAL APPLICATION PRACTICES</b>	
<b>User Qualifications</b>	<ul style="list-style-type: none"> <li>■ Chemical application and advice on pest management problems will be made by the IPM Coordinator or a licensed pest control company, particularly in the creation of customized IPM problems, which may require detailed knowledge of the biology and ecology of a particular species.</li> <li>■ If pesticides are required, CITY staff will determine, or coordinate with a licensed pest control company to determine, the best product and application in accordance with the approval requirements.</li> <li>■ Only trained personnel can prepare and use all chemicals.</li> </ul>
<b>Species Considerations</b>	<ul style="list-style-type: none"> <li>■ Time the treatment to coincide with the presence of the pest.</li> <li>■ Use a selective chemical that has the least effect on non-target species and treat only the area affected.</li> </ul>

<p><b>User Safety</b></p>	<ul style="list-style-type: none"> <li>■ Users must wear protective clothing appropriate to the pest chemical application used.</li> <li>■ Ensure that anyone handling toxic chemicals never works alone and that the work area is well-ventilated.</li> <li>■ Wear a respirator for outdoor spraying or dusting of organic phosphorus compounds.</li> <li>■ Eating, drinking, and smoking must be prohibited when using or handling chemicals.</li> <li>■ Users must be familiar with the chemicals they are likely to be using, the effects the chemicals may have on the body, and how the chemicals may enter the body.</li> <li>■ Users must be aware of the signs and symptoms of acute poisoning related to chemicals they are using. They must stop work if they are feeling ill and seek medical advice.</li> </ul>
<p><b>Equipment</b></p>	<ul style="list-style-type: none"> <li>■ Equipment must be frequently checked and properly maintained, both for health and safety reasons and to minimize spray drift.</li> </ul>
<p><b>Weather/Time Restrictions</b></p>	<ul style="list-style-type: none"> <li>■ Spraying must not be carried out in unsuitable weather. Anyone operating sprayers must have access to a wind-speed meter, and only spray when the wind speed is negligible.</li> <li>■ Spraying must not take place within 48 hours of a rain event.</li> <li>■ Hours of work must be controlled so that building occupants are not exposed.</li> </ul>

<p><b>BASIC PLANT AND FUNGI CONTROL PRACTICES</b></p>	
<p><b>Maintenance</b></p>	<ul style="list-style-type: none"> <li>■ Keep the building grounds well-maintained. Clear plant debris, especially from fruit-bearing trees.</li> <li>■ Maintenance personnel shall use mulch and other landscaping best practices, warding off weeds and other pests.</li> <li>■ Keep vegetation trimmed at least 18 inches from the building.</li> </ul>
<p><b>Plantings</b></p>	<ul style="list-style-type: none"> <li>■ Maintain and plan landscape features to eliminate safe havens for pests.</li> <li>■ Avoid monocultures by mixing plant species in planters and gardens.</li> </ul>

<b>Manual Controls</b>	<ul style="list-style-type: none"> <li>■ Landscaping shall be hand weeded and chemical control shall be kept to a minimum. This measure prevents human and environmental exposure to hazardous chemicals.</li> </ul>
<b>Chemical Controls</b>	<ul style="list-style-type: none"> <li>■ When chemical use is necessary, replace hazardous substances with least-toxic chemicals as defined by Our Water, Our World Reduced-Risk Pesticide List.</li> </ul>
<b>Inspection Schedule and Location</b>	<ul style="list-style-type: none"> <li>■ Responsible parties will inspect the site at regular intervals to monitor and apply pest controls operations.</li> </ul>

