



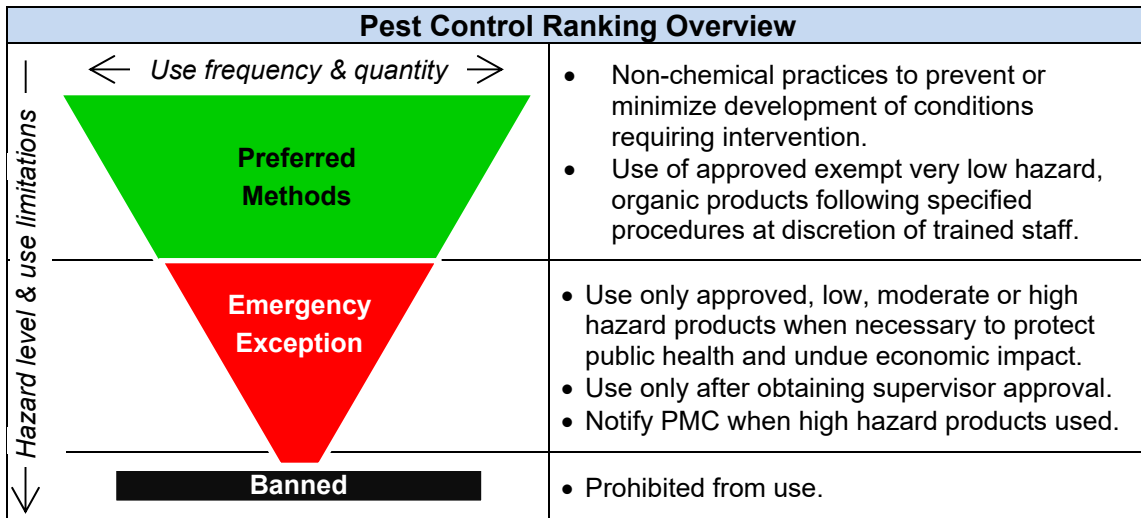
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1.0 Introduction

Consistent with federal and State of California requirements, IUSD’s Maintenance & Operations Department follows a Progressive Pest Management (PPM) program for landscape and building maintenance on IUSD maintained property and campuses. The PPM program incorporates the use of prevention strategies, non-chemical controls, and chemical controls (i.e., pesticides). A pesticide is any substance, or mixture of substances, used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest that may be detrimental to vegetation, humans or animals. By definition, whether the chemical is organic or synthetic, it is still a pesticide if the intent is to treat for a pest. The guiding principles of the program and a pest control ranking overview are provided below:



IUSD Progressive Pest Management Guiding Principles
<ol style="list-style-type: none"> 1. Use pest prevention practices to avoid the use of pesticides or other pest control methods. 2. Use non-chemical methods as a first choice for pest control. 3. Limit the use chemical methods (i.e., pesticides) to situations where non-chemical methods fail. 4. Emphasize the use of exempt, very low hazard, organic pesticides when chemical controls are needed, and only use more hazardous pesticides as necessary to protect public health and undue economic impact. 5. Limit exposure to pesticide applicators and nearby persons (especially where children, faculty and the general public congregate) and ensure proper notification before and after use. 6. Use only pesticides that have been approved by the IUSD Pest Management Committee (PMC), which includes representation from community stakeholders.

Further elaboration and guidance regarding these principles is contained in the sections that follow. A summary “playbook” of how IUSD developed this program is provided in Appendix A.

2.0 Pest Control Protocols

IUSD prioritizes prevention and non-chemical control measures by following a systematic approach that uses extensive knowledge about pests and their hosts, such as infestation thresholds, life histories, and environmental requirements to compliment and facilitate biological and other natural control of pests. Pest control flowcharts and training resources are specifically developed for each types of pest. These materials contain:

1. Appropriate prevention strategies;
2. Monitoring protocols with associated tolerance/action thresholds;
3. Tiered application of control measures moving from non-chemical methods, to low hazard pesticides and to higher hazard pesticides; and
4. Specific use requirements and restrictions for control methods and products.

