



Integrated pest management plan



Revised June 2017

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TABLE OF CONTENTS

INTEGRATED PEST MANAGEMENT PLAN EXECUTIVE SUMMARY	1
SECTION 1: WHAT IS INTEGRATED PEST MANAGEMENT?	3
SECTION 2: LICENSING, CERTIFICATION AND CONTINUING EDUCATION OF PEST MANAGEMENT PERSONNEL AT METRO	5
SECTION 3: MANAGEMENT METHODS FOR PEST PROBLEMS.....	6
SECTION 4: DEVELOPING BEST MANAGEMENT PRACTICES FOR PESTS.....	9
SECTION 5: PESTICIDES APPROVED FOR USE ON METRO PROPERTY	11
SECTION 6: NOTIFICATION OF PESTICIDE USE AT A SITE.....	13
SECTION 7: USING PESTICIDES ON METRO PROPERTY.....	14
SECTION 8: PESTICIDE APPLICATION RECORD KEEPING	16
SECTION 9: PESTICIDE APPLICATION BY NON-METRO EMPLOYEES AND CONTRACTORS	17
SECTION 10: STORAGE AND TRANSPORTATION OF PESTICIDES.....	18
SECTION 11: USE OF REMAINING PESTICIDE SOLUTIONS AND RINSES.....	19
SECTION 12: DISPOSAL OF EMPTY PESTICIDE CONTAINERS AND UNUSABLE PESTICIDES.....	20
SECTION 13: USE OF PROTECTIVE CLOTHING AND EQUIPMENT	21
SECTION 14: EMERGENCY INFORMATION CONCERNING ACCIDENTAL PESTICIDE EXPOSURE.....	22
SECTION 15: PESTICIDE SPILL RESPONSE	23
SECTION 16: WORKER PROTECTION STANDARDS.....	27
SECTION 17: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT COMPLIANCE FOR PESTICIDE USE IN OR NEAR WATERWAYS.....	28
SECTION 18: HOW TO ADDRESS PESTS OR OTHER ISSUES NOT YET INCLUDED IN THIS PLAN	28
APPENDIX A INTEGRATED PEST MANAGEMENT POLICY	29
APPENDIX B APPROVED CHEMICAL LISTS	31
APPENDIX C BEST MANAGEMENT PRACTICES.....	35
APPENDIX D PESTICIDE USE REQUEST FORM	37
APPENDIX E NATURAL AREAS PESTICIDE APPLICATION SIGN (AREA CLOSED)	39
APPENDIX F NATURAL AREAS PESTICIDE APPLICATION SIGN (CAUTION)	40
APPENDIX G PESTICIDE APPLICATION RECORD	41
APPENDIX H IPM ADVISORY COMMITTEE BYLAWS.....	43

INTEGRATED PEST MANAGEMENT PLAN EXECUTIVE SUMMARY

Metro's integrated pest management plan supports Metro's toxics reduction goal set out in the Sustainability Plan for Metro Internal and Business Operations adopted by Metro Council in 2010 by Resolution No. 10-4198. Metro's toxics reduction goal is to eliminate the use or emissions of persistent, bioaccumulative toxics and other priority toxic and hazardous substances by 2025. To this end, Metro's Sustainability Plan calls for an integrated pest management plan:

Toxics reduction action 2.2 is to "Reduce use of herbicides and pesticides in all Metro operations. Create and implement an IPM (Integrated Pest Management) policy to reduce use of herbicides and pesticides on all Metro properties. Policy should address the unique needs of different property types, including developed property landscapes and natural area restoration needs. Program should phase out high risk pesticides as indicated by Salmon Safe. Begin tracking and reporting of all herbicides and pesticides used by Metro staff and contractors.

Page 35, Sustainability Plan for Metro internal and business operations.

This plan was developed to meet the spirit of the above action and to provide the framework for implementing integrated pest management practices while accommodating Metro's land and facility management needs. This plan aims to create a framework to meet goals by adopting flexible, site-specific, pest solutions at Metro's parks, natural areas and built facilities.

It is Metro's policy to:

- Manage, track, report and minimize the use of toxic products on all Metro properties.
- Ensure that staff and contractors adhere to the highest standards for safety and best practices when applying pesticides at Metro facilities.
- Ensure that all staff and contractors that apply, advise the use of and procure pesticides are certified by an internal or external licensing or certification.
- Treat pests according to practices outlined in Metro's best management practices documents.
- Post notification at entrances and in conspicuous locations when applying pesticides at Metro parks, natural areas and built facilities.
- Respond to and report spills immediately according to DOT, EPA, DEQ and OSHA guidelines.
- Only use pesticides that are on the approved chemical list for the property or facility.
- Define the method and procedure for storage and disposal of pesticide materials for all Metro locations and personnel.
- Create an integrated pest management advisory committee to share practices and knowledge, and to enable policy goals to be achieved.

This integrated pest management plan standardizes how pesticides are managed, tracked and reported to minimize the use of toxic products on all Metro properties. It creates standards for product procurement, handling and usage and establishes a framework for providing integrated pest management training and education by equipping staff with best management practices. The plan includes mandatory licensing requirements and creates standards for working with contractors and local government agencies. These standards will be written into Metro's contractual and intergovernmental agreements. Metro's integrated

pest management plan creates guidelines for pesticide application and correct pesticide disposal and spill response methods in an emergency situation. Chemical lists dictate what chemicals can be used within Metro's departments and at each property or site. All pesticide applications must be tracked using a standardized agency-wide form. Application data from the forms will be collected into a centralized tracking and reporting system for all pesticide usage on Metro properties. The adoption of an integrated pest management advisory committee will provide staff, managers and contractors with a forum for sharing knowledge and information. The use of effective communication, program oversight, and coordinated efforts is designed to ensure that Metro achieves its policy goals. The integrated pest management plan applies to all Metro facilities and operations and all pest management activities conducted on Metro property.

SECTION 1: WHAT IS INTEGRATED PEST MANAGEMENT?

Integrated Pest Management is a strategy used by Metro in the maintenance of its natural areas, parks and built facilities. The following definition is from the U.S. Environmental Protection Agency's publication, *INTEGRATED PEST MANAGEMENT FOR TURFGRASS AND ORNAMENTALS*:

Integrated pest management is the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means with the least possible hazard to people, property and the environment. The goal of integrated pest management is to manage pests and the environment so as to balance costs, benefits, public health and environmental quality. Integrated pest management systems use all available technical information on the pest and its interactions with the environment. Because integrated pest management programs apply a holistic approach to pest management decision making, they take advantage of all appropriate pest management options, including, but not limited to pesticides. Thus integrated pest management is: a system using multiple methods; a decision-making process; a risk reduction system; information intensive; cost-effective; site specific.

The University of California-Davis defines integrated pest management as follows:

Integrated pest management 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.

The integrated pest management process first determines if a pest needs to be managed, and if so, how best to do it. Key elements are information gathering, well-informed decision making and monitoring of results. The process promotes effective, low-risk management strategies to manage pests. The controls used in this program include cultural, physical, mechanical, manual, biological and pesticide methods and materials. Often a combination of methods is used.

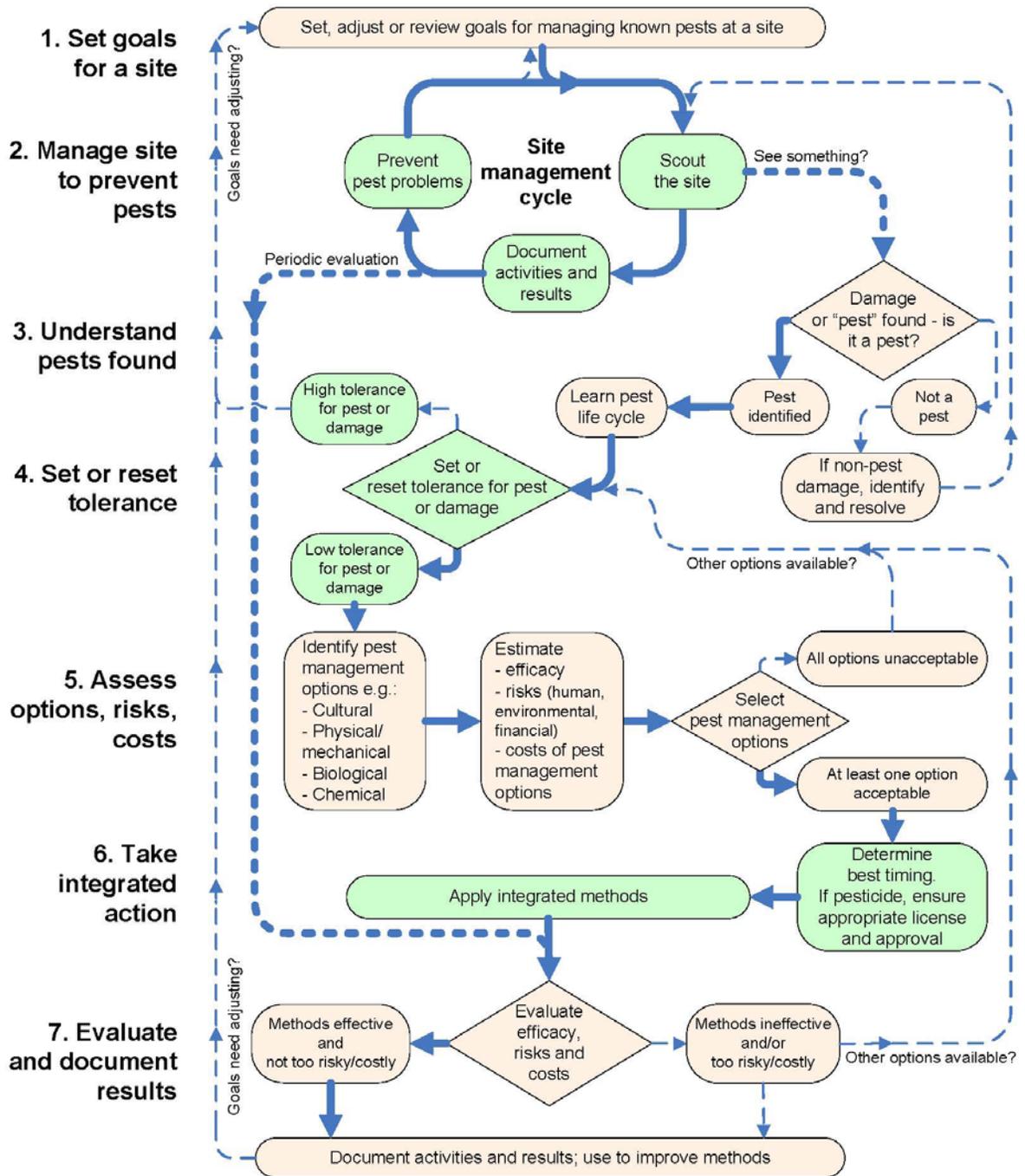
Metro's integrated pest management plan is designed to standardize specific work practices at Metro which are performed by both staff and contractors across multiple sites. The specific pest prevention and control measures explained in this plan are aimed at pest management applications at Metro's built facilities, parks and natural areas. Within these standardized work practices, Metro professionals will evaluate methods selected to manage specific pest populations on a case-by-case basis. These methods include:

- Proper planning and management decisions
- Cultural methods
- Mechanical and physical controls
- Biological methods
- Chemical methods: Use of the least toxic and effective pesticide from Metro's approved chemical lists

These methods are explained and described further in Section 3. Additionally, Metro's integrated pest management process is visually described on the following page.