<b>BASIC ANIMAL PEST CONTROL PRACTICES</b>	
<b>Site/Building Cleanliness</b>	<ul style="list-style-type: none"> <li>■ Keep garbage containers clean, free of odors, and covered. Sanitation measures reduce habitat and food sources for pests.</li> <li>■ Keep areas around garbage containers free of spillage or garbage to prevent the collection of trash or debris on the ground around or underneath the containers.</li> <li>■ Keep grounds free of high weeds, trash, old equipment, and debris, as these conditions create ideal harborage for rodents.</li> </ul>
<b>Structural Integrity</b>	<ul style="list-style-type: none"> <li>■ Maintain the building exterior in good condition with no holes or openings larger than ¼ inch including, but not limited to, windows, doors, fans, vents, etc. to keep pests from entering the building.</li> <li>■ Address any deficiencies in the building exterior with corrective measures, i.e., cementing, screening, caulking, installing stripping on door bases, etc.</li> <li>■ Maintain door sweeps on all applicable doors to produce a good seal to the ground.</li> </ul>
<b>Inspection Schedule and Location</b>	<ul style="list-style-type: none"> <li>■ Visual inspections shall be performed monthly to identify problem areas.</li> </ul>

<b>SPECIFIC ANIMAL CONTROL STRATEGIES</b>	
<b>Ants</b>	<ul style="list-style-type: none"> <li>■ Always keep food items in sealed containers or store them in the refrigerator or freezer. Clean surfaces and storage areas to remove crumbs and stains. Keep sinks and worktops clean and dry.</li> <li>■ Prune branches close to the building or anything that might create a bridge for the ants to cross.</li> <li>■ In areas where ants are present, wipe the areas down with soapy water to prevent the formation of major scent trails. If there already is an established trail, wipe backwards from the food source to the entrance of the trail.</li> <li>■ Treat only areas that have active pest infestations. Temporary blockades can be made using chili powder, cinnamon, boric acid, or sticky substances such as petroleum jelly.</li> <li>■ Baits are best put in the path of an ant trail and then removed after the ant activity stops.</li> <li>■ Identify the ant species for most relevant measures.</li> </ul>
<b>Aphids</b>	<ul style="list-style-type: none"> <li>■ Prune out infested leaves.</li> <li>■ Knock off aphids by spraying with a strong stream of water.</li> <li>■ Wait for hot weather; most aphids are gone by mid-June.</li> <li>■ Release ladybugs on heavily infested plants.</li> <li>■ Spray with insecticidal oil or soap (Safer soap).</li> </ul>
<b>Bed Bugs</b>	<ul style="list-style-type: none"> <li>■ Call professional pest management to inspect and treat for the presence of bed bugs indicated by the initial inspection.</li> </ul>
<b>Caterpillars</b>	<ul style="list-style-type: none"> <li>■ Obtain a correct identification of the caterpillar to prescribe the most appropriate form of control.</li> <li>■ Bacterial insecticides derived from natural ingredients are available to control caterpillars.</li> </ul>
<b>Cockroaches</b>	<ul style="list-style-type: none"> <li>■ There are five main species of cockroaches and effective control depends on identifying them correctly.</li> <li>■ All food handling areas should be cleaned frequently.</li> <li>■ IPM measures for controlling cockroaches include effective hygiene and exclusion practices, sticky traps lined with pheromones, boric acid, and insect growth regulators.</li> </ul>
<b>Dust Mites</b>	<ul style="list-style-type: none"> <li>■ Fabrics, bedding, and carpets attract and generate dust and dust mites. To keep dust mites at bay, keep building well-ventilated and dry.</li> </ul>