3.0 Prevention Strategies (Preferred)

IUSD implements practices to prevent the development of pest conditions that may require control. Examples include selecting plants compatible with a site's environment, maintaining good housekeeping practices, sealing points of entry to buildings, using organic fertilizer, using beneficial insects, and applying landscape design adjacent to buildings that reduce pest habitat. The “California Academy of Sciences Integrated Pest Management Plan (10/7/10)” is used as a reference model for developing IUSD specific practices.

4.0 Non-Chemical Control Methods (Preferred)

IUSD implements non-chemical (and generally non-controversial) biological, cultural, and physical methods as a first choice to control pests. Examples include using deterrents, elimination of attractive sources, and physical removal of pests. The “California Academy of Sciences Integrated Pest Management Plan (10/7/10)” is used as a reference model for developing IUSD specific practices.

5.0 Chemical Control Methods (Preferred, Exception, Banned)

IUSD uses chemical controls (i.e., pesticides) only when non-chemical methods fail to provide adequate control. Pesticide selection criteria and related use restrictions are provided in Figure 1. The Pest Management Committee (PMC) reviews and approves specific pesticide products for specific uses within IUSD. Approved and banned products and related use restrictions are maintained in the IUSD Pesticide Inventory. IUSD, and its retained vendors, can only use approved pesticides from this list, which has been developed in conjunction with the PMC.

5.1 Pesticide Rankings

The IUSD Pesticides Inventory groups pesticides as follows:

- **Preferred**. Approved pesticides can be used at discretion of trained IUSD staff when non-chemical methods are not successful. These include products that are:
 1. California Healthy Schools Act Exempt (CA HSA exempt); or
 2. Both a) San Francisco Environment tier III (lowest) hazard, and b) Environmental Protection Agency (EPA) signal word category IV (very low toxicity).

- **Exception.** Approved pesticides can only be used after non-chemical and “preferred” pesticide methods are not successful, and when needed to protect risks to public health or to avoid undue economic impact. They can only be used with prior approval from an IUSD pest control supervisor, and in the case of highest hazard products, the PMC must be specifically notified upon each use. This group includes non CA HSA exempt products that are:
 1. Both SF Environment tier III (lowest) hazard and EPA signal word category III (low toxicity, “caution”);
 2. Both SF Environment tier II (moderate) hazard and EPA signal word category II (moderate toxicity, “warning”); and
 3. Both SF Environment tier I (highest) hazard and EPA signal word category I (high toxicity, “danger”).
- **Banned.** Listed pesticides are prohibited from use within IUSD. Determinations are made by the Pest Management Committee.

For both “preferred” and “emergency exception” pesticides, preference is given to the selection of organic based pesticides certified by the Organic Materials Review Institute (OMRI) or an equivalent certifying body. Likewise, preference is given to products specifically listed on the current SF Environment Reduced Risk Pesticides list.

Provisions for the use of the highest hazard products are necessary to prevent IUSD from being vulnerable to infestations, loss of plant materials, diminished use of facilities, and risks to public health.

Some non-chemical methods may be assigned to higher hazard ranking categories based upon the judgment of the PMC.

5.2 Ranking Process and Resources

IUSD ranks pesticides using the process defined in Appendix D and the ranking worksheet provided in Appendix E. Resources used to support the ranking process are cited in Appendix D and copies of selected documents are stored for reference in an IUSD PPM Program resources folder.

6.0 Data Tracking & Management

IUSD tracks the application of pest control practices as follows:

- Preferred Use Form. This form is used to help manage and track pest control applications and outcomes using “preferred methods” in the ranking protocol (see Appendix B).
- Exception Use Form. This form is used to help manage and track pest control applications and outcomes using “emergency exception” products in the ranking protocol. This form also documents supervisor approval for use of these products and documents notification of the PMC in the event of the use of category 6 “high hazard” products (see Appendix C).
- Pest Control Inventory (.xlsx). This tool is used by IUSD to manage the listing of approved practices/products, manage the listing of banned practices/products, and compile data on the use of approved practices/products.

