

# EUGENE CITY COUNCIL AGENDA ITEM SUMMARY



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## Work Session: Use of Pesticides in City Parks and Buildings

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Meeting Date: March 13, 2013  
Department: Public Works/Central Services  
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Agenda Item Number: A  
Contact: Kevin Finney  
Contact Telephone Number: 541-682-4809

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### **ISSUE STATEMENT**

This item is in response to council direction to hold a work session to discuss the use of pesticides in City parks and other City-owned property.

### **BACKGROUND**

The council has asked several questions related to current park and facility management practices, the use of Integrated Pest Management strategies, and alternatives to chemical control methods for managing pests. Staff has prepared a memo to the council (Attachment A) reporting on the types of chemicals used, amounts used, storage and disposal of chemicals, and how staff is using pesticides for some specific management challenges. The broader questions about Integrated Pest Management and how it is used in managing City lands and facilities will be addressed in the work session.

#### **What is the current practice?**

The management of pests in City buildings and parklands is the responsibility of the Facility Management and Parks and Open Space (POS) divisions. City staff follows the principles of Integrated Pest Management (IPM) to manage pests (unwanted plants, insects and other animals) on over 4,400 acres of parklands and 200 community centers, pools, office buildings, and other facilities.

IPM is a coordinated decision-making and action-taking process that uses the most appropriate pest control methods and strategies in an environmentally and economically sound manner to meet the City's pest management objectives. The IPM strategy is based upon monitoring of pest levels, establishing thresholds for actions against the pest, evaluation of control options, selection of the most effective control method (chemical or non-chemical) with the lowest non-target impacts, and timing control actions according to the pest's life cycle and biology. Once a control action has been taken, results are monitored and future actions are informed by the results. A commitment to IPM does not preclude the use of chemical pesticides, but the application of the strategy results in the pesticide option being exercised only when necessary.

When IPM is implemented, cultural practices are modified to reduce pest populations and least toxic non-chemical control methods are tried before pesticides are applied. If a pest cannot be controlled without the use of pesticides, the IPM strategy dictates use of the least toxic effective pesticide that will have the least non-target impacts. For example, staff might try hand-pulling and sheet mulching invasive weeds at Hendricks Park before using a pesticide. If non-chemical methods are not successful in controlling the invasives, staff might reconsider whether control of the plant is critical to the function of the plant community. If it is critical, staff will choose the least toxic herbicide that is known to be effective against the weed in question.

City staff has used an Integrated Pest Management (IPM) strategy to manage parklands since the early 1980s, and have been leaders in the IPM field for 30 years. City staff has been invited to make presentations about its pest control methods at several regional conferences in the past few years. The current edition of the POS IPM Policy and Operations Manual (IPM POM) was published in 2007 and has been updated several times since then. The IPM POM document runs to nearly 100 pages and contains guidelines for the management of pests in many types of developed landscapes, vacant lands, natural habitats, rights-of-way and medians, the golf course and rose garden, as well as bioswales and waterways. The manual contains information on cultural practices to prevent or limit the impacts of each pest and describes the effective control methods for the pest, including non-chemical methods, and where applicable, the pesticides which are known to be effective against the pest.

The POS IPM policy also outlines two programs which further limit the use of pesticides on parklands: the Pesticide-Free Parks Program and the No Pesticide Zone policy. In partnership with the Northwest Center for Alternatives to Pesticides (NCAP) the City launched the Pesticide-Free Parks program in 2007. Staff chose parks which could be reasonably maintained without the use of pesticides, obtained the support of the neighborhood association for each park and launched the program. Additional parks have been added to the program and the City currently has eight pesticide-free parks, sites which are managed entirely without the use of pesticides, often with the assistance of neighborhood groups or other volunteers. Additional parks are added to the program when volunteer groups adopt them, committing to help with weed control on the site.

The No Pesticide Zone policy establishes no-pesticide zones around certain park features, including: playgrounds, picnic areas, dog parks, swimming and wading pools, spray-play areas and stormwater catch basins and inlets. These areas are managed without pesticides and weeds are pulled by hand, burned or controlled with other non-chemical means. When it is necessary to apply a pesticide in a No Pesticide Zone, for example when a nest of stinging insects is very near a playground, the area is fenced or taped off and posted to alert park users. Depending on the circumstances, hard surfaces near where the application was made may be washed down after the application.

The Facility Management Division officially incorporates an IPM requirement into its Landscape Maintenance contracts referencing the POS IPM manual.