<b>Scales (hard and soft)</b>	<ul style="list-style-type: none"> <li>■ Provide plant with proper irrigation.</li> <li>■ Encourage natural enemies (ladybugs, lacewings).</li> </ul>
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<b>SPECIFIC ANIMAL CONTROL STRATEGIES CONTINUED</b>	
<b>Flies</b>	<ul style="list-style-type: none"> <li>■ Collection of waste and residues should be carried out at least twice a week.</li> <li>■ Keep refuse areas clean to avoid providing flies with breeding grounds.</li> <li>■ Ensure bin lids fit tightly and the bins are cleaned regularly.</li> <li>■ Use fine mesh window and door screens as a barrier against entry by any flying insect.</li> <li>■ Ultra-violet (UV) fly killing equipment is very effective so long as it is situated correctly. In food preparation areas, UV equipment should only be used once all possible precautions have been taken to keep flying insects out. Position the UV equipment close to an entry point, at right angles to the nearest competing light source such as a window. In many catering establishments, poorly situated UV equipment poses a greater food hygiene hazard than lacking pest repellants altogether. This is because when placed next to the food preparation area, they draw flies to the food, which they are likely to contaminate before being killed.</li> <li>■ Natural chemical treatments include pyrethrum extracted from the <i>Chrysanthemum cineraria folium</i> plant that can be used in kitchens and restaurants.</li> </ul>
<b>Mosquitoes</b>	<ul style="list-style-type: none"> <li>■ Find and eliminate their habitat.</li> <li>■ Do not allow flowerpots, buckets, plastic sheeting, or other open containers outside to collect water.</li> <li>■ Drain unused pools or fountains so that the water cannot become stagnant.</li> <li>■ Drain or fill depressions, mud flats, and other areas that might hold water.</li> <li>■ Repair leaking taps and air-conditioning units so that puddles cannot form and ensure that septic tanks and sewage systems are properly maintained and in good working order.</li> <li>■ Avoid over-irrigating lawns and gardens, and keep weeds and grass well-clipped.</li> <li>■ To prevent mosquitoes from coming indoors, fit fine-mesh screens to porches, doors, and windows.</li> </ul>

<p><b>Fabric/Clothing Moths</b></p>	<ul style="list-style-type: none"> <li>■ Fabrics should be washed and then put in bags and placed in a freezer. When taken out to thaw, shake the fabrics vigorously to remove dead larvae.</li> <li>■ Clean the areas where fabrics have been stored with vinegar and water.</li> <li>■ Store fabrics in cedar chests or closets. Place cedar chips or blocks or lavender sachets in drawers.</li> <li>■ For acute moth problems, reusable traps can be baited with a controlled-release pheromone system to lure moths into the trap and disrupt their mating cycle.</li> <li>■ Avoid mothballs and insect foggers.</li> </ul>
<p><b>Pantry Moths</b></p>	<ul style="list-style-type: none"> <li>■ Vacuum affected areas.</li> <li>■ Scrub all surfaces with hot water and detergent, especially in corners and around the edges of removable shelves. White vinegar also works.</li> <li>■ Food items and containers should be thoroughly cleaned with a detergent and water solution and wiped down with a vinegar rinse before being put back. Use air-tight containers made of hard plastic, glass, or metal and not plastic bags.</li> <li>■ Kill any moths with a fly swatter or moth traps.</li> <li>■ Peppermint gum, bay leaves, peppercorns, and cloves may also help deter pantry moths.</li> </ul>

<b>SPECIFIC ANIMAL CONTROL STRATEGIES CONTINUED</b>	
<b>Rodents</b>	<ul style="list-style-type: none"> <li>■ Rodent control should start with a survey to determine the source of the problem and the conditions that encourage the infestation.</li> <li>■ Remove food sources.</li> <li>■ Eliminate places of refuge.</li> <li>■ Openings in building foundations and walls should be closed or screened with wire mesh that has holes not more than 1.25 cm (0.5 in) wide. Where pipes enter masonry, force heavy hardware cloth or steel wool into the opening, then fill it with concrete.</li> <li>■ Continuous surveillance is necessary and places where rodents have been gnawing to gain entry to a building should be sealed with metal flashing.</li> <li>■ Doors are particularly vulnerable to rodent entry so ensure that external doors and windows close tightly with no gaps at the bottom.</li> <li>■ Materials stored in the open, in sheds or in building should be stacked at least 30 cm (1 ft.) above the ground.</li> <li>■ Stringent waste disposal practices should be observed – secure all waste in closed containers and not just plastic bags.</li> <li>■ Wash bins regularly. Make sure composting bins are designed to prevent rodents from entering.</li> <li>■ Bait should be sticky to ensure that the mouse triggers the trap mechanism even if it only lightly touches the bait. Mice prefer peanut butter or chocolate. Bacon, oatmeal, or apples can also be used as bait.</li> <li>■ An alternative to snap traps is a battery-operated trap that generates a high voltage once the rat or mouse is inside.</li> </ul>
<b>Slugs and Snails</b>	<ul style="list-style-type: none"> <li>■ There are various non-chemical solutions to eliminate slugs and snails, including putting salt or sharp shingle around vulnerable plants, drowning them in beer, or simply throwing them over a fence. Elemental copper bands also repel snails and slugs. Remove daytime hiding places (weeds, debris, etc.).</li> </ul>
<b>Wasps and Hornets</b>	<ul style="list-style-type: none"> <li>■ A simple trap can be made by putting beer or a solution of jam or honey and water in an open jar around the grounds. If this does not work, there are branded traps available containing specially formulated attractant baits.</li> </ul>