Revision History:

- 9/11/17—Initial program.
- 1/18/19—Addition of “Section 6: Data Tracking & Management”; Appendices A, B, C; and limited edits to other sections.
- 3/4/20—Added ranking process & worksheet (appendices D & E) and related changes to section 5.2 due to loss of PRI database.
- 6/7/23—Updated appendices D & E to reflect changes in available data sources
- Future—Incorporate section specifying applicator licensing and posting/notification protocols.

Figure 1: IUSD Pesticide Ranking Categories

Goal: To support a reduction in the quantity of hazardous chemicals used and to shift use to less hazardous alternatives.

Ranking Category		Criteria Summary			Use Restriction Summary
		<i>Must meet all criteria, select most stringent if conflict. Organic certified and SFE listed are preferred, not required.</i>			
		CA HSA Exempt	SFE Category	EPA Label Category	
Hazard level & use limitations		Use frequency & quantity			
	1-Preferred (non-chemical)	Non-chemical control measures (biological, cultural, and physical)			
	2-Preferred (exempt-very low hazard)	Yes	3 (low)	4 (very low) optional "caution"	<ul style="list-style-type: none"> Use of approved products following specified procedures at discretion of trained IUSD staff.
	3-Preferred (exempt-low, mod, high haz)	Yes	3,2,1	4,3,2,1	
		No	3	4	
	4-Exception (low hazard)	No	3 (low)	3 (low) "caution"	<ul style="list-style-type: none"> Above restrictions. Use only when necessary to protect public health and undue economic impact. Use only after obtaining supervisor approval.
5-Exception (moderate haz)	No	2 (moderate)	2 (moderate) "warning"		
6-Exception (high haz)	No	1 (high)	1 (high) "danger"	<ul style="list-style-type: none"> Above restrictions. Notify PMC when used. 	
Banned		Determination made by the PMC.			<ul style="list-style-type: none"> Prohibited from use.

Appendix A
(IUSD PPM Playbook)



This document outlines the process Irvine Unified School District (IUSD) has followed in creating their Progressive Pest Management (PPM) program, along with an overview of key program elements.

1. Form a Pest Management Committee (PMC):
 - *Include the district PPM coordinator, key maintenance staff, parents, leaders from environmental health and pest control professions, and other stakeholders from the local community as practicable (e.g., city/county landscaping staff). Meet quarterly (at minimum).*
2. Create a Progressive Pest Management program (PPM):
 - *Develop with the PMC. Tailor to fit District needs and pest pressure thresholds. Emphasize prevention and non-chemical control methods over the use of pesticides, and restrict use to products approved in conjunction with the PMC (see chart below).*
3. Establish a timeline for implementation:
 - *Prioritize pest control needs, start trying different strategies, refine over time.*
4. Train staff and shift mindset to progressive pest management principles:
 - *Create and train staff on procedures specific to types of pests. Incorporate monitoring and threshold levels to reach before using successive control methods.*
5. Make the Progressive Pest Management program public:
 - *Share information not only about pesticide applications as required by regulations, but also share and advertise progressive or “green” actions that are being undertaken.*

