



Clean Water for Salmon

Model Pest Management Policy for the Protection of Salmon and Human Health



Pesticide Action Kit

Section I: PURPOSE

The City/County of _____ is committed to using its operations and authority to protect water quality and human health. The City/County recognizes that using integrated pest management practices that reduce pesticide use can result in improved salmon habitat and survival rate, reduced levels of toxic chemicals entering the water, and benefit human and environmental health. Pesticides pollute water and can threaten salmon survival via lethal and sublethal effects as well as harm to their food supply and habitat. Pesticides are linked to adverse human health effects including cancer, neurological harm, birth defects, reproductive harm, endocrine disruption, and acute poisoning.

The City/County of _____ hereby adopts the Pest Management Policy for Salmon and Human Health as its official pest management policy. Prevention is the primary tool for solving all pest management problems on city/county property including, but not limited to, landscaping and building maintenance. When pest problems occur, mechanical, physical, biological, and other alternative methods are the preferred control methods. Use of pesticide products will be decreased or eliminated as prevention and alternative controls are increased.

This policy concerns all pest management practices on property owned and/or maintained by the City/County of _____ whether practices are carried out by the City/County or by its contractors. This policy does not concern pest management practices on property that is not owned or maintained by the City/County.

Section II: PEST MANAGEMENT PROGRAM

II.a. Pest Prevention

Prevention creates conditions that encourage desired plants, animals, and other organisms and discourage unwanted vegetation, insects, and other organisms.

The City/County of _____ will:

- Design and construct indoor and outdoor areas to reduce potential for pest habitats.
- Use management practices, including waste management and food storage, to reduce potential for excessive development of pest populations.
- Plant pest-resistant plants (native where appropriate) in newly landscaped and re-landscaped areas.
- Maintain plant health through use of compost, and appropriate irrigation and timing of planting.
- Establish new plantings using proper plant selection, soil preparation, planting techniques, plant density, irrigation practices, mulch application, monitoring, and follow-up maintenance.
- Use mulch to enhance soil fertility, inhibit weed growth, and reduce erosion.
- Maintain healthy turf through appropriate mowing, fertilization, and irrigation practices.
- Modify existing landscapes to reduce potential for pest habitats.
- Match cultural and environmental requirements of plants with site conditions.
- Eliminate planting of non-native invasive species.

II.b. Biological, Mechanical, Physical, and Other Alternative Pest Control Methods

To evaluate and address existing pest problems or problems that may develop in spite of prevention techniques, all City/County departments shall follow the approach outlined below.

- Routinely monitor sites for optimal health and sanitation conditions.
- Routinely monitor populations of potential pests and their natural enemies to determine if and when control is needed.
- Establish threshold levels of pests below which the population does not require control.
- Use physical, mechanical, biological, and other alternative methods to keep pest numbers low enough to prevent intolerable damage or annoyance.

II.c. Use of Pesticide Products

1. In order to use a pesticide product the City/County will document its need to address a specific pest problem considering prevention and alternatives to pesticides first. This documentation will be made available to the public. Pesticide products may only be used if no economically feasible or effective alternative is available. The result of this process will be a limited-use list that details currently allowed pesticide uses in a specific problem area.
2. The City/County will conduct an annual review of the limited-use list. This list is included in the annual use of pesticide products by the City/County and therefore is also subject to reduction goals.
3. Within one year of passage of this policy the City/County of _____ will have reduced pesticide use by at least 35%. In the second year, use will be reduced an additional 25%; in the three years following, use will be reduced an additional 15, 10, and 5% respectively. Pesticide use will be measured by quantity of the ready-to-use pesticide product.
4. Upon passage of this ordinance:
 - a. All aesthetic uses of pesticides will end immediately.
 - b. All calendar-based pesticide product applications will end immediately.
 - c. No pesticides will be applied within at least 100 feet (ground applications) and 200 feet

(aerial applications) of a lake, stream, wetland, groundwater recharge area, or storm drain.