**DEFINITIONS FOR USE WITH THIS POLICY**

1. “Basin Plan Amendment” or “BPA” means the regulatory requirements for the Control of Pyrethroid Pesticide Discharges that was adopted by the Central Valley Water Board on June 8, 2017, with the adoption of Resolution R5-2017-0057. The BPA established measurable pyrethroid concentration goals and an implementation program for the control of pyrethroid pesticides that are or could potentially impact aquatic life in the Sacramento and San Joaquin River watersheds.
2. “Contractor” means a person, firm, or corporation or other entity, including a governmental



- entity that enters into a contract with the CITY for pest management services.
3. "Integrated Pest Management" (IPM) means an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.<sup>3</sup>
  4. "IPM Coordinator" means the designated agent or employee experienced in IPM field and office work and is responsible for IPM program coordination for the CITY.
  5. "IPM Policy" means this Integrated Pest Management Policy.
  6. "Pest" means any pest as defined in Section 12754.5 of Chapter 2 of Division 7 of the California Food and Agricultural Code. Pest includes any of the following that is or is liable to become, dangerous or detrimental to the public health or the agricultural or nonagricultural environment of the State:
    - a) Any insect, predatory animal, rodent, nematode or weed.
    - b) Any form of terrestrial, aquatic, or aerial plant or animal, virus, fungus, bacteria, or other microorganism (except viruses, fungi, bacteria, or other microorganisms on or in living man or other living animals).
    - c) Anything that the Secretary of the California Department of Food and Agriculture or the Director of Pesticide Regulation for the California Department of Food and Agriculture by regulation declares to be a pest.
  7. "Pest Control Adviser" or "PCA" means any person possessing a current pest control adviser license issued by the California Department of Pesticide Regulation. The PCA license is required for making pest control recommendations in the landscape setting.
  8. "Pest Control Operator" or "PCO" means any person possessing a current pest control operator license issued by the California Department of Pesticide Regulation. The PCO license is required when performing structural pest control.
  9. "Pest-Specific Plan" means a written plan addressing the management and control of a particular pest. Components of Pest-Specific Plans should include pest biology, impacts, pest thresholds, recommended treatments, monitoring frequency, cultural practices, and site modifications to prevent or reduce the incidence of pest problems.
  10. "Pesticide" means pesticide as defined in Section 12753 of Chapter 2 of Division 7 of the California Food and Agricultural Code. Pesticide includes any of the following:
    - a) Any substance or combination of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest which may infest or be detrimental to vegetation, man, animals, or households or be present in any agricultural or nonagricultural environment whatsoever.
    - b) Any spray adjuvant.
  11. "Pesticide Applicator" means any person or company hired by a CITY Department who applies pesticides, as defined in this section, to property owned, leased, or managed by the CITY.
  12. "Phase II Permit" means the State Water Resources Control Board's Phase II Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, Order No. 2013-0001, adopted February 5, 2013, and subsequent re-issuances of this Order.

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<sup>3</sup> <https://www2.ipm.ucanr.edu/what-is-IPM/>

13. "Signal Word" means the toxicity category word on the pesticide label: Danger, Warning, Caution or None Required. See Toxicity Category I; II, III, IV product.
14. "Pesticide Use Report Form" or "PUR" means a document that records pesticide uses or other treatment practices within and associated with City owned, managed, or leased structures.
15. "Toxicity Category I; II, III, IV product" means any pesticide, as defined in 40 Code of Federal Regulations Section 156.10, meeting the appropriate toxicity categories, and bearing on the front label panel the signal word Danger, Warning, Caution or None Required.