The landscapes of several City facilities (Facility Management Campus, Lincoln Yards, Police Services Building, The Train Depot, Washington Park Community Center, River House, Police Headquarters Building, and the Kaufman House) are maintained through the use of hand pulling

of weeds, mulching, and other mechanical, non-chemical means. Plants and lawns are treated with only organic, natural fertilizers. On occasion it is necessary to use a chemical treatment on an insect pest, but care is taken to choose the least toxic pesticide.

In addition, the standard operating procedure when dealing with pests at all City facilities is to follow least invasive procedures first. As part of this policy, staff meets with the occupants of the site to go over the situation and identify any non-chemical ways of treating the problem. Facilities staff does a physical audit of contributing factors in the affected area which is then shared with building staff. As many pests become a problem because of the direct actions of humans, modifying these actions can often substantially reduce the pest problems. Facility Management prefers the use of a structured program of pest control starting with low-impact and working upwards to chemical treatment only if needed. Often deep-cleaning, elimination of breeding grounds, removal of food sources or addressing the physical structure will address the pest problem. If all low-impact steps are unsuccessful, a state-licensed pest management contractor is hired to resolve the issues.

Facility Management secures contracts and/or price agreements with established IPM procedures with vendors who do supplemental pest control work for interior building pests, as well as landscape pests.

**Does the City have a least-toxic pesticide purchasing list?**

Although there is not a shared list, implementation of the IPM policy drives a decision-making process which selects the effective control method with the lowest non-target impact – the least toxic effective option. The decision to purchase and apply a pesticide is made based upon the pest, the alternative control methods available, the type of damage the pest is causing and the risk to health, safety and public infrastructure that the pest presents. Purchases and applications are made after careful consideration of the balance between the impacts of the pest and the impacts of the control method. POS staff work with partner agencies to share best management strategies and compare results of control efforts and they have developed least-toxic approaches to weed management that are considered state of the art and are approved for use around waterways and other sensitive habitat areas. All pesticide purchases for POS and Facility Management are made by state-licensed pesticide applicators that hold certifications for pesticide laws and safety and application of pesticides on public lands.

**Has staff explored non-chemical alternatives?**

For several decades POS staff has led the field in development of alternatives to toxic chemicals for controlling pests. Significant resources have been invested in trialing and evaluating many alternative weed control methods. Some methods that are currently used in the City's parklands include: hand pulling and grubbing; propane torch burning; sheet mulching; compost, leaf and wood chip mulching; alternative plant selection; solarizing; shading; installation of mowing strips and pads under fences, signs, picnic tables and other park amenities; and seed bank depletion before new plantings are installed.

In addition, staff has tried the following alternative weed treatment methods which were largely ineffective, dangerous for staff, or impractical at the parkland scale: clove oil, citric acid, vinegar, corn gluten, desiccating soaps and fatty esters, and steam treatments.

POS staff has partnered with the NCAP and a coalition of other parkland managers to research, develop and publish alternative approaches to maintaining parklands. POS staff developed and use many of the best management practices which are featured in a series of four publications produced by NCAP titled "Non-Herbicidal Weed Control Strategies Implemented by City Parks Staff in the Northwest."

Some of the non-chemical methods Facilities Management has utilized include:

- Crane fly management at Fire Stations 2, 6, and 11: Implemented a monitoring system to track numbers of larvae. Decreased the irrigation of lawn areas to reduce the successful incubation of larvae. Removed thatch and aerated lawns to remove incubation habitat and increase the vigor of the lawn to better recover from pest damage. Discontinued the twice-yearly scheduled spraying for crane flies at these sites.
- Squirrel damage to tree limbs at new police headquarters site: After pruning branches, deer antlers were hung in the tree to serve as a "preferred food/chew source" to keep squirrels from chewing on branches. The problem was solved without the need to trap, poison, or remove squirrels from site.
- Anthracnose on London Planetrees at the Park Blocks: Deep root feeding using fish oil and kelp increased the general health and vigor of trees to aid tree in naturally fighting off the effects of the disease. No chemical treatment was necessary.
- Fleas at Peterson Barn Community Center: Implemented an aggressive floor and furniture cleaning treatment and worked with the supervisor and manager to remind employees of the departmental policy not to bring pets to work. No chemical treatment was necessary.
- Mice at the Animal Shelter: The Facility Management IPM information sheet was reviewed with staff at the animal shelter and a physical site assessment was made for point of entry, potential food source, and housekeeping. Recommendations were made to staff for keeping food sources securely closed and areas kept swept and clean. No chemical methods were needed.