IUSD Pesticide Ranking Categories		
Ranking Category	Methods/Criteria	Use Restrictions
<p style="text-align: center;">Preferred Methods</p>	<p>Green:</p> <ol style="list-style-type: none"> 1. Non-chemical controls 2. CA HSA exempt pesticides 3. Very low hazard pesticides <p><i>Examples: housekeeping, sealing buildings, deterrents, pest removal, organic products.</i></p>	<ul style="list-style-type: none"> • Non-chemical practices to prevent or minimize development of conditions requiring intervention. • Use of approved products following specified procedures at discretion of trained staff.
<p style="text-align: center;">Emergency Exception</p>	<p>Red:</p> <ol style="list-style-type: none"> 4. Low hazard pesticides 5. Moderate hazard pesticides 6. High hazard pesticides <p><i>Note: Reference San Francisco Environment criteria & Pesticide Research Institute database. Organic products preferred.</i></p>	<ul style="list-style-type: none"> • Use only when necessary to protect public health and undue economic impact. • Use only after obtaining supervisor approval. • Notify PMC when high hazard products used. • Emergency exemption to address health threats that exceed determined thresholds.
<p style="text-align: center;">Banned</p>	<ul style="list-style-type: none"> • Determined by the PMC. 	<ul style="list-style-type: none"> • Prohibited from use.

IUSD’s PPM program and related resources can be found at: www.iusd.org/tbd

List of Products Compatible With A PPM: [Link to IUSD’s master list of products compatible with the PPM](#)

Appendix B

(Preferred Use Form)



**Preventative Pest Management Program
Pest Control Practices Form**

<input type="checkbox"/> Custodial <input type="checkbox"/> Grounds	PREFERRED USE FORM
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The purpose of this form is to document the appropriate use of "preferred" pest control methods in accordance with the IUSD Preventative Pest Management (PPM) program. **Refer to the PPM flowcharts and other training materials for actions to take specific to the identified pest/issue.**

Site Name: _____ Start Date: _____

Room/Area: _____ Employee: _____

Pest/Issue: _____ Supervisor: _____

Prevention & Non-Chemical Control Measures	Yes	No	N/A
1. Has an attractive source for the pest been found and has it been cleaned-up or otherwise controlled? <i>Describe the attractive source below.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Have the pests been physically removed/cleaned-up and have the areas of travel been cleaned? <i>Indicate the number of times cleaned up below.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Have the points of entry of the pest been identified and sealed or otherwise addressed (e.g., work order submitted)? <i>Describe actions & work order # below.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Have mechanical traps (snap, sticky) been used? <i>Describe type, number and placement below.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Have general prevention measures been implemented? <i>(Check all that apply)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Control moisture at sinks <input type="checkbox"/> Keep surfaces clean. <input type="checkbox"/> Door sweeps in place. <input type="checkbox"/> Daily trash/recycling removal. <input type="checkbox"/> Food in sealed containers. <input type="checkbox"/> Pet cages clean/mat under. <input type="checkbox"/> Plants/mulch 18" from wall. <input type="checkbox"/> Seal holes/cracks/points of entry.			

Describe actions taken as indicated above:

Preferred Pesticide Products Used *Generally used at least 3x before requesting exception products below.*

Date	Product	Qty. (#/oz)	Where used? Describe effectiveness

Outcome	Yes	No
1. Did the above practices resolve the issue? <i>Provide comments as desired below.</i>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is a request to use emergency exception pesticides being made? <i>If yes, check reasons that apply and comment below.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Priority #1: Human health and safety <input type="checkbox"/> Priority #3: Disruption to work/learning <input type="checkbox"/> Priority #2: Damage to assets <input type="checkbox"/> Priority #4: Aesthetically displeasing	Date: _____	

Comments:

Appendix C

(Exception Use Form)



**Preventative Pest Management Program
Pest Control Practices Form**

- Custodial
- Grounds

**EXCEPTION
USE FORM**

The purpose of this form is to document the appropriate use of "emergency exception" pest control methods in accordance with the IUSD Preventative Pest Management (PPM) program. **Refer to the PPM flowcharts and other training materials for actions to take specific to the identified pest/issue.**

Site Name: _____ **Start Date:** _____

Room/Area: _____ **Employee:** _____

Pest/Issue: _____ **Supervisor:** _____

Review of Preferred Practices	Yes	No
1. Has the "Preferred Use Form" for the subject location/issue been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the request to use emergency exception pesticides being approved?	<input type="checkbox"/>	<input type="checkbox"/>

If no, comment on reasoning below. If yes, check reasons that apply and comment below.