5. Within six months after passage of this act, the City/County of _____ will end all uses of known high-hazard pesticides listed in Appendix A. Pesticide application timing and amount will be determined according to the efficacy of the product and impact to the surrounding environment. Considerations will include pest biology, weather, seasonal changes in wildlife use, and local conditions.

Generally, all pest management techniques must avoid disrupting natural pest controls present and aim to suppress the pest population, not eliminate it. In many cases a portion of the pest population must remain to sustain natural enemies.

Section III: TRAINING, EDUCATION, AND RESEARCH

III.a. Training and Education

City/County permanent and seasonal staff shall be trained in prevention and the other pest management techniques outlined in this policy if appropriate to their area of work. Trainings should occur on topics such as: sanitation in the office space, food storage for kitchens, pest biologies, landscaping and re-vegetation with pest resistant and native plants, using compost tea, mechanical and other new pest control strategies applicable to the pest problems in existence, and toxicology of pesticides. Training of landscape and maintenance staff shall occur at least once a year. All other city staff shall receive education about prevention of pest problems in the workplace.

III.b. Research Project

Each year the City/County will establish a research project with the goal of developing and implementing new alternative strategies to prevent/control pest problems. A research project will be undertaken if there is a problem for which all prevention and

alternative controls have proved ineffective or too costly and pesticide products are being used. Priority of project selection will go to the reduction of pesticides that have major uses as indicated by amount used, number of applications, or cost of product.

Section IV: PUBLIC NOTIFICATION AND INVOLVEMENT

IV.a. Notification

Within 120 days of the effective date of this ordinance, any City/County department that uses a pesticide shall comply with the following notification procedures:

Notification signs shall be posted at least 72 hours prior to any pesticide application. Signs shall remain in place for at least seven days after pesticide application. Signs shall be posted (i) at the treatment site, at a central area in the building, and at every entry point if the pesticide is applied in an enclosed area, and (ii) in highly visible locations around the perimeter of the application area if the pesticide is applied in an open area. If the application is to a linear landscape, such as along a path or roadside, signs shall be posted at 100-foot intervals.

Notices shall begin with a header containing the signal word from the pesticide label alongside the words “Pesticide Application.” For example, “WARNING: PESTICIDE APPLICATION.” Notices shall be at least 8-1/2 by 11 inches, and shall include the following information: the pesticide’s active ingredient; the date and time of pesticide application; the area treated; the rate of application; the name and phone number of the contact person for the application; the name and phone number of the responsible party where the pesticide label and material safety data sheets may be obtained; and a boxed-off warning stating: “CAUTION: Individuals taking medication, pregnant women, infants, children, and individuals with respiratory or heart disease, chemical sensitivi-

ties, or weakened immune systems may be particularly susceptible to adverse health effects due to pesticide exposure.”

Material Safety Data Sheets (MSDS), pesticide product labels, and manufacturer information about all pesticide ingredients used on City/County property will be readily accessible to the public.

The City/County shall notify the public prior to any aerial pesticide application via notices in widely read newspapers and postings, the content of which meets the above requirements. Notices shall be posted throughout the area affected by the aerial application. If an immediate pesticide application of any kind is necessary for the protection of public health, signs meeting the requirements of this section shall be posted.

The City/County should further educate the public by designing and implementing public education about changing landscaping and pest management practices. Education may also include signs in public places explaining the benefits of the city’s pest management practices for salmon restoration and protection of human health.

IV.b. Public Involvement

The Pest Management Coordinator will ensure a formal process to obtain public input when determining:

1. Selection of research projects,
2. Creation and updating of the limited-use list,
3. Achievement of goals for pesticide reduction,
4. Format of data in the annual report.