### **What are other cities doing?**

There is a wide range of approaches to pest management in other municipalities. A few municipalities have declared all of their parks to be pesticide-free. Other communities value a very manicured and weed-free appearance in their public places and they support the ongoing use of pesticides in all their parks. Many more cities and towns are struggling to maintain their parklands and cannot find the resources to manage them without the use of pesticides. Cities such as Seattle, Portland and Corvallis are taking an approach similar to Eugene's, designating some pesticide-free areas, managing their parklands through IPM and working with their communities to bring volunteers into the parks to help with the maintenance of the pesticide-free areas. Eugene continues to be on the forefront, partnering with other agencies to develop management strategies which minimize the use of pesticides in the parklands, and working with volunteers to manage some parklands without pesticides.

Facility Management staff contacted other major cities in Northern California and the Northwest. The facility managers in those areas reported they do not have an IPM policy established for buildings.

### **RELATED CITY POLICIES**

The Eugene City Council has adopted policies that direct the City to pursue sustainability (Resolution #4618, adopted in 2000), protection of natural resources (Growth Management Policy #17), and recovery of threatened Upper Willamette Spring Chinook Salmon (Resolution #4615, adopted in 2000).

As part of its role in implementing these policies, and to implement sound land management practices, it is the policy of the City of Eugene Parks and Open Space Division to practice Integrated Pest Management (IPM).

### **COUNCIL OPTIONS**

Staff is presenting information requested by the council.

### **CITY MANAGER'S RECOMMENDATION**

Staff is presenting information requested by the council. No recommendation for action has been developed.

### **SUGGESTED MOTION**

There is no suggested motion.

### **ATTACHMENTS**

A. Memo to Mayor and Council: Use of Pesticides in City Parks and Facilities

### **FOR MORE INFORMATION**

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## Memorandum

Date: March 5, 2013

To: Mayor Piercy and City Council

From: Kevin Finney, Park Operations Manager  
Brian York, Facility Management Landscape Program Coordinator

Subject: Use of Pesticides in City Parks and Facilities

The City Council has scheduled a work session for March 13, 2013 to discuss the use of pesticides in City parks and facilities and Councilor Brown has submitted several questions to staff related to the subject of the work session. In this memo we will provide responses to the specific and technical questions presented to staff, and at the work session we will offer responses to the more general questions and provide the broader background on the concept of integrated pest management (IPM) and the City's implementation of IPM. In the work session we will answer questions on any of the information presented here. Councilor Brown's questions and the responses from the Parks and Open Space and Facilities Management Divisions are presented below.

### **1. What pesticides are we currently using where (indoors and outdoors) and in what quantities, to control what pests, and at what cost?**

#### **A. Parks and Open Space Division Response**

The application of pesticides in Oregon is regulated by the Oregon Department of Agriculture (ODA). Each year Parks and Open Space (POS) staff report to the ODA on the amount and type of pesticides that are applied by POS staff. For the latest reporting period, 2011, the following pesticides were applied in parks and/or natural areas by POS staff:

<b>Herbicides</b>	<b>Pounds applied</b>
Glyphosate (e.g. Roundup or Aquamaster)	58.61
Triclopyr (e.g. Garlon 3A)	31.44
Triethylamine Triclopyr (e.g. Milestone VM Plus)	9.13
Aminopyralid (e.g. Milestone)	1.25
Diethylamine salt (e.g. Sterling)	0.12
Clethodim (e.g. Envoy Plus)	0.11
<b>Insecticides</b>	
Tetramethrin (e.g. Blast'em wasp and hornet killer)	.007
Permethrin (e.g. Blast'em wasp and hornet killer)	0.018
Piperonyl Butoxide (e.g. Blast'em wasp and hornet killer)	0.035



In addition to the applications made by POS staff, licensed commercial pesticide applicators make some applications on parklands at Laurelwood Golf Course and at the Owen Rose Garden (see details below). Contractors who make applications at the golf course or rose garden must comply with the standards and procedures in the POS Integrated Pest Management Policy and Operations Manual. Commercial applicators may also apply pesticides on City land under contract as part of a park development project or a habitat restoration or enhancement project. POS staff has requested that contracted pesticide applicators provide the information on types and amounts of chemicals applied on City lands and that information will be made available to Council when it is received from the contractors.

Insecticides have not been applied to protect vegetation in Eugene’s parklands for over a decade, however small amounts of insecticides are applied with the aerosol insecticide “Wasp Blasters” used by POS staff each summer season to eradicate yellow jacket and hornet nests near playgrounds, park paths and other high-traffic areas.

Herbicides are applied on parklands to control invasive weeds and other unwanted vegetation during the course of regular parkland maintenance or habitat enhancement projects. The most commonly treated weeds include aggressive invasives such as thistles, non-native grasses, Scot’s broom, Japanese knotweed, English ivy, blackberry, and poison oak. In developed parks staff may treat weeds along fence lines and in shrub beds and tree wells.

The cost of pesticides, in the minimal amounts applied by POS staff, is not tracked separately from other incidental materials and supplies. Based on the totals reported to the ODA, we estimate that the total cost of the pesticides applied by POS staff in 2011 was about \$2,700.

**B. Facility Management Division Response**

<b>Pesticide name</b>	<b>Chemical Used (Active Ingredient)</b>	<b>Location</b>	<b>Pest</b>	<b>Quantity of Chemical</b>	<b>Cost (per year)</b>
Imidacloprid 2F	Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	Atrium, Fire Station No 1, Police Headquarters, Train Depot	Aphids	1 gal	\$706
Imidacloprid 2F	Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	Downtown Flower Pots	Aphids	18 gal	\$3,768
Imidacloprid 2F/Conserve	Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine/spinosad (including	Downtown Flower Pots	Thrips	3 gal	\$2,826

	Spinosyn A and Spinosyn D)				
Avid	Abamectin	Downtown Flower Pots	Spider Mites	2 gal	\$2,826
Upstar	Bifenthrin	Emergency Services Campus, Fire Station No 6	Crane Fly	920 gal	\$1,111
SuffOil-X	Petroleum Oil	Police Headquarters	Golden Beetle	1 gal	Incorporated into yearly maint. contract
Speed Zone	2-4-Dichlorophenoxyacetic acid; isooctyl (2-ethylhexyl) ester; 3,6-Dichloro-o-anisic acid (Dicamba); Carfentrazone-ethyl; R(+)-2-(2-Methyl-4-chlorophenoxy)propionic acid (MCPP)	Emergency Services Campus, Fire Station No 6, Fire Station 11	Broadleaf herbicide for turf	3 gal	Incorporated into yearly maint. contract

**2. Where are the chemicals stored and what does the City do with chemicals no longer in use?**

Parks and Open Space staff store and mix pesticides in a centralized storage facility designed and used exclusively for that purpose. Access to the POS pesticide storage facility is limited to staff who hold a state pesticide applicator’s license. The facility has a spill containment floor, lockable storage cabinets and a regulation mixing area. Pesticides that are no longer useful are disposed of according to State and Federal law and depending on the material in question. The chemicals go to a hazardous materials handling contractor (e.g. NW Hazmat Inc.), or to Lane County’s Hazardous Waste program for disposal.

Facility Management does not store pesticides. All chemicals are applied by vendors who are State licensed to handle and store pesticides at their place of business.

**3. What specific chemicals are used in the Owen Rose Garden?**

The following fungicides are applied by the City’s contractor to the roses at the Owen Rose Garden to control the fungi that attack them: Miclobutanil (e.g. Eagle) with Supreme (dormant



oil); Propiconazole; Chlorothalonil; and Fenarimol (e.g. Rubigan). The fungicides are applied in rotation to improve their efficacy and reduce the development of resistance in the fungal pathogens. Applications of fungicides have decreased at the rose garden over the last few years as a result of careful attention to cultural practices and the selection of disease-resistant varieties.

Herbicides are applied at the Owen Rose Garden to control weeds in the rose beds and the flowering borders. Weeds in the turf areas are treated every few years as the population of weeds reaches the established threshold for treatment. The following herbicides were used at the Owen Rose Garden in the past year: Glyphosate (e.g. Roundup or Aquamaster) for weeds in the beds and paths; Diethylamine salt (e.g. Sterling) for weeds in the turf; and Clethodim (e.g. Envoy Plus) for grasses in the beds and flowering borders.

Some aerosol wasp and hornet killer is used at the Owen Rose Garden for control of stinging insects in high traffic areas. The spray cans used contain permethrin and tetramethrin and they are of the type available at retail stores.

#### **4. What specific chemicals are used along urban waterways for blackberry control?**

Blackberry, a state-listed noxious weed, is controlled on habitat restoration sites, including along some waterways, through a regime of repeat mowings followed by a selective spot spraying of Garlon 3A and Milestone on the resprouting top growth. The pesticide is applied only to the regrowth on mowed plants, new growth that is less than a year old. Blackberry fruits are born on wood that is in its second season or older so this method limits the potential for berries to be contaminated with the pesticide. By greatly reducing the biomass of the plants, this approach reduces the food storage ability of the plants, which then succumb to the targeted spot-spraying, significantly reducing the amount of herbicide required. This treatment method is the least toxic effective method and it is approved by State and Federal resource protection agencies. The repeat mowing and spray is recognized by the Oregon Watershed Enhancement Board (OWEB) as the preferred method of control and it is required for blackberry removal on restoration projects that are funded through that agency.

For more information contact:

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