- Priority #1: Human health and safety
- Priority #3: Disruption to work/learning
- Priority #2: Damage to assets
- Priority #4: Aesthetically displeasing

Comments:

Supervisor Approval	Name: _____	Signature: _____	Date: _____
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Emergency Exception Pesticide Products Used *Each application must be approved by the supervisor. The PMC must be notified of any application of category 6 (high hazard) products. Document notification and other use comments below.*

Date	Product	Cat.#	Qty. (#/oz)	Where used? Describe effectiveness

Comments:

Appendix D

(Ranking Process)

IUSD PPM Program Ranking Process

Updated 6/7/23

Gather Product Information

- Get current SDS (manufacturer website)
- Get current label (manufacturer website, confirm on EPA registration site)

Ranking Process

1. Use an IUSD PPM Program product ranking worksheet.
 - Worksheet provided as program Appendix E.
2. Determine the product's San Francisco Environment (SFE) category.
 - See process below.
3. Determine if the product is CA Healthy Schools Act exempt.
 - See process below.
4. Determine the IUSD PPM Program ranking.
 - See Figure 1 in program.
5. Determine if the product is organic.
 - This is not a ranking requirement but may be used to select one product over another.
 - Look for OMRI certified or equivalent (<https://www.omri.org/ubersearch>).

Note: The Pesticide Research Institute (PRI) "Pesticide Product Evaluator" Database (<http://www.pesticideresearch.com/site/evaluator/>) is a resource that rates products per SFE criteria and identified those that are CA HSA exempt. At this time the database is no longer functional and the above process is used instead.

Process for Determining SFE Category

Get current copies of: a) SFE Reduced Risk Pesticide List, and b) the accompanying guide (<https://sfenvironment.org/pest-management-for-city-departments#list>)

Check the current SFE Reduced Risk Pesticide List to see if the product in question has been evaluated already. If it has been evaluated, then note the category and done. If not, then try to find a product with similar ingredients or continue per below.

Work through the criteria in the SFE Guide using the summary on p.4 with supporting detail on pp. 5-9. Each criteria is rated as high (1), moderate (2), or low (3).

General information sources for the SFE criteria:

- Product label
- Product SDS
- Pesticide Action Network (PAN) Database (<http://www.pesticideinfo.org/>)
- EPA Pesticide Registration (see databases box) (<https://www.epa.gov/pesticide-registration>)
- DTSC Authoritative lists (for use on specific criteria as noted below)
<https://dtsc.ca.gov/scp/authoritative-lists/>

Information sources for specific SFE criteria are discussed below:

- Signal Word (check product)
 - See label for signal word
 - Determining if “none/very low/4”
 - Label/EPA registration will not specify this category (it is just absent) and manufacturers can use “Caution/3” as a precaution.
 - Toxicity data criteria for signal words found in EPA Label Review Manual, chapter 7, Table 1, p.3 (<https://www.epa.gov/pesticide-registration/label-review-manual>).
 - Specific toxicology data can be found in SDS, PAN
- Restricted Use (check product)
 - See EPA pesticide registration site (will also appear on label)
 - “Restricted Use” means it is restricted to certified applicators, not just general use restrictions.
- Cancer (check ingredients)
 - See PAN cancer information; or
 - Alternative:
 - DTSC Lists:
 - Prop 65
 - IRIS Carcinogens (EPA)
 - IARC Carcinogens
 - NTP 13th ROC
- Reproductive or Developmental Toxicity (check ingredients)
 - See PAN reproductive and developmental toxicity; or
 - Alternative:
 - DTSC Lists: Prop 65 and NTP OHAT – Repr. Or Dev. Toxicants; and
 - EPA TRI (<https://www.epa.gov/toxics-release-inventory-tri-program/toxicity-data-category-tri-listed-chemicals>)
- Endocrine Disruption (check ingredients)
 - See PAN endocrine disruption; or
 - Alternative:
 - European Commission List
 - SFE Guide refers to list of 146. FACS research found this and an additional list of 204 added later. Both are compiled from: https://ec.europa.eu/environment/chemicals/endocrine/strategy/substances_en.htm, specifically: a) the initial study of 564, Annex 13 (list of 146), and b) the follow-up study of 435, Annex 9 (list of 204)
 - DTSC List:
 - EC ED. This list is from a later date and may be better data (not sure if this is duplicative with the above lists).
 - Book: Environmental Endocrine Disruptors by Lawrence Keith. SFE Guide refers to this book. It costs ~\$500 and is dated. In addition, the SFE criteria is unclear on how to use the list. For these reasons, this reference is not relied upon at this time.
- Water Pollution (check ingredients)
 - Compile a list of 303b contaminants for use area
 - EPA site
 - Go to <https://mywaterway.epa.gov/>
 - Search for Irvine, CA