Section V: CITY/COUNTY AND DEPARTMENTAL PEST MANAGEMENT COORDINATORS

V.a. City/County Pest Management Coordinator
Effective 120 days after the passage of this Act, the City/County council shall appoint a Pest Manage-

ment Coordinator dedicated to promotion of prevention and alternative pest controls. The Pest Management Coordinator is charged with implementing this policy, including:

1. Ensuring appropriate steps are taken to direct the City/County towards pest prevention and alternative controls.
2. Ensuring annual landscape and maintenance staff trainings occur.
3. Ensuring education occurs for all other City/County staff.
4. Ensuring the unified database that compiles information provided by each department has inter-departmental consistency and is kept up to date.
5. Ensuring that all departments are achieving the yearly goals of this ordinance.
6. Ensuring the end-of-the-year report is written.
7. S/he leads the pest management coordinators.
8. Ensuring that questions by both departments and by the citizens of _____ receive prompt responses.

V.b. Departmental Pest Management Coordinators

Effective 180 days after the passage of this Act, each department with pest management responsibilities, together with the City/County Pest Management Coordinator, shall identify a departmental Pest Management Coordinator. This person is responsible for:

1. Educating department staff about the policy.
2. Ensuring that her/his department is achieving the goals set forth by the Committee to comply with this policy.
3. Assuring tracking of all pest management activities conducted or contracted by the department.
4. Actively participate in the review of the limited-use list.

Effective 180 days after the passage of this Act, all Pest Management Coordinators shall form a committee to oversee implementation of this policy.

Section VI: RECORD KEEPING

The City/County of _____ will maintain publicly accessible information with records of pesticides used by all departments. The information will be maintained in a database that will include records of each pesticide application including the EPA registration number of the pesticide, amount of each ready-to-use pesticide product used, exact locations of each treatment, and the target pest. The City/County shall also record and report the quantity of the pesticide product used (pre mixing).

The City/County will also maintain records of prevention and control methods utilized, rationale for their use, their effectiveness, the presence and extent of pest problems, and the populations of natural enemies.

Data on prevention or treatment techniques will be added to the database within 30 days of the action. Data on pesticide applications will be recorded within five working days of the application.

Section VII: PROGRAM EVALUATION

On a yearly basis, the City/County of _____ will review its pest management program to evaluate how well its pest prevention and control objectives are being met, and to identify areas where improvement is needed. Evaluation of the following is required:

- a. Alternative pest prevention and control measures used; efficacy of control measures; rationale for their use or discontinuation.
- b. Pest management plan for the coming year along with the plan for achieving the next year's goals.
- c. Results of research and demonstration projects of the previous year.
- d. Research and demonstration projects for the coming year.
- e. Quantities of each ready-to-use pesticide product applied during the previous year.

- f. An assessment of the city's compliance with this policy.
- g. An assessment of the limited-use list as well as the criteria list for the known high-hazards.

A report will be prepared that includes all of the above information. The report will be made available to the public upon request, through the Internet, and notices to interested parties will be sent out prior to release. Additionally, the information in the report will be presented to the city council or county commissioner at a public meeting in which the public has an opportunity to comment.

DEFINITIONS

Aesthetic Use – pesticide applications made solely for cosmetic reasons rather than for public safety or improved plant health.

Calendar Based – applications of pesticides that are made on a monthly, bi-monthly, or quarterly basis rather than when a need is demonstrated and as a last-resort measure.

Known High-Hazard

The following list of resources shall be used to determine if a pesticide is a known high-hazard pesticide. If any active ingredients or other ingredients in a product meet one of these criteria, then the product is a known high-hazard pesticide.

This list of criteria is subject to change with the availability of additional resources. Therefore, this list shall be reviewed annually to determine whether new resources should be used.

1. Acutely toxic to humans.
 - Classified as Toxicity Category I or II by the United States Environmental Protection Agency (EPA). Danger or Warning will be listed on the label.
2. Acutely toxic to aquatic insects, fish, aquatic and semi-aquatic plants, wildlife, or domestic animals.
 - The Environmental Hazards Section of the label will state toxic, highly toxic, or extremely toxic.

- The U.S. EPA Office of Pesticide Programs Reregistration Eligibility Decisions (REDs, IREDs, and TREDs) states that the level of concern is exceeded or the risk quotient is greater than one.