Metro Integrated Pest Management Process

Solving actual pest problems with the least collateral damage | 3/1/16



PESTICIDE USE

Pesticide is a general term for any substance intended for preventing, destroying, repelling or mitigating any pest. Pests include, but are not limited to, insects, fungi, rodents and weeds. For the purposes of Metro's pesticide-related requirements in this plan, the term "pesticides" refers to EPA-registered pesticides as well as any "Minimum Risk" pesticides (which qualify to be exempt from EPA registration) that have a signal word of "Danger" or "Warning." Managing pests may require pesticides as part of an integrated pest management approach. Metro minimizes pesticide risks by careful product selection and application. Pesticides vary greatly in their toxicological characteristics so choice of materials is a key element of good integrated pest management decision making.

Metro pesticide applicators are required to comply with all pesticide label directions, federal, state, and local pesticide regulations, applicable safety laws and Metro policies.

SAFETY

When Metro employees use pest management equipment and apply materials, Metro provides each worker all appropriate personal protective equipment. Use of such equipment is an important part of safely applying pesticides as well as properly using mechanical equipment. **No Metro volunteer may apply pesticides.**

LAWS AND REGULATIONS

Several federal and state agencies regulate the use of pesticides. Metro conforms to all applicable pesticide laws and regulations. **Metro allows only Oregon State licensed pesticide applicators to buy, advise, use or supervise pesticides and their application on Metro-owned properties.** To obtain a Public Pesticide Applicator's license, applicators must pass a series of tests given by the Oregon Department of Agriculture covering pesticide laws, safety, use, integrated pest management, and other subjects. Applicators may be personally liable if they apply pesticides contrary to state and federal laws and label directions.

Once licensed, applicators must accumulate 40 credit hours of state-approved recertification training over a five-year period to maintain their license. Metro provides access to recertification training hours to its employees every year. Class sessions are tailored to provide instruction in diverse aspects of pest management and safety that are relevant to Metro's integrated pest management goals.

Applicators are required by law to record specific information when applying pesticides. Metro has designated procedures for this purpose (see Section 8). Information recorded includes date and time of application, conditions, locations and formulations and amount applied. An example of this form is found in Appendix G.

SECTION 2: LICENSING, CERTIFICATION AND CONTINUING EDUCATION OF PEST MANAGEMENT PERSONNEL AT METRO

PURPOSE

This section defines the education, training, licensing and certification requirements for applicators who are applying pesticides, or supervising others applying pesticides.

BACKGROUND

State pesticide applicator licensing assures a level of expertise and familiarity with pest management practices and pesticide materials. Metro is committed to maintaining a high level of expertise in its workforce. The continuing education requirements of state licensing also help keep personnel up-to-date on pest management theory and practice. Therefore, Metro requires all personnel buying, using, supervising or advising the use of pesticides maintain a public Oregon state applicators license. While Oregon law does not require this level of licensing for all applications carried out on Metro land, Metro has always been committed

to maintaining a high level of expertise in its workforce and chooses to exceed the minimum standards. In addition, no Metro volunteers may plan the use of or apply pesticides.

PROCEDURE

All Metro personnel applying pesticides or directing the application of pesticides by other staff or contractors shall be licensed as state public pesticide applicators by passing the appropriate Oregon Department of Agriculture examinations. Pesticide application scenarios that are known to pose very low risk to humans and the environment may be requested to be exempt from the licensing requirements for Metro staff, as long as this does not conflict with any applicable regulations, laws or policies. Exemptions are requested through the Pesticide Use Request process described in Section 5, and use scenarios described in an approved Best Management Practice document. In the case of approved exemptions, Metro staff must first participate in a short training before using an exempted pesticide without a license.” In order to maintain a valid Oregon Department of Agriculture state license the applicator currently must acquire a minimum of 40 hours of state- accredited supplementary education over a five-year period, with no more than 15 hours accumulated in any given year. Metro will keep pesticide applicators informed of approved education to meet continuing certification and licensing requirements. Information regarding state licensing requirements and status may be found at the Oregon department of Agriculture’s website: <http://www.oregon.gov/ODA/PEST/>.

SECTION 3: MANAGEMENT METHODS FOR PEST PROBLEMS

PURPOSE

This section establishes the principles governing Metro’s approach to pest management.

BACKGROUND

Metro utilizes the principles of integrated pest management in managing facilities and land under its care. Integrated pest management is a coordinated decision-making process that uses the most appropriate management strategy on a site- and situation-specific basis. The process first identifies the pest, determines if the pest needs to be managed, and if so, how best to do it. Key elements of an integrated pest management program are information gathering, well-informed decision making and monitoring of results. Through proper decision making, the process promotes effective strategies to manage pests.

PROCEDURE

Metro shall employ integrated pest management principles in managing pest problems. Staff shall monitor facility and landscape conditions, assess appropriate thresholds and determine action levels on a site-by-site basis. All licensed applicators shall determine an effective, feasible and economically sound pest management method that does not create unacceptable risk to the public, the environment or staff.

If a pesticide is chosen as the best method for pest management, licensed applicators shall choose appropriate materials only from the approved chemical list specific to their facility, site or work unit. The suitability of the material, nature of the site, potential health and safety effects, potential environmental effects, overall costs, characteristics of the product and any other special considerations related to the situation shall be taken into account in this process. After control measures have been made, employees or contractors should appropriately monitor the facility or site to assess any impact and the efficacy of the measures taken.

Pesticide resistance occurs when a pest population develops a genetically acquired tolerance to a pesticide that was previously effective at controlling the pest. To avoid pesticide resistance at a site, different pesticide products appropriate for controlling a target pest and listed on the approved chemical list for the program addressing the pest, should be rotated. Applicators should follow label directions carefully and avoid using too much or too little pesticide, both of which can contribute to resistance in a population.

Proper planning and management strategies

The management techniques used in this manual include proper planning and management decisions and cultural, mechanical and physical, biological and chemical methods. Often a combination of methods is used.

Management of pests via prevention strategies can be highly effective and low in cost. This approach focuses on eliminating problems before they begin. Examples include door sweeps in vulnerable areas, prioritization of specific areas for control measures and establishing the tolerance level and action threshold for different pests in different contexts. These thresholds vary according to pest, plant and site. Action thresholds are determined on a case- by-case basis.

Tolerance level is used to describe a level of pest presence above which unacceptable amounts of negative plant health impacts, environmental impacts, effects on infrastructure and assets, intolerable aesthetic impacts, or undue safety risks are likely to occur.

Action Threshold is the point at which control measures are necessary to prevent a pest population or its impact from exceeding the threshold.

Best management practices are methods or techniques that have consistently shown results superior to those achieved with other means, and that are used as benchmarks or guides for defining Metro's on site practices.

Proper site design and plant selection are important ways to avoid pest problems. While no landscape or facility can be designed to be completely free of pest management needs, such considerations need to be part of the planning process. Examples include:

- Use of native plants, disease- or pest-resistant plant species or varieties.
- Removal of pest-susceptible plants, or replacement with pest-resistant plants or varieties.
- Elimination or modification of underlying problems (such as poor drainage or food sources).
- Proper spacing of plant material to reduce the incidence of pest problems.
- Maintenance of species diversity and elimination of monocultures in plantings.
- Elimination of alternate hosts for diseases.
- Establishing over-story plantings, including groundcover plantings and other design techniques benefiting both the establishment of plants and the reduction of weeds.

Cultural practices

Proper cultural practices are essential to well-managed facilities and landscapes and can often help maintain their resistance to pest problems. Examples include:

- Knowledge of the cultural requirements of plants to best provides proper conditions for optimum plant health and resistance to pests.
- Maintain soil health by adding organic matter, avoiding over-tilling or otherwise breaking down the soil structure and other best practices.
- Adequate site, soil and grade preparation before landscape installation.
- Use of disease-resistant grafting rootstock or scion wood.
- Proper timing and use of water to reduce over or under watering.

- Proper timing and use of fertilizer to eliminate over and under fertilization.
- Raking and debris removal in certain garden or landscape situations and removal of pest sources.
- Pruning and plant removal to promote air circulation and light penetration for plant health.
- Removal of diseased, infested, damaged or dead wood.
- Mulching for weed reduction, water retention, winter protection and root zone improvement.

Mechanical and physical controls

Mechanical and physical methods are often employed to manage pests. Examples include:

- Mechanical clearing of weeds in rough areas.
- Hand weeding in shrub beds.
- Mowing of rough turf areas for vegetation control.
- Traps such as yellow sticky boards for greenhouse insects and traps for mammalian pests.
- String trimming to control unwanted vegetation.

Biological methods

Biological control may be available to manage pests. As many biocontrols have caused problems in natural systems, they should be chosen with great care. A better strategy is minimizing disruption of natural pest controls that may be present. Examples include:

- Introducing insect or disease parasitoids, predators and microbial products to control pests. Any use or release of non-native insects is subject to the approval of the department director. Expert consultation is advisable.
- Minimizing the use of disruptive techniques and materials in landscapes that may destroy natural pest control organisms.

Chemical methods

Chemical controls include both naturally derived and synthetically derived pesticides. Pesticides are derived from many sources, vary widely in their characteristics and must be examined individually to determine their suitability within the integrated pest management approach. Examples include:

- Placement of pheromone traps
- Disinfecting materials or equipment to prevent spread of pests
- Application of naturally and synthetically derived pesticides

Approved chemical list (ACL) is a list of those chemicals approved for use by Metro's integrated pest management advisory committee for a specific Metro department that either applies pesticides or is responsible for overseeing contractors applying pesticides.

SECTION 4: DEVELOPING BEST MANAGEMENT PRACTICES FOR PESTS

PURPOSE

This section provides additional criteria to inform staff and contractors in the determination of the pest management method best suited for the particular site or need. For best management practices on specific pest categories see Appendix C.

PROCEDURE

Best Management Practices (BMP) documents will follow a standard format, and be written with input from staff and contractors involved in managing the particular pests in question. See Appendix C.

New BMP documents will be reviewed and if sufficient, approved by a subcommittee of the IPM Advisory Committee. The subcommittee will include - at a minimum - the IPM Coordinator and two other advisory team members. BMP approval requests will be considered any time of year. Every effort will be made to ensure that request decisions are made within four weeks of submission.

The items below will also be taken into consideration when choosing a pest management method.

Nature of the site

Different Metro sites may have varying standards of acceptable care and appearance. Determining whether a particular Metro site requires control of pests, and what level of control, requires taking these differences into account and specifically considering the following:

- Erosion susceptibility and potential movement of soil through runoff
- The intended use and function of the facility or landscape
- The feasibility of the method given the area and scope of the problem
- The relative importance and public expectation of a facility site or planting
- Site conditions such as soil type, grade, drainage patterns and presence of surface water
The suitability of existing landscaping and alternative plants that may do better.

Possible health and safety effects

Pest management methods have varying possible health and safety effects. It is necessary to assess the following:

- Short and long term toxicological properties, equipment operation safety issues, worker safety and any other related potential health effects of the materials or methods, both to the applicator and especially vulnerable populations
- Equipment operation safety issues for both the operator and the public
- Worker safety and worker injury issues involved with carrying out the method

Possible environmental effects

Some pest management methods may cause both acute and chronic toxicity and other related potential effects to non-target organisms including mammals, birds, amphibians, fish, invertebrates and other organisms. Consider the following:

- Environmental effects from potential bioaccumulation, groundwater contamination, etc.
- Potential impacts to non-target plants and other organisms from materials or methods

- Potential impacts to federally listed threatened or endangered species
- Possible introduction or establishment of invasive plants (for example: with use of equipment that may bring new weeds to a site).

Costs

In choosing a pest management method, consider both short and long term costs as they relate to:

- Costs of the material or method
- Application and labor costs
- Length and quality of pest control
- Feasibility of using a particular method or product

Characteristics of the product

A pest management product must match the problem it is meant to tackle. Consider:

- Target pests and target sites of the product being used
- Possible residual effects, decomposition pathways, rates and breakdown products
- Volatility and flammability
- Product formulation and package size
- Leachability, solubility and surface and soil bonding characteristics of the product
- Ease of cleaning equipment after use
- Positive and negative synergistic effects of pesticide combinations
- Components of so-called inert ingredients and trademarked adjuvants

Special considerations

- Application equipment availability and suitability for the situation
- Method of delivery: type of equipment and technique being used to apply pesticide
- Current and anticipated weather conditions
- Previous pesticide applications to the site and the interval between treatments
- Possible development of pest resistance to a particular management method or material (ensure the optimal amount of pesticide consistent with the label be used to reduce the potential for development of pest resistance and to minimize the frequency of applications necessary to control the target pest)
- Product rotations with differing modes of action as appropriate
- Presence of wildlife and native plants, minding time of year (e.g., spring migration or nesting season)
- For pesticide applications at the zoo, the presence of zoo animals must be a consideration in product use, amount used and location uses

Following are some considerations to make before beginning an application to assure the proper amount of pesticide is mixed.

- Weather conditions and predictions
- Acreage/square footage of the job site

- Other activities occurring on site: special events, mowing, irrigation, etc.
- Type and size of the equipment appropriate to do the job

When applying pesticides use the following procedures to reduce and safely store the rinse solution. These are secondary to label information and state and federal regulations.

- Mix only enough pesticide solution to do the job that day.
- Use up all pesticide, applying until the tank is empty, or no more solution is coming through the nozzle.
- If pesticide mix remains in spray equipment at the end of the work day clearly label the contents, affix to the tank or sprayer all legal labels for the products used. Also mark the current concentration for each product, the date and the name of the applicator.
- When resuming spray applications at a future date, either use the leftover material, or add dilution water and circulate the mix thoroughly before adding new concentrate.
- If spray tank rinsate is created, store the rinsate as make-up water for the next day. The next day's pesticide should be compatible or the same. The same labeling requirements described above pertain to the rinsate mix as well.
- Rinsing and/or cleaning of the sprayer may be necessary if the following conditions apply: it is necessary to use a pesticide incompatible with that previously used, or before long term storage of the equipment.

SECTION 5: PESTICIDES APPROVED FOR USE ON METRO PROPERTY

PURPOSE

This section establishes the oversight procedures and selection process of pesticide materials for use at Metro facilities, parks and natural areas.

BACKGROUND

Pesticides vary widely in their characteristics and their legally labeled uses. Not every registered pesticide will be appropriate for use. Also, certain pesticides may be suitable for one kind of site or purpose but not for others. Pesticides must be carefully evaluated for their suitability for specific program use before they are included on an approved list. For example, LEED certified buildings any pesticide that meets San Francisco's Tier 3 hazard criteria is considered a less toxic pesticide (<http://www.tier3pest.com/>). Program needs for various pesticides change over time as new pest challenges arise. Also, pesticide material availability changes as products, active ingredients and label uses are added or removed. Information about pesticides may change over time and this may influence their suitability for program use. For these reasons, approved lists need to be flexible allowing for additions and deletions (this will be done every three years on a rolling basis).

Goals for the pesticide use approval process are as follows:

- Only the most effective, least risky, and economical chemical pest control methods will be approved or selected from approved options, when a chemical control is needed.
- The ACL will change based on new information, new pests, regulation and experience. Every pesticide will be reviewed at least every three years and updates to the list will be made on a rolling basis.
- The ACL process will be flexible and efficient.
- The ACL process will help to prompt and support staff, contractors and lessees across the agency to practice robust IPM decision making and skills development.

PROCEDURE

1. All pesticide use requests start with a detailed Best Management Practices (BMP) document. Pesticide use approvals must be preceded by reviewing an existing or writing a new BMP document, unless there is an emergency.
 - a) BMP documents will follow a standard format, and be written with input from staff and contractors involved in managing the particular pests in question.
 - b) New BMP documents will be reviewed and if sufficient, approved by a subcommittee of the IPM Advisory Committee. The subcommittee will include - at a minimum - the IPM Coordinator and two other IAT members.
 - c) BMP approval requests will be considered any time of year. Every effort will be made to ensure that request decisions are made within four weeks of submission.
 - d) BMP documents will be kept in Appendix C.
2. **Pesticide Use Requests** will include a consistent set of efficacy, risk and cost data. A Pesticide Use Request form must be submitted and approved for any new pesticide used on Metro property and to continue using a pesticide that is up for review. (See Appendix D).
 - a) Once a pesticide is approved for a specific use, it can be added to the appropriate BMP document, and to the agency ACL, with conditions of use indicated clearly.
 - b) Pesticide uses not specifically included in a Best Management Practices document are not allowed.
 - c) Pesticide approval will be for formulated products or active ingredients as appropriate.
 - d) Pesticide use requests will be considered and decided by a subcommittee of the IPM Advisory Committee which will include - at a minimum - the IPM Coordinator and two other IAT members who are not associated with the facility or work unit submitting the request.
 - e) Pesticide use requests will be considered any time of year. Every effort will be made to ensure that use request decisions are made and communicated back to requesters within three weeks of the submission date. Timely submittal of a request for use is the responsibility of the requester, not the reviewers. It is best to request new pesticides as early as possible (e.g., beginning of year) to avoid holdups due to busy reviewers.
3. **The Approved Chemical List** will be updated at least annually and updates made accessible to all pesticide applicators working on Metro property. The ACL will change based on new information, regulations, new pests and experience.
 - a) Every pesticide will be reviewed at least every three years and updates to the list will be made on a rolling basis.
 - b) If new information or experience indicates a particular approved pesticide is no longer among the least risky, most effective choices or for any other reason a pesticide becomes not legal or advisable to use for the purpose in question, approval for that use will be revoked. Approval revocations may be absolute or “use up and do not restock.”
 - c) Each time a change is made to the ACL, all Best Management Practices documents affected by the change will need to be updated. The goal is to develop a system of automatic updates between the ACL and the Best Management Practices documents.

- d) Ensuring staff, contractors and lessees are using the most recent ACL and Best Management Practices documents will require careful version controls, timely updating and excellent communication so field staff in particular have the most recent information.
 - e) Current Approved Chemical Lists and Best Management Practices documents will be accessible via the internet.
 - f) Completed pesticide use requests will also be accessible via the internet.
4. **Emergency use of new pesticides also requires pre-approval.** If a pest situation requires immediate attention because of an imminent threat to health, safety or substantial facility damage, then an Emergency Pesticide Use request may be granted.
- a) Submission of a completed Pesticide Use Request form will be required for emergency requests. An “emergency request” box will be included on the form to indicate the special status.
 - b) Emergency requests will be considered and decided within one business day of submission, or as soon as possible thereafter, by either the IPM Coordinator or another member of the IAT who is not associated with the facility or work unit submitting the request.
5. **The ACL should not short-circuit good IPM decision making.** Before using a pesticide, applicators must first follow Metro’s IPM decision making process (see page 4), including identification of pest, setting or review of tolerance levels, and analysis of the efficacy, risks and costs of all feasible options. In addition, all pesticide applicators must be familiar with and follow the Best Management Practices associated with any pesticide applications they plan to do on Metro property. Best Management Practices documents can be found in Appendix C.

Metro expects strict compliance by all staff, contractors and vendor applicators to all pesticide label requirements concerning safe, legal and effective use of pesticides.

SECTION 6: NOTIFICATION OF PESTICIDE USE AT A SITE

PURPOSE

This section establishes notification procedures for each application of pesticides by Metro personnel and contractors at Metro facilities, parks or natural areas.

BACKGROUND

Metro understands that facility, park or natural area users may want to be informed of treatments. Label requirements for pesticide applications may also mandate that entry to treated areas be avoided for a specific time interval. Visitors may also seek additional information about pest management activities occurring at a facility or site. To satisfy these needs, all pesticide applications will be accompanied by on-site notification signage.

PROCEDURE

Metro intends to inform site visitors of pesticide application through the use of notification signs. Applicators will post these signs immediately before an application begins in clearly visible locations. The intent of the signs is to allow the public to encounter the signs prior to entry to a treated area during or after an application, and so they have the opportunity to avoid this area. This notification signage will include basic information about the application and appropriate contact numbers for those desiring more details about the pest problem and the approach being used. For examples of Metro natural areas signage see Appendices E and F. Other programs, venues or facilities should develop signage that includes language and graphics that meet the criteria of their interpretive plans or signage standards.

Re-entry times and/or dates will be listed on notification signs if required by the label. Employees or contractors will remove the signs after the re-entry specification has been met. For most products, this interval is limited to when the liquid application has dried or until any dust has settled from a dry or granular application. A sign may be removed later than planned, therefore signs must have the application date on them.

As a convenience for community centers, schools and day care facilities in session, these entities should be notified in writing whenever practicable before an application is made to nearby adjacent properties. School or community center personnel can then schedule the activities of their users accordingly. The notification letter or its equivalent shall be delivered to the school or community center 24 hours before any applications of pesticides are planned to take place.

SECTION 7: USING PESTICIDES ON METRO PROPERTY

PURPOSE

This section establishes procedures for application of pesticide materials by Metro personnel and contractors.

BACKGROUND

As part of Metro's integrated pest management program, employees and contractors will apply pesticides in a legal manner and strictly follow all precautionary requirements for their use. This section outlines procedures for pesticide application at facilities, parks and natural areas maintained by Metro employees or contractors. All registered pesticides are accompanied by a legal label specific to each product that defines all legal uses. All Metro employees and contractors must use pesticides strictly according to these label directions.

PROCEDURE

The label is the law and shall be followed strictly. In addition:

- Personal protective equipment shall be used wherever indicated on the label of the product and/or on the safety data sheet for the product.
- Spray equipment shall be maintained in a safe and useful condition and shall be calibrated regularly.
- Anti-siphoning devices shall be used when filling large spray tanks.
- Pesticides used shall be chosen from the current Approved Chemical Lists as provided to the appropriate work units.
- Employees and contractors shall apply pesticides only in appropriate weather conditions and consider all other relevant criteria from Section 4.
- Employees and contractors applying pesticides shall post notification signs where pesticides are being applied, as described in Section 6.
- Metro employees and contractors shall record all pesticide applications on Metro approved pesticide application record forms (Appendix G).

The law allows a licensed applicator to:

- Apply a pesticide at any dosage, concentration or frequency listed on the label
- Use any equipment or method of application not prohibited by the label
- Mix a pesticide or pesticides with a fertilizer if the mixture is not prohibited by the label

- Mix two or more pesticides, if all the dosages are at or below the recommended rates and if not specifically prohibited by the label

Pesticide may be used only on sites and targets stated on the label. Higher dosages, higher concentrations or more frequent applications than the label allows are not permitted. Similarly, use of lower rates than recommended on labels is not advised due to its potential to facilitate pest resistance. All employees and contractors applying pesticides must strictly follow label directions for use, safety, mixing, diluting, storage and disposal, as well as any restrictions on re-entry.

Using pesticides at Metro

The following steps shall be taken when using pesticides on Metro property:

- A Metro employee or contractor identifies or is informed of a pest problem.
- Identify the pest.
- Determine if actions need to take place. Thresholds and action levels are determined by a licensed applicator or licensed supervisor for the specific pest problem in question and are included in the Integrated Pest Management Best Management Practices documents.
- Management strategies are determined by a licensed applicator. Special situations may require expertise from outside Metro such as university diagnostic laboratories.
- Choose the pesticide using the "Developing Best Management Practices for pests" summarized in Section 4 and the approved chemicals list for the appropriate work unit.
- Check application equipment for safety and mechanical problems; calibrate if necessary.
- If applications are outdoors, check label for appropriate application situations and appropriate wind conditions to prevent pesticide drift and volatilization. Applications should be done when suitable wind conditions exist to minimize drift. Adjustments should be made for spray droplet size and pressure if and when conditions warrant. No application should take place where there is unacceptable drift.
- Post notification signs before use to inform the public and staff of the application. For specific rules see Section 6.
- List re-entry specifications on the signs if required by the label.
- Apply material according to the label and in accordance with state and federal regulations.
- Record applications of pesticides on the approved form. See Appendix G.
- Remove signs after the label designated re-entry requirements have been met. This is usually when the liquid pesticide has dried, unless indicated otherwise on the label.
- Evaluate the results of management measures.

SECTION 8: PESTICIDE APPLICATION RECORD KEEPING

PURPOSE

This section establishes recording and reporting procedures for all pesticide applications taking place at Metro facilities, parks and natural areas by licensed Metro personnel or individual pursuant to a contract or intergovernmental agreement. No volunteers are permitted to apply pesticides to Metro property.

BACKGROUND

Detailed record keeping is an essential part of integrated pest management program implementation, and is vital in communicating, reporting and analyzing the effectiveness of pest management activities. State law requires that written records be kept for pesticide applications. The law requires that licensed applicators record the details of pesticide applications and keep these records for three years. These records must be stored in a central location and be available for review.

PROCEDURE

A key goal of Metro's integrated pest management program is to have consistent, accurate records of all pesticide applications performed on Metro properties. All pesticide applications by Metro staff and contractors must be tracked using a standardized agency-wide form. Data from the forms will be collected into a centralized tracking and reporting system for all pesticide usage at Metro properties.

Required data for the Pesticide Application Records will include, but not be limited to the following, and will need to satisfy Oregon Department of Agriculture requirements and all applicable laws.

- The location of the land or property and specific area where the application was made*
- Total area treated if applicable*
- Date and approximate time (start and end of application)*
- The supplier of pesticide products applied*
- The trade name and the strength of the pesticides applied and EPA number of pesticide (if applicable)*
- The concentration* and total amount of mixture applied
- Summary information of device or apparatus used*
- Name and license number of applicator, apprentice or trainee* (whether the applicator is Metro staff or employed by a Metro contractor)
- Temperature and wind conditions
- Target pest or weed*
- Aquatic buffer designation where applicable
- Records kept for three years*

**** Denotes Oregon Department of Agriculture Application Record Requirement***

Refer to Oregon Pesticide Application Record Requirements for specific Oregon Department of Agriculture record keeping requirements at:

<http://www.oregon.gov/ODA/programs/Pesticides/RegulatoryIssues/Pages/Recordkeeping.aspx>

Applications on different dates or at different locations must have their own application record. They cannot be combined on one record. See Appendix G for the draft standard Metro Pesticide Application Record form.

SECTION 9: PESTICIDE APPLICATION BY NON-METRO EMPLOYEES AND CONTRACTORS

PURPOSE

This section establishes oversight procedures over all pesticide applications taking place at Metro facilities, parks and natural areas. Anticipated applications by non-Metro employees and contractors must undergo an approval process to satisfy certain licensing and other requirements before the work can take place. This oversight is essential to ensure that all pest management activities occurring at Metro facilities, parks and natural areas adhere to established integrated pest management-based goals and principles and address environmental and safety concerns.

BACKGROUND

Without proper oversight, pest management activities undertaken by non-Metro personnel may lead to regulatory, environmental or safety problems. Metro infrastructure, landscapes and the public may be put at risk, or integrated pest management principles may not be followed. The approval process within this manual is not intended to be a hindrance to appropriate and timely work. These procedures are intended to ensure that the best practices are used and problems avoided.

PROCEDURE

Contractors, partner organizations, state and county agencies desiring to apply pesticides not on the approved chemical list to Metro managed land or facilities shall submit a Pesticide Request Form (Appendix D) to the Integrated Pest Management Advisory Committee to the extent practicable (unless this conflicts with prior agreement or if the agency has prevailing authority). The integrated pest management advisory committee will evaluate the request before any additional pesticide application can take place. If the committee cannot agree whether to approve the chemical, the decision process is outlined in Section 3: Decision Making Process of the IPM Advisory Committee Bylaws (Appendix H).

Employees of commercial pesticide operator companies

Employees of commercial pesticide operator companies must possess valid state pesticide applicator licenses at the time of planning and application of pesticides. The applicator license in the state- defined category appropriate for the particular application is required. Per state law, any contract staff operating under a “Trainee License” must be under the direction of a licensed commercial pesticide applicator.

Metro project managers shall regularly review the performance record of contracting businesses applying pesticides to Metro facilities, parks and natural areas. This review shall include an examination of past work and safety performance. All involved parties shall disclose pertinent information regarding any performance or safety issues raised from prior projects.

Employees of partner organizations

Employees of partner organizations possessing valid state pesticide applicator licenses are permitted to apply pesticides on Metro property if under the direction of licensed Metro staff, if a prior agreement with Metro stipulates application or if applied by an agency with prevailing authority. The applicator license in the state- defined category appropriate for the particular site is required.

Roughly 10 percent of Metro’s property is managed by partner entities, mostly City of Portland, Tualatin Hills Parks and Recreation, Clean Water Services, and City of Gresham. These lands are primarily small portions of larger parks and natural areas such as Forest Park. Owing to the physically complex patchwork of properties,

it is not possible to individually track pesticide applications by non-Metro staff or contractors on Metro's land within these larger parks and natural areas.

Metro's Conservation Program staff will instead review the IPM plans of the partner agencies to ensure the procedures used for ensuring safe and legal pesticide applications are commensurate with those within Metro's IPM Plan, and bring a report on the reviews and their determination to the Metro IPM Advisory Committee. If a review reveals issues that need to be addressed, Metro's IPM Advisory Committee will work with Metro Conservation Program staff to address the issues. If necessary, a solution may be incorporated into Metro's intergovernmental agreements with the agencies in question.

Employees of state agencies

Situations may occur where state agencies need to apply pesticides to Metro facilities, parks and natural areas to perform early detection and control of invasive species or as part of a partnership effort. Metro is supportive of early detection and rapid response to serious invasive species threats, and communications from the state regarding its need for pesticide use for these purposes will be responded to by Metro in a timely manner.

Employees of county vector and nuisance control agencies

Metro understands that there may be situations where the county vector and nuisance control agency has the need to apply pesticides to Metro property as part of its mandate to further public health goals. The Integrated Pest Management Advisory Committee shall respond to communications from this agency in a timely manner. Unless preempted by the legal authority of the county agency, licensed public health endorsed applicators will be considered for approval to apply pesticides to Metro facilities, parks and natural areas. To the greatest extent possible, Metro and the county will work together to arrive at mutual agreements for activities that address public health goals and good environmental stewardship. These agencies include:

- Multnomah County Health Department, Vector Control Division
- Washington County Department of Health and Human Services
- Clackamas County Vector Control District

Agricultural lease holders

Metro also leases land to farmers. Holders of agricultural leases are required to submit to Metro pesticide application records from the previous year. One agricultural lease holder (CalFarms) is required to submit pesticide application plans prior to application and records each year showing what they actually applied. Additionally, it is highly recommended that holders of Agricultural leases develop conservation plans with the Natural Resources Conservation Service to obtain recommendations for optimal use of the land while protecting habitat and other natural resources. Findings from the pesticide plans, records submissions and conservation plans will be used to develop a new approach to integrating Metro's agricultural leases into the Metro IPM Plan processes in the future.

SECTION 10: STORAGE AND TRANSPORTATION OF PESTICIDES

PURPOSE

This section defines the method and procedure for storage of pesticide materials for all Metro locations and personnel.

BACKGROUND

Attention to the proper storage of pesticide material is vital to assure public and employee safety, as well as to protect the investment in their purchase. Several agencies are involved in regulating aspects of pesticide storage. No single agency has comprehensive authority. Pesticides will be stored and transported in a manner that reduces the risk of spills, exposure, theft, degradation, contamination or loss.

PROCEDURE

Pesticides or pesticide containers shall be kept in secure and safe locations in accordance with existing laws and in a cabinet specifically designed for chemical storage. They shall be kept in a temperature controlled, well-ventilated area. Areas used for storage shall be labeled and designated for use by work unit supervisors.

Pesticides shall be safeguarded from environmental damage such as extreme temperature, photo-decomposition or moisture. All pesticides in storage shall be inspected regularly and, if necessary, rotated to ensure that the oldest items are used first.

Pesticides being transported shall be appropriately and safely secured in the vehicle. (Only licensed applicators shall transport pesticides.) Appropriate spill response supplies must be immediately available.

Pesticides shall not be transported in the cabs of passenger vehicles when alternatives exist, such as truck beds, truck boxes or vehicle trunks.

SECTION 11: USE OF REMAINING PESTICIDE SOLUTIONS AND RINSES

PURPOSE

This section establishes procedures for the use and disposal of any pesticide remains generated by Metro employees. It outlines methods for use of remaining pesticide solutions and rinses in a legal and safe manner.

BACKGROUND

Applicable laws require that all pesticide solutions and rinses be applied to target areas according to label directions. These solutions and rinses may also be disposed of at an authorized pesticide disposal site. It is the goal of Metro to conduct pesticide operations so that disposal of remaining material is not necessary.

PROCEDURE

Pesticide solutions and rinses should be applied according to the label directions, and to legal target sites so there are no pesticides remaining. This shall be accomplished by accurately gauging the amount of pesticide needed for the job. Metro promotes the use of advance planning to minimize the number of times it is necessary to switch pesticides in spray equipment. In order to reduce the amount of excess rinsate, rinse equipment only at the end of the spray cycle or when changing to pesticides that are incompatible with those in the tank. It is a legal requirement to fully and legally label all tanks and sprayers containing leftover pesticides at the end of each day.

- Read the pesticide label. The following procedures should not conflict with label information or state or federal regulations. Contact your supervisor if you see a conflict or have questions.

- Wear protective clothing as listed on the label when handling pesticides, pesticide containers or pesticide equipment.
- Fill the spray equipment approximately 1/4 full with clean water. Shake or agitate so that all inside surfaces are washed. If possible use the spray hose to rinse the inside surface of the tank. These procedures should coincide with all labels.
- Spray the rinse water out of the spray equipment onto an approved target area. Rinse water should be run through all hoses, booms, etc. Filters should be cleaned. Because of the dilute nature of the pesticide in the rinse water, a coarse spray can be used and is recommended to save time. Do not "pond" or saturate the soil.
- If the tank is to be stored, repeat steps 3 and 4 above until the tank is clean.

SECTION 12: DISPOSAL OF EMPTY PESTICIDE CONTAINERS AND UNUSABLE PESTICIDES

PURPOSE

This section defines the method and procedures for the disposal of pesticide containers and unusable pesticides or those pesticides with registrations that have been totally or partially suspended.

BACKGROUND

Metro considers proper disposal of unusable pesticides and pesticide containers of the utmost importance to the safety of employees, the public and the environment. Several governmental agencies regulate pesticide disposal. No one agency has comprehensive authority. Agencies involved include the Oregon State Department of Agriculture, Department of Environmental Quality, Environmental Protection Agency and Occupational Safety and Health Administration. Metro will comply with all relevant laws governing the proper disposal of these materials.

PROCEDURE

Metro shall dispose of pesticides and empty pesticide containers in accordance with all state and federal regulations and label recommendations. Disposal of pesticide containers and unusable pesticides not in accordance with this manual will be cause for disciplinary action.

The following steps should not conflict with pesticide label information or state and federal regulations. Contact your supervisor if you determine a conflict or have other questions. Always wear protective clothing when handling pesticides or pesticide containers, as directed on the label.

Storage of non-rigid containers including bags, sacks, and boxes

- Pesticide material must be emptied into application equipment to the extent made possible by physical agitation of the container.
- Visually verify that residues have been removed.
- Multiple-rinse non-rigid containers such as paper lined with plastic or foil.
- Place in a plastic bag and mark as to contents.

Storage of rigid containers such as plastic, glass, or metal

- Pesticide material must be emptied into application equipment to the extent possible by pouring, then visually verifying that the residues have been removed.

- The container must be rinsed with clean water until clean; the rinse water poured into the spray equipment. Empty the pesticide and all rinsates into the sprayer before the full amount of diluting water is added to the spray equipment.
- Replace lid firmly on the container and place in a plastic bag and mark as to contents.

Storage of empty containers

Containers must be stored in plastic bags in a secure area until they can be taken to a Metro transfer station. Containers do not need to be processed as hazardous waste and should be processed through the standard waste stream.

Disposal of unusable pesticides

Unusable pesticides are ones that:

1. are damaged through vaporization, freezing, infiltration of moisture to containers or photo decomposition;
2. have exceeded their shelf life; or
3. have visually changed their composition or structure in some manner.

When unusable pesticides are found the following procedure must be followed:

- The Integrated Pest Management Advisory Committee shall be informed of plans to dispose of pesticides and of results of the disposition.
- The IPM Advisory Committee representative from the department wishing to dispose of a pesticide will contact the Oregon Department of Agriculture, the manufacturer or dealer and/or a licensed consultant and find out if the product is still usable.
- If a pesticide cannot be disposed using the guidelines listed above or by following the recommendations of the dealer or manufacturer or licensed consultant, it may be necessary to arrange for disposal of the pesticide in a manner recommended by a Metro regional waste facility.
- The integrated pest management coordinator is responsible for arranging for the disposal of pesticides. A record of these disposals should be kept on file for three years.

Disposal of pesticides with totally or partially canceled registrations (or those which have been removed from approved use by Metro).

If transfer is not feasible the unused pesticide should be disposed of in accordance to the previously listed guidelines.

SECTION 13: USE OF PROTECTIVE CLOTHING AND EQUIPMENT

PURPOSE

This section outlines the requirements for the use of protective clothing and equipment by Metro personnel when undertaking pest management activities.

BACKGROUND

Use of pest management tools, equipment, and materials may require the use of personal protective equipment. Use of such equipment is necessary to provide an adequate measure of safety for the applicator. This equipment may be clearly defined in legal pesticide label directions or directives in equipment manuals. When such directives exist they must be followed. Use of appropriate equipment may not be so clearly defined

for all pest management methods, and in such cases it is the responsibility of the applicator and the supervisor to determine and employ adequate safety equipment.

PROCEDURE

Personnel engaged in the use of pest management tools, equipment or materials shall follow all clothing and equipment requirements required to ensure their safety. When using pesticides, the label directives for use of personal protective equipment must be followed. Use of related power and mechanical equipment must be accompanied by appropriate equipment as determined by equipment manuals or supervisor's directives.

Required personal protective equipment appropriate to satisfy specific pesticide label requirements shall be provided by Metro to employees for their use. These may include, but are not limited to respiratory protection, eye protection, face shields, coveralls, rain gear, mixing aprons, chemically resistant boots and gloves. Time will be made available during the work shift to wash up before lunch and at the end of the work shift. The applicator is responsible for cleaning, storing and maintaining all personal protective equipment in a safe and useful manner. Single use equipment shall be disposed of in accordance with applicable local, state and federal laws.

SECTION 14: EMERGENCY INFORMATION CONCERNING ACCIDENTAL PESTICIDE EXPOSURE

PURPOSE

This section establishes procedures for the proper response to employee and citizen inquiries regarding accidental exposure to any pesticide material used by Metro employees. It defines Metro's response to inquiries concerning adverse health effects as a possible result of accidental exposure to pesticides.

BACKGROUND

Metro's handling of public inquiries should be prompt, professional and well supported. While Metro can answer general questions, Metro does not have medical professionals on staff to address specific medical questions relevant to accidental exposure. This expertise is readily available in the health care community. Therefore, concerns of this nature will be referred to qualified medical personnel for resolution.

PROCEDURE

In response to a non-emergency inquiry

- Respond to questions to the best of your ability.
- Refer detailed or technical questions to the Integrated Pest Management Advisory Committee.
- Inform your supervisor.

Metro will inform applicators of proper procedures to be taken in case of pesticide exposure. Anyone inquiring about pesticide exposure will either be referred to emergency services by dialing 911 if appropriate, his or her own personal physician, the Oregon Poison Center, or the Pesticide and Analytical Response Center. A list of these authorities and their phone numbers is on the following page.

Contacts for medical emergencies	Telephone number
Fire, Ambulance, HAZMAT	911
Oregon Poison Center – 24 hours, Portland area	503-494-8968
Oregon Poison Center – 24 hours, outside Portland area	1-800-222-1222
DEQ Northwest Regional Office	503-229-4263
Oregon Emergency Response System	1-800-452-0311
National Response Center	1-800-424-8802
CHEMTREK (an industry emergency spill information service)	1-800-424-9300

Safety data sheet information about all hazardous substances in the workplace will be made available to all personnel. This information includes symptoms of exposure and procedures for handling overexposure to individual pesticides. If symptoms of illness occur during or shortly after applying pesticides, the Oregon Poison Center should be contacted or the individual should receive medical attention immediately.

Non-emergency questions received by Metro shall be referred to a member of the integrated pest management working group, who will provide information or a referral to qualified individuals or sources for further information.

Procedures

- Use planning to avoid emergencies and to expedite aid should an accident occur.
- Be informed of the symptoms of exposure and the decontamination steps necessary in case of accidental exposure.
- Use all safety procedures and protective gear as recommended on the label.
- Have a copy of the appropriate label available when applying or transporting pesticides (concentrated and dilute.)

In case of a medical emergency related to suspected pesticide exposure

Handle any emergency situation as per first aid instructions on label and safety data sheet. Call for emergency backup if necessary.

- Contact the Oregon Poison Center: 1-800-222-1222
- Take the label and safety data sheet for medical personnel reference if it is necessary to leave the site.
- Inform your supervisor as soon as possible.
- Inform the Integrated Pest Management Advisory Committee or coordinator as soon as possible.

SECTION 15: PESTICIDE SPILL RESPONSE

PURPOSE

This procedure is intended to cover pesticide spills, both on Metro property and in transport. In any emergency involving hazardous materials, take immediate necessary action to protect life, safety and the environment.

PROCEDURE

Immediate actions

- If there is an injury, pesticide exposure or fire, call 911 immediately for assistance.
- Assist injured people.
- Remove contaminated clothing immediately. Use eyewash, emergency shower or other source of water to decontaminate the individual.
- If there is a pesticide exposure, obtain the product label and have it ready for medical responders.
- Determine whether there is an imminently hazardous situation that you can take steps to correct.
- For example it may be appropriate to move a vehicle away from a waterway or heat source.
- If in a vehicle, pull it off the roadway to a secure location if possible.
- Keep bystanders at a safe distance using barrier tape or other means.
- If there is a spill on the roadway set up reflectors or other traffic control devices to divert traffic. Notify ODOT: 503-283-5859.
- Assess the situation. Determine if you are able to clean up the spill with the supplies and helpers that you have immediately available. Take into account the volume and hazardous properties of the product spilled.
- Notify your supervisor or manager.
- Determine if the spill requires notification of state or federal authorities (see below).

If you are not able to clean it up:

- Make contact to obtain assistance. If you are not able to quickly obtain the required supplies and assistance from co-workers or Metro Hazardous Waste Program staff, call 911 to obtain help from the local hazmat team.
- Stay a safe distance away and take defensive action to prevent further spread, such as placement of absorbent booms.

If you are able to clean up the spill, proceed to spill control steps below.

Spill control and cleanup

- If at any time the spill begins to react, heat up or becomes too large or otherwise unsafe to clean up, immediately stop, evacuate and call for assistance.
- Put on proper protective equipment based on the hazards of the material.
- Clear and secure the area and take defensive steps to block or contain the flow of materials to the environment (soil, water, storm drains and sewer drains).
- If the spill is from a leaky container, position the container to prevent additional spillage. If possible, patch the container with duct tape, plug holes with a rag, and/or place the container in secondary containment, such as a plastic bag or pail.
- For dry material, carefully sweep up the pesticide to minimize dust.

- If the spill is liquid, contain the spill by placing absorbent or booms around the edges. Working from the outside towards the center, pour absorbent over the spilled liquid. Using a broom, dustpan or other tools, mix the absorbent into the spilled material.
- Thoroughly sweep all material into a sealed plastic bag or other sealed container. Clearly label the container. Wash or dispose of the broom.
- Remove protective equipment, keeping contamination away from your body. Clean hands and face with wipes.
- Put contaminated disposable protective equipment in a plastic bag for disposal. Put contaminated non-disposable protective equipment in a bag for later decontamination.

After the incident

- If there is any remaining contamination of soil or anything else in the area, consult your supervisor about additional cleanup needed.
- Dispose of spill cleanup residues. Consult with Metro Hazardous Waste staff for advice on proper disposal. If the material needs to be disposed of as hazardous waste, it can usually be brought to one of Metro's facilities at no cost.
- Complete a Pesticide Spill Incident Report and provide a copy to your supervisor.
- Clean contaminated equipment and restock spill response supplies.

Spill response equipment

The following items must be immediately available to all persons applying or transporting pesticides:

- A binder that includes:
 - Chemical labels for materials being transported
 - Safety data sheets for chemicals being transported clipped to front of binder
 - Pesticide Spill Response Procedures and Incident Report form
 - A Department of Transportation Emergency Response Guidebook
 - Emergency phone numbers
- A cellular phone, if there is the potential of a spill occurring that would require assistance.
- Personal protective equipment appropriate for handling the pesticides being applied or transported in the event of a spill. Bring extras in case of contamination, tears, etc.
- An eyewash station/bottle either on the truck or on site and immediately available in the case of an emergency.
- Tools and supplies to make repairs to containers and application equipment and to stop leaks.
- Tools for picking up spilled material. Depending on the formulation this may include absorbent material, broom and dustpan, or shovel.
- Plastic recovery bags and ties for the material and for contaminated personal protective equipment.
- Optional equipment and supplies, depending on type of pesticide, volume and whether it is in transport:
 - Bagged absorbent

- Absorbent booms, dikes, pillows and towels
- Squeegee
- Whisk broom
- Dust pan
- Hard bristle brush to loosen material
- Duct tape for temporary repair
- Patching material
- Quill and hose
- Warning tape, signs
- DOT reflectors
- Bucket
- Flat and pointed shovels
- Flashlight
- Safety vests
- Tools: hammer, box knife, screwdriver, shovel
- First aid kit
- Waterless soap, moist wipes

When to notify state/federal authorities

Oregon and federal law requires reporting certain spills of hazardous materials or waste. When in doubt, it is best to report.

The reporting requirement **does not** apply for spills that meet all three of the following conditions:

- The spill occurs on public or private property and is known to the person having control over hazardous materials
- The spill occurs on a surface impervious to the hazardous materials spilled
- The spill is completely cleaned up without further incident

Spill reporting **is required** if these three conditions are not all met, **and** the spill exceeds any of the following in a 24 hour period:

- Two hundred pounds (25 gallons) of concentrated pesticide residue
An amount equal to or greater than the quantity listed in 40 CFR Part 302 – Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments adopted prior to July 1, 2002; these spills must also be reported to the National Response Center, 1-800-424-8802
Ten pounds or more of a hazardous material not otherwise listed as having a different reportable quantity by the department or the United States Environmental Protection Agency on the list of hazardous substances in 40 CFR 302.4
Other thresholds apply for oil and other non-pesticide spills

For spills of mixtures or solutions, the regulation calls for reporting if the total quantity of hazardous materials in the mixture or solution, in pounds, exceeds the reportable quantity of the hazardous material with the lowest reportable quantity.

The regulation also calls for reporting of threatened spills or releases, defined as, “circumstances or events exist that indicate a spill or release of oil or hazardous materials is likely and imminent.”

Reporting

Qualifying spills must be reported to the Oregon Emergency Management Division, 1-800-452-0311.

Information to have on hand when reporting a spill:

- Your Name
- Who you work for
- Phone number
- Location of spill
- Material spilled and quantity
- Time spill occurred
- Is the spill contained?
- Is the spill likely to enter a body of water?
- Who has been notified?
- What is being done to clean up the spill?

CONTACT PHONE NUMBERS

Emergency service	Telephone number
Fire, Ambulance, HAZMAT	911
Oregon Poison Center – 24 hours, Portland area	503-494-8968
Oregon Poison Center – 24 hours, outside Portland area	1-800-222-1222
ODOT	503-283-5859
Metro South hazardous waste facility (Oregon City)	503-655-0480
Metro Central hazardous waste facility (NW Portland)	503-223-8133
Metro safety specialist	503-797-1937
Oregon Emergency Response System	1-800-452-0311
National Response Center	1-800-424-8802

SECTION 16: WORKER PROTECTION STANDARDS

BACKGROUND

The federal Worker Protection Standard is designed to protect employees engaged in pesticide application from occupational exposure to pesticides. It contains requirements for notifying employees of applications, the use of personal protective equipment and restrictions on entry into treated areas. Specific personal protection equipment information is available on the product label and in the safety data sheets. Personnel who have any contact with pesticides shall follow all personal protective equipment requirements.

PROCEDURE

The Worker Protection Standard requires that steps are taken to reduce the potential risk of pesticide-related illness and injury to handlers and workers with possible exposure to pesticides. It is therefore essential that all requirements be satisfied for all employees involved with entry into areas where pesticides may be applied.

SECTION 17: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT COMPLIANCE FOR PESTICIDE USE IN OR NEAR WATERWAYS

PURPOSE

The state NPDES weed and algae permit requirements are dependent on the treatment area and extent of the application by the agency. The Oregon state permit sets a threshold that, when exceeded, requires pesticide users to submit an application to the state for registration and pay fees among other requirements. For weed and algae control in water, these thresholds are set at 20 acres of surface treatment area or 20 linear miles of treatment area at water's edge. These thresholds refer to the annual treatment area under the responsibility of a single landowner (such as land cared for by Metro) and combine any applications performed by any agency on that land. Therefore Metro and other agencies and contractors applying pesticides on Metro property must be included in any calculations assessing threshold.

PROCEDURE

- Determine annual area of surface applications and applications within 3 feet of waterways.
- Metro is registered and has coverage under an Oregon NPDES-issued permit for algae and weed control.

The discharge of pesticides shall be minimized by:

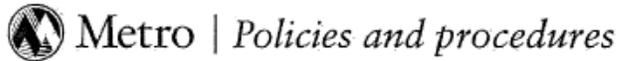
- Using an optimal amount of pesticide
- Calibrating and maintaining equipment
- Reducing spills and leaks (including when mixing and loading equipment)
- Assessing wind, water temperature and other environmental conditions to ensure proper application.

The following documents shall be maintained for three years

- A copy of the permit <https://www.oregon.gov/deq/wq/wqpermits/Pages/default.aspx>
- Documentation of the amount of surface area or linear miles treated in a calendar year (including contractors and internal employees) is tracked using a standardized Metro pesticide application form
- Documentation of an adverse incident, spill or potential adverse incident that is not reported
- Pesticide applicator records as required by Oregon Department of Agriculture or U.S. Department of Agriculture

SECTION 18: HOW TO ADDRESS PESTS OR OTHER ISSUES NOT YET INCLUDED IN THIS PLAN

When pest problems arise that are not yet covered in this plan's Best Management Practices documents, a new BMP document may need to be written. In this case, see Appendix C, and/or contact the IPM coordinator or the chair of the IPM Advisory Committee with your inquiry.



Subject Integrated Pest Management (IPM) on Metro Property
Section Metro
Approved by Martha J. Bennett, Chief Operating Officer

POLICY

It shall be Metro's policy to use and implement an Integrated Pest Management (IPM) approach in the management of Metro's land and facilities. Metro's IPM plan is set forth in the attached IPM Manual, which shall be updated from time to time.

APPLICABLE TO

All departments.

PROCEDURES & RESPONSIBILITIES

1. Metro has created an IPM Manual setting forth a framework to meet IPM goals through flexible, site specific, pest solutions at Metro's parks, natural areas and built facilities.
2. The manual shall be updated from time to time in response to better knowledge and improved practices.
3. Each department shall implement and follow the policies and procedures set forth in the IPM Manual.

 Metro | *Policies and procedures*

Subject Integrated Pest Management (IPM) on Metro Property
Section Metro
Approved by Martha J. Bennett, Chief Operating Officer

RECORD OF APPROVAL

By the signature below, this policy is adopted under the authority of Metro Code §2.20.030.

Category: Department Work Rules
Authority: Metro Code §2.20.030
Supersedes: N/A
Explanation: This new policy was drafted in response to respond to the goals set out in the *Sustainability Plan for Metro Internal and Business Operations*.

Be it so ordered:

Signature:



Martha J. Bennett, Chief Operating Officer

Date:



Adopted mm yy

Page 2 of 2

APPENDIX B | APPROVED CHEMICAL LISTS

Please refer to Best Management Practices documents for pests (Appendix C) for further pesticide use specifications.

For the most up-to-date Approved Chemical Lists by venue go to the link below or contact the Metro IPM Coordinator. The following approved chemical lists were current at the time of publication of this version of the Metro IPM Plan. However, these approved chemical lists are updated periodically, in response to new pests, regulations, information and products. For the most current lists, visit <https://metronet.oregonmetro.gov/all-metro/Pages/integrated-pest-management.aspx> or contact the Metro IPM Coordinator. For a description of the process by which chemicals are added or deleted from this list, see Section 5, page 12.

Metro Regional Center

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Burn Out II	Clove oil, citric acid	Herbicide	Annual broadleaf weeds and grasses
Intice Gelamino ant gel	Borax 3%	Insecticide	Ants
The Pantry Pest Trap	Pheromone	Pheromone	Indian meal moth

Portland Expo Center

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Cross Bow	Triclopyr+2,4-D ester	Herbicide	Blackberry, seedlings, etc.
Envoy	Clethodim	Herbicide	Weeds in woody plants
Pendulum 2G	Pendimethalin	Herbicide	Annual broadleaf weeds and grasses
Ranger Pro	Glyphosate	Herbicide	Annual broadleaf weeds and grasses
SedgeHammer	Halosulfuron-methyl	Herbicide	Yellow nutsedge
Sim Trol	Simazine	Herbicide	road side weeds, gravel pads
Intice Gelanimo ant gel	Borax 3%	Insecticide	Ants

Metro Regional Parks

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Garlon 3a	Triclopyr	Herbicide	Himalayan blackberry, seedlings, etc.
Kleen-up Pro	Glyphosate	Herbicide	Annual broadleaf weeds and grasses
Rodeo	Glyphosate	Herbicide	Japanese knotweed
Intice Geronimo ant gel	Borax 3%	Insecticide	Ants

Oregon Convention Center

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
M-pede	Potassium salts of fatty acids	Fungicide	Fungicide control for aphids/powdery mildew
Roundup Pro	Glyphosate	Herbicide	Annual broadleaf weeds and grasses
Roundup QuickPro	Glyphosate and diquat	Herbicide	Annual broadleaf weeds and grasses
Scythe	Palargonic acid/related fatty acid	Herbicide	Moss and crackweeds on hard surfaces
SedgeHammer	Halosulfuron-methyl	Herbicide	Nut sedge
Intice Gelamino ant gel	Borax 3%	Insecticide	Ants
Conrac Blocks	Bromadiolone	Rodenticide	Rodents

St. John's Landfill

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Buccaneer Plus	Glyphosate	Herbicide	Annual broadleaf weeds and grasses
Garlon 3A	Triclopyr	Herbicide	Broadleaf vegetation
Intice Gelanimo ant bait	Borax 3%	Insecticide	Ants
Spectracide Wasp & Hornet Killer	Prallethrin Lambda Cyhalothrin	Insecticide	Wasps, hornets, yellow jackets

Metro Natural Areas Program

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Banvel	Dicamba	Herbicide	Broadleaf weeds such as kickxia, hypochaeris/leontoden
Fusilade, Fusilade DX, Fusilade II	Fluazifop-P-butyl	Herbicide	Various non-native grasses in oak savanna and prairie systems
Garlon 3A, Tahoe 3A	Triclopyr amine	Herbicide	Buddleia sp. (butterfly bush), Ilex sp. (Holly), Cytisus scoparius (Scots broom), Prunus laurocerasus, Daphne laureola
Garlon 4, Tahoe 4E	Triclopyr ester	Herbicide	Buddleia sp. (butterfly bush), Ilex sp. (holly), Cytisus scoparius (Scots broom), Prunus laurocerasus, Daphne laureola
Habitat	Imazapyr	Herbicide	Polygonum cuspidatum, hohemicum, sachalinense (Japanese knotweed)

Milestone VM plus(capstone)	Aminopyralid and Triclopyr	Herbicide	Various broadleaf weeds in natural areas, etc.
Opensight	Aminopyralid and Metsulfuron methyl	Herbicide	Various broadleaf weeds in natural areas
Oust	Sulfometuron methyl	Herbicide	Arum italica
Poast, Poast Plus	Sethoxydim	Herbicide	Various non-native grasses
Rodeo, Aquamaster, Accord	Glyphosate	Herbicide	Geranium robertianum (Herb Robert geranium), Alliaria petiolata (garlic mustard), Cirsium sp. (thistle), Impatiens glandulifera (policeman's helmet), Lythrum salicaria (purple loosestrife), Phalaris arundinacea (reed canary grass)
Select, Select 2EC, Select Max	Clethodim	Herbicide	Various non-native grasses in oak savanna and prairie systems
Vastlan	Triclopyr choline	Herbicide	Woody plants and Broadleaf weeds
Intice Gelanimo ant gel	Borax 3%	Insecticide	Ants

Oregon Zoo

TRADE NAME	COMMON CHEMICAL NAME	TYPE OF PESTICIDE	TARGET SPECIES/PEST
Banvel	Dicamba	Herbicide	Broadleaf weeds
Crossbow	Triclopyr+2,4-D ester	Herbicide	Blackberry, ivy
Garlon 3A	Triclopyr	Herbicide	woody brush
Altosid pellets	Methoprene	Insecticide	Mosquitoes
Altosid XR briquettes	Methoprene	Insecticide	Mosquitoes
Bonide Neem Oil	Neem oil	Insecticide	Lace bugs, white spot on Gaillardia
Cimexa	Amorphous silica gel	Insecticide	Ground wasp or yellow jackets
Grants sulfur	Sulfur	Insecticide	Mites
Insecticidal soap	Potassium salts of fatty acids	Insecticide	Whitefly scale, mealy bug
InTice Gelanimo ant bait	Borax 3%	Insecticide	Ants
Maxforce fc roach bait	Fipronil	Insecticide	Cockroaches
Maxforce Fly	Imidacloprid	Insecticide	used for stinging/flying insects in approved bait stations only
Natular XRT	Spinosad	Insecticide	Mosquitoes
Niban	Orthoboric acid	Insecticide	Ants

Pro Sedge	Halosulfuron-methyl	Herbicide	Nutsedge
Roundup Pro	Glyphosate	Herbicide	Annual broadleaf weeds and grasses
Scythe	Perlargononic acid	Herbicide	moss on hard surfaces
Surflan	Oryzalin	Herbicide	Landscape weeds
Treflan	Trifluralin naphthalene	Herbicide	Landscape weeds
Onslaught	Esfenvalerate	Insecticide	Cockroaches, stinging and flying insects
Phantom	Chlorfenapyr	Insecticide	Cockroaches
Safer soap	Potassium	Insecticide	Aphids, mealy bugs
Timbor	Disodium octaborate tetrahydrate	Insecticide	Termites
Vendetta Cockroach gel	Abamectin	Insecticide	Cockroaches
Zoecon Gentrol IGR	Hydroprene	Insecticide	Cockroaches
Copper tape	Copper	Molluscicide	Slugs
Sluggo	Iron phosphate 1%	Molluscicide	Slugs
Contrac Blocks	Bromadiolone	Rodenticide	Rodents
Maki Paraffinized pellets	Bromadiolone	Rodenticide	Rodents

APPENDIX C | BEST MANAGEMENT PRACTICES

Best Management Practices (BMP) document outline (Draft, January 25, 2017)

For the most current BMP documents, see Appendix C of the Integrated Pest Management Plan at <https://metronet.oregonmetro.gov/all-metro/Pages/integrated-pest-management.aspx> or contact the Metro IPM Coordinator or the Chair of the IPM Advisory Committee.

1. **Pest name** (common and scientific)
2. **Summary** (including brief mention of damage and action thresholds, by Metro site if they vary)
3. **General information**
 - a. Identification
 - b. Origin and local distribution
 - c. Habitat and hosts
 - d. Life cycle
4. **Damage, monitoring and action thresholds**
 - a. Description of damages
 - b. Monitoring methods
 - c. Action thresholds (in general and/or for specific sites and/or for specific control strategies)
5. **Management**
 - a. **Summary**
Brief description (+/- 3 sentences) of recommended or required management strategies.
 - b. **Cultural, physical, mechanical**
 - i. Describe recommended methods and their efficacies, risks, costs.
 - c. **Biological**
 - i. Describe recommended methods and their efficacies, risks, costs.
 - d. **Chemical**
 - i. **Summary**
 1. Brief description of key chemicals, methods, and considerations.
 - ii. **Approved chemicals**
For each chemical listed, the following data will be included in a table.
 1. Active ingredient/s
 2. Product (if approval is for a specific product)
 3. EPA number
 4. Application rate/s (by method if more than one)
 5. Comments on efficacy
 6. Comments on methods, timing, costs, etc.
 7. Conditional use status
 - a. Approval expiration/review date
 - b. Approved Metro sites or contexts
 - c. Other conditions
 8. Key hazards and risks
 - a. Signal word
 - b. EPA cancer classification
 - c. Aquatic resource buffer requirement
 - d. Other key health or environmental concerns
 - e. **Other management considerations** (e.g.: more on methods, risks, special contexts, special licensing or permits, BMP summaries by site type, more detailed information or instructions, etc.)
 6. **Evaluation**

- a. Describe how and when the management strategies' levels of success will be assessed and determined.

7. Resources

- a. Includes bibliography of information used for the document, Links to important web pages for chemicals (e.g., labels, SDS), pesticide request forms for this management plan.

APPENDIX D | PESTICIDE USE REQUEST FORM

FOR ADDITIONS TO THE APPROVED CHEMICALS LIST

For the most up-to-date form visit <https://metronet.oregonmetro.gov/all-metro/Pages/integrated-pest-management.aspx>, or contact the Metro IPM Coordinator or the Chair of the IPM Advisory Committee.

Pesticide Request Form | Metro IPM Program updated 1/31/17

Submit to IPM Coordinator with a copy of the label and SDS. Suggested information sources listed on back.

Requester's name		Date	
Active ingredient/s		EPA Reg. #	
Inert ingredient/s (if known)		Emergency request? ___ Yes ___ No	
Product name			
Target pest/s			
Metro pest plan already in place?	___ No ___ Yes (indicate name of pest plan):		
Site, program or work unit/s	___ EXPO ___ Glendoveer ___ MRC ___ Natural areas ___ OCC ___ Parks ___ P'5 ___ Zoo Other/details:		
Specific location/s or location-type/s	E.g.: "kitchens," "daycare," "(a specific) natural area"		
Location near aquatic resource?	___ Yes ___ No Details (how close, etc.):		
Pest problem: describe the problem, history of this pest at this location, the history of previous prevention or control measures (including cultural, physical, biological, mechanical, and chemical), monitoring and results, and tolerance level.			
Does this product replace or complement a currently approved pesticide for the same pest? ___ No ___ Yes, replaces ___ Yes, complements If yes, indicate original product:			
Yes	No	Read questions below, and check the appropriate box	
		Have you read all parts of the label (excluding those irrelevant to your intended use)?	
		Is the pesticide labeled for the pest/crop/use you are planning to use it for?	
PPE required			
Re-entry interval			
Signal word	___ Caution ___ Warning ___ Danger ___ No signal word		
Aquatic resource buffer required?	___ Yes ___ No Details (how close, etc.):		
EPA cancer classification	___ Carcinogenic to humans ___ Likely to be carcinogenic to humans ___ Suggestive evidence of carcinogenic potential ___ Inadequate info to assess carcinogenic potential ___ Not likely to be carcinogenic to humans ___ Not classified	___ A. Human carcinogen ___ B1 or B2. Probable human carcinogen ___ C. Possible Human Carcinogen ___ D. Not classifiable as to human carcinogenicity ___ E. Evidence of non-carcinogenicity	

IPM Program reviewer/s		Date/s reviewed	
Decision	___ Approved ___ Approved with conditions ___ Denied ___ Exempted for Metro staff Comments:		
Addnl. info sources			

Zoo veterinarian only: Approved Approved with conditions Denied
 Comments:

Environmental & health hazards (NA if your use does not apply)	Proposed mitigations (or NA)
Mobility (in soil)	
Persistence (half life in soil)	
Bioaccumulation potential	
Aquatic organisms	
Pollinators	
Birds	
Small mammals	
Pest resistance potential	
Human reproductive, endocrine or other	
Application type/s	<input type="checkbox"/> Spot <input type="checkbox"/> Blanket <input type="checkbox"/> Frill <input type="checkbox"/> Basal stump <input type="checkbox"/> Bait <input type="checkbox"/> Crack & crevice Other (please specify):
Equipment type/s	<input type="checkbox"/> Backpack <input type="checkbox"/> Spray bottle <input type="checkbox"/> Bait station <input type="checkbox"/> Spreader <input type="checkbox"/> Power sprayer Other (please specify):
Applicator type/s	<input type="checkbox"/> Metro staff <input type="checkbox"/> contractor Other (please specify):
Action threshold	
<p>Summary rationale for using this chemical: Briefly describe your considerations in choosing this chemical over (or with) non-chemical methods or in combination with other chemicals. Describe expected efficacy, costs and risks of most concern, key mitigations, and any other primary considerations.</p>	
Some suggested info sources, other than label	http://npic.orst.edu/ (general info) https://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1 (general info; search chemical then see Regulatory Actions and Science tabs) http://www.cdms.net/Label-Database (pesticide labels) http://www.co.thurston.wa.us/health/ehipm/ipm_cntyimp.html (general info; see Terrestrial & Aquatic Herbicide, Fungicide and Insecticide Reviews – note rodenticides and molluscicides listed with insecticides) http://npic.orst.edu/chemicals_evaluated.pdf (cancer classifications) https://www.epa.gov/endocrine-disruption/endocrine-disruptor-screening-program-tier-1-screening-determinations-and (endocrine disruption info)
Links to specific web pages you used	

Form updated January 31, 2017

RESTORATION IN PROGRESS

AREA CLOSED

As part of Metro's work to restore a healthy native plant community, invasive weeds are being treated with approved herbicides by state-licensed applicators.

Thank you for your cooperation.

DATE AND TIME OF APPLICATION: _____

TARGETS

General invasive weed species

PRODUCT USED

Garlon 3A 62719-37

Garlon 4 Ultra 62719-527

Aquamaster 524-343

Rodeo 62719-3245

For more information, call Metro's land management team at 503-797-1819.



RESTORATION IN PROGRESS

CAUTION

As part of Metro's work to restore a healthy native plant community, invasive weeds are being treated with approved herbicides by state-licensed applicators.

Treated plants may show signs of blue dye. Avoid areas that have been treated until the herbicide has dried.

Thank you for your cooperation.

DATE AND TIME OF APPLICATION: _____

TARGETS

- General invasive weed species
- _____

PRODUCT USED

- Garlon 3A 62719-37
- Garlon 4 Ultra 62719-527
- Aquamaster 524-343
- Rodeo 62719-3245
- _____

For more information, call Metro's land management team at 503-797-1819.



APPENDIX G | PESTICIDE APPLICATION RECORD

Below is a draft of the printable pesticide application record form. An online version will be used to collect application data. For the most recent version, visit <https://metronet.oregonmetro.gov/all-metro/Pages/integrated-pest-management.aspx> or contact the Metro IPM Coordinator or the Chair of the IPM Advisory Committee.

Metro Pesticide Application Record				Oregon Emergency Response System: 1-800-452-0311			updated 10/10/14	
Site name/address 1		Company name 2		Date of application 3		License Pub, Comm; Ag-herbc, Forest, Aqua, Orna-Herb, Orna-Insect/fun, ROW, IIHS-Gen, 4 IIHS-Struct Other:		
Start time 5a AM or PM		End time 5b AM or PM		Aquatic application 6a yes, no	Aquatic area treated 6b	Linear ft. 6b	Sq. Ft. 6c	Aquatic 6d initial, re-treatment
App. # 7	Description of area treated 8	Target pest 9	Application type 10	# Of units of area treated 11	Unit of measure 12	Application equipment 13		
App. #1		invasive weed, rodent, indoor insect, annual weed/grass Other/detail:	spot, blanket, bait, frilling, basal stump Other:		acres, sq. ft., lin. ft., n/a	backpack, bait station, spray bottle, spreader, power sprayer Other:		
App. #2		invasive weed, rodent, indoor insect, annual weed/grass Other/detail:	spot, blanket, bait, frilling, basal stump Other:		acres, sq. ft., lin. ft., n/a	backpack, bait station, spray bottle, spreader, power sprayer Other:		
App. #3		invasive weed, rodent, indoor insect, annual weed/grass Other/detail:	spot, blanket, bait, frilling, basal stump Other:		acres, sq. ft., lin. ft., n/a	backpack, bait station, spray bottle, spreader, power sprayer Other:		
App. # 14	Product name 15	EPA reg. # 16	Total amount product used 17	Product units 18	Total mix used 19	Concentration % 20	Distributor or store and location 21	
				fl. oz., gal., qt., pint, lbs., mL, gram	gal.	%		
				fl. oz., gal., qt., pint, lbs., mL, gram	gal.	%		
				fl. oz., gal., qt., pint, lbs., mL, gram	gal.	%		
				fl. oz., gal., qt., pint, lbs., mL, gram	gal.	%		
	For power sprayer only			fl. oz., gal., qt., pint, lbs., mL, gram	gal.	Rate oz./ac.	fl.	
	For power sprayer only			fl. oz., gal., qt., pint, lbs., mL, gram	gal.	Rate oz./ac.	fl.	
Adjuvant/indicator dye 22		Fl. oz. adjuv./dye used 24	Weather 24		Additional Trainee/s Apprentice/s Applicator/s 25a		License #/s 25b	
			a. Wind direction					
			b. Wind speed					
			c. Air temp. (°F)					
			d. Rel. Humidity					
Notes 26								
Name (print) 27a		License # 27b						
Signature 27c								

Metro Pesticide Application Record instructions

Completed Metro Pesticide Application Records must be submitted to the Metro IPM Coordinator the first week of the month immediately following the application/s.

Licensed applicators may choose to create separate records since all licensed applicators listed on a record will be liable for all applications reported on the record.

1. Use the official name of the property or facility where the treatment was made, e.g.: "Portland's Arlene Schnitzer Concert Hall," or "Richardson Creek," and its address.
2. Indicate the name of your company or organization, e.g.: "Metro," or "Sprague."
3. Write in the date of application. Format date as "mm/dd/yyyy."
4. Indicate the active license and categories possessed by the applicator. Remember applicator must possess an active license specific to any applications recorded on this form. Natural areas herbicide applications require at a minimum, either a Forest, Agriculture-herbicide or aquatic category.
5. a. Indicate the time at the beginning of your actual application/s and "am" or "pm".
b. Indicate the time at the end of your actual application/s and "am" or "pm."
6. *This section for aquatic applications only - within 3 feet of water or surface treatment over water. Note that this refers to only the aquatic portions of any applications listed below.*
 - a. Indicate if the application requires an aquatic license, i.e.: is within 3 feet of water or is a treatment over surface water.
 - b. Fill in the area treated in linear feet for aquatic applications within 3 feet of the water's edge.
 - c. Fill in the area treated in square feet for aquatic applications over surface water.
 - d. Indicate if this is the first aquatic application at this location during the current calendar year or if it is a re-treatment.
7. Each record sheet can accommodate up to three separate applications as long as they occur at the same time on the same day at the same property.
8. Describe the area treated. For example: "Along stream in SE quadrant of property," or "front landscape bed of red barn," or "wall void in primate building."
9. Circle the category of target pest or write in a different category. More specific information such as the type or species of insect or weed is optional.
10. Circle the method of application from the options given or write one in.
11. Write in the number of units of area treated. For blanket applications, indicate actual area treated. For spot applications, use the size of the area on the site within which the applications were made - this could be the management unit, treatment unit, area walked through to make the applications, or the lineal feet of a creek or sidewalk. For baits, gels, bio-foams and wall void applications, write in "n/a."
12. Indicate the unit of measure for the number of units of area treated listed in box #11.
13. Circle the application equipment or apparatus used from the options listed, or write-in another.
14. Write in the application number from above (#1, #2 or #3) for each product listed in the box to the right. This allows multiple products to be listed for a single application, such as in the case of tank mixes.
15. Write in the product name or trade name as it appears on the actual label (e.g.: "Roundup Pro" or "Advion Ant Gel").
16. Write in the entire EPA Registration Number from the actual pesticide product label on the actual container used.
17. Write in the total amount of product applied in the area treated, using one of the units of measure listed in box #17 to the right. For baits in predetermined blocks or packets, calculate amount by multiplying the number of grams per packet by the number of packets.
18. Indicate the unit of measure for the number of units of product used as listed in box #17.
19. For tank mixes, indicate the total volume of mix that you used for this application, in gallons. Note: this quantity will be repeated for each product in the mix.
20. Indicate the concentration of product in the tank mixture. For power sprayer applications, use bottom rows and indicate Fluid ounces per acre, if applicable.
21. Provide the name of the business where the product was purchased, and its location.
22. Write in the type of indicator die or adjuvant used. Leave blank if none used.
23. Write in the number of fluid ounces of indicator die or adjuvant used. Leave blank if none used.
24. *This box applies to outdoor applications only.*
 - a. Indicate which direction the wind is coming FROM.
 - b. Write in the wind speed in miles per hour.
 - c. Write in the air temp in degrees Fahrenheit.
 - d. Record the relative humidity.
25. List all Trainees, Apprentices and Applicators other than the one filling out this record, plus their active license numbers.
26. Use this space to describe any other information that may be pertinent to this application such as "kids playing adjacent to property," "homeowner asked what we were doing," "started to rain as we left."
27. a. Print the name of the licensed Applicator approving the record.
b. Write in the active license number of the person approving the record.
c. Use this space for the signature of the person approving the record.

METRO INTEGRATED PEST MANAGEMENT ADVISORY COMMITTEE BYLAWS

ARTICLE I NAME

The Committee shall be known as the Integrated Pest Management Advisory Committee (IPM Committee).

ARTICLE II MISSION

The primary function of the IPM Advisory Committee is to support, coordinate, guide, monitor and assess implementation of Metro's Integrated Pest Management Plan (IPM Plan) for internal business operations. The IPM Committee is the primary internal forum for sharing IPM practices and knowledge, and developing recommendations for implementing and revising the IPM Plan in a way that supports Metro's ability to achieve its business objectives.

ARTICLE III AUTHORITY

The IPM Committee is an advisory body to the Metro Sustainability Program and the agency as a whole on implementation and revision of the IPM Plan. Members have moral and technical authority that derives from their subject matter expertise, knowledge of their respective facilities' operations, and shared knowledge and experience guiding implementation of the IPM Plan. Often they are decision-makers on how to handle individual pest issues at their respective facilities and are, or report to, the lead point person for implementing Metro's IPM Plan at their facility or venue. In many cases, this person will be working with a team at their facility or venue that may include a green team member, facility manager, operations staff, line staff and a multitude of other stakeholders to successfully implement pest management solutions in that facility, department or venue. In addition the IPM Committee provides an advisory role to the Metro Sustainability Steering Committee as the primary stakeholders for Metro wide implementation of the IPM Plan. The purpose in this role is to ensure that the Sustainability Steering Committee is periodically (quarterly) updated to provide effective leadership, program coordination and advocacy necessary to support meeting Metro's Sustainability Plan goals.

ARTICLE IV MEMBERSHIP

Section 1: Appointment to the Committee

One representative and one alternate will be appointed by the respective department director in the following operational areas¹:

1. Oregon Zoo
2. Oregon Convention Center
3. Portland Expo Center
4. Portland's 5 Centers for the Arts (Portland's 5)
5. Property and Environmental Services (PES) Solid Waste
6. Parks and Nature Conservation Program

¹ For a privately run facility the lead facility manager will appoint / represent
Integrated Pest Management | Revised June 2017

7. Parks and Nature Visitor Services Program
8. Property and Environmental Services (PES) Metro Regional Center (MRC)
9. Glendoveer Golf and Tennis
10. Property and Environmental Services (PES) Resource Conservation & Recycling

IPM Committee members provide support and guidance for those who manage project activities, and may also be responsible for managing specific components of implementation of Metro's IPM Plan. When appointing members to this committee, department directors are encouraged to appoint individuals who:

- Understand the goals, objectives, strategies, and actions of the Metro IPM Plan;
- Possess a genuine interest in IPM and to help lead Metro to meet IPM goals;
- Have a connection to Metro facility operations through work assignments, day to day job or as assigned by department director as a sustainability leader for the department; and
- Are able to attend IPM Steering Committee meetings and commit two to three hours per month to committee work outside of regular committee meetings.

Section 2: Terms of membership

Each member of the steering committee shall serve at least one term of two years. Members must be reappointed by their respective department director at the end of each term to continue serving on the committee. Terms shall be staggered so that there is no situation where all committee members change at once.

Each member of the committee shall have an alternate who can attend meetings in the event the primary member can't attend.

Section 3: Responsibilities of members

Members of this committee perform the following functions:

1. Prioritize IPM Plan projects and set IPM Committee goals, work plans and budget priorities;
2. Monitor progress of IPM Plan implementation at regular IPM Committee meetings;
3. Review and propose IPM program policies and processes;
4. Identify obstacles to implementation and strategies to overcome them. Interface with and provide support for departments and operations managers to implement IPM Plan;
5. Evaluate annual work plan projects and IPM program goals,
6. Serve as the primaries point of contact for IPM Plan implementation at the department or venue that person represents on the committee;
7. Provide regular updates to the relevant managers and staff in their respective departments about IPM activities across Metro and updates to the IPM Committee about IPM activities in their department;
8. Coordinate IPM Committee activities with the sustainability activities of the Green Team at their department (only applicable at the Zoo, MRC, PES, OCC and Portland'5);
9. Provide updates to the Sustainability Steering Committee about IPM Plan activity as requested;

10. Support, coordinate, guide, monitor and assess the application of IPM best practices in their department; share information about what works between departments;
11. Contribute to and review IPM education materials, pest management tools, pesticide use applications, program reports and assessments;
12. Help to resolve conflicts and disputes associated with implementing and revising the IPM Policy and IPM Plan, reconciling differences of opinion and approach; and
13. Recommend updates and improvements to the IPM Plan and Plan implementation goals as-needed.

Section 4: Attendance expectations

IPM Committee members are expected to attend all meetings. In the event that the member has an unavoidable conflict with the meeting time or an unexpected facility emergency arises, the alternate is expected to attend the meeting and participate.

Alternates are welcome to attend any meeting that is of interest to them but their attendance is not required unless the committee member they back up can't attend the meeting.

If a member misses more than two meetings in a six -month period, then the Committee Chair will advise the appropriate venue or department director of this and may request that the member be replaced.

ARTICLE V OFFICERS

This committee does not have officers. A Senior Planner and IPM Coordinator have been assigned to facilitate and support implementation of the IPM Policy and Plan for a start-up period of 3 years (2015-

18). The Senior Planner serves as the IPM Committee Chair during this start-up

period. The Chair