- Go through list of 303b impaired water bodies, click on “view water body report”, copy and paste listing of contaminant parameters, not assessment year
 - Alternative
 - CA Water Boards has same data in a statewide listing. Challenge is figuring out which bodies of water are in Irvine watershed. You can only filter down to county level.
 - https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html
- Hazards to Birds, Aquatic Life, Bees, and Other Wildlife (check product)
 - See SDS and label
- Soil Mobility (check ingredients)
 - Evaluate all of the following:
 - NPIC Pesticide movement rating (<http://npic.orst.edu/ingred/ppdmove.htm>). The rating is based on GUS, which is then compared to SFE criteria.
 - CA DPR Status Report Pesticide Contamination Prevention act. Look to see if ingredients are on the GWPL (Table 1) (https://www.cdpr.ca.gov/docs/emon/grndwtr/chem_data.htm).
 - Review SDS and label warnings.
- Persistent, Bioaccumulative, Toxic Chemicals (PBTs) (check ingredients)
 - DTSC Lists:
 - EC PBT
 - US EPA NWMP PBTs
 - US EPA TRI PBTs (not listed in SFE Guide, but appears related)

Process for Determining CA HSA Exempt

Refer to CDPR HSA exempt fact sheet

- <https://apps.cdpr.ca.gov/schoolipm/> (see HSA section)
- https://apps.cdpr.ca.gov/schoolipm/school_ipm_law/hsa_exempt_pesticides.pdf
- Copy saved in IUSD PPM resources folder (10/2019)
- May be designated as CA HSA exempt on label, in SDS, or PAN

FIFRA 25(b) exempt status (one of the four CA HSA exempt conditions)

- May be designated FIFRA 25(b) exempt on label or in SDS. If not designated as such, it is likely not worth the effort to determine if it is.
- If it is exempt, it is not required to be registered by EPA.
- Exempt if it meets 6 conditions, including long lists of qualified ingredients.

(END)

Appendix E

(Ranking Worksheet)

IUSD PPM Program Ranking Worksheet

Updated 6/7/23

Use this form in conjunction with IUSD PPM Program ranking process.

Evaluation Date:		
Evaluation By:		
Product Information		
Product:		
EPA Reg #:		
Label:		
SDS:		
Active Ingredients:		
Other Ingredients:		
Notes:		
SFE Category	Rating	Notes/Sources
Signal Word:		
Restricted Use:		
Cancer:		
Repro/Dev:		
Endocrine:		
Water Pollution:		
Haz Birds:		
Haz Aquatic Life:		
Haz Bees:		
Haz Other Wildlife:		
Soil Mobility:		
PBT:		
Final SFE Category:		
CA HSA Exempt	Yes/No	Notes
Self-contained bait or trap?		
Gel/paste & used in indoor crack/crevice?		
Antimicrobial (incl. sanitizers/disinfect.)?		
FIFRA 25(b) exempt product?		
Determination		
IUSD PPM Ranking:	# Category (sub cat.)	
Organic:		