<http://www.epa.gov/pesticides/reregistration/status.htm>

U.S. EPA Office of Pesticide Programs. Tolerance Reassessment & Reregistration. "Pesticide reregistration status." [REDs, IREDs, and TREDs]

3. May cause cancer in humans.

- Classified as a known, likely, probable, or possible carcinogen by the U.S. EPA.

<http://www.epa.gov/pesticides/carlist/>

U.S. EPA Office of Pesticide Programs. "List of Chemicals Evaluated for Carcinogenic Potential"

- *To request hard copy, call or write*

- Classified as a known, likely, probable, or possible carcinogen by the International Agency for Research on Cancer (IARC).

<http://193.51.164.11/monoeval/grlist.html>

IARC
"Lists of IARC Evaluations"

- *click on 'List of all agents, mixtures and exposures evaluated to date' for a list of chemical names, CAS numbers, and volume number.*
- *click on 'Complete List of all Monographs and Supplements published to date' for complete text.*

- Classified as known or reasonably anticipated to be human carcinogen by National Toxicology Program; listed by State of California.

http://www.oehha.org/prop65/prop65_list/Newlist.html

California. Office of Environmental Health Hazard Assessment.

"Proposition 65"

- *scroll down to: 'Download the (month day, year) list in PDF format.'*
- *Document is titled: "Chemicals known to the State to cause cancer or reproductive toxicity."*

4. Nervous system toxicant in humans.

- Cholinesterase inhibitor
<http://www.pesticideinfo.org>
 - *Search for chemical, then click More for more information, then scroll down to Toxicity Information. A skull and crossbones under cholinesterase inhibitor indicates it is a cholinesterase inhibitor.*
- Listed as neurotoxic in U.S. EPA Toxics Release Inventory.
<http://www.epa.gov/tri/chemical/index.htm>

5. Reproductive toxicant in humans.

- Classified as known or reasonably anticipated to be reproductive toxicant by National Toxicology Program; listed by State of California.
http://www.oehha.org/prop65/prop65_list/Newlist.html
California. Office of Environmental Health Hazard Assessment.
“Proposition 65”
 - *scroll down to: ‘Download the (month day, year) list in PDF format.’*
 - *Document is titled: “Chemicals known to the State to cause cancer or reproductive toxicity.”*

6. Disrupts hormonal systems.

- Listed by Illinois EPA as a chemical associated with endocrine system effects.
<http://www.nihs.go.jp/hse/environ/illiepatable.htm>
“Illinois EPA endocrine disruptors strategy. Table 1 Preliminary List of Chemicals Associated With Endocrine System Effects in Animals and Humans (*) or In Vitro (+)”

7. Persists in the environment.

- Soil half-life of 100 days or greater as listed by Agricultural Research Service.
<http://wizard.arsusda.gov/acsl/ppdb1.html>
Agricultural Research Service
“U.S. Department of Agriculture Pesticide Properties Database”
- Soil half-life of 100 days or greater as listed by OSU Extension Pesticide Properties Database
<http://ace.orst.edu/info/npic/ppdmmove.htm>
Vogue, PA, Kerle, EA, and Jenkins, JJ
“OSU Extension Pesticide Properties Database”

8. High or very high mobility in soils.

- Groundwater Ubiquity Score of 3.0 or as listed by Oregon State University Extension Pesticide Properties Database.
<http://ace.orst.edu/info/npic/ppdmmove.htm>
Vogue, PA, Kerle, EA, and Jenkins, JJ
“OSU Extension Pesticide Properties Database”
- The Environmental Hazards Section of the label warns about leachability or detections.

9. Detected in salmon waters at an amount hazardous to aquatic species.

- Using the most recent pesticide detection data from salmon habitat determine if at levels that exceed U.S. EPA or Canadian aquatic life criteria.
<http://www.epa.gov/waterscience/criteria/>
U.S. EPA Water Quality Criteria.
 - *click on ‘Aquatic Life’ AND ‘Criteria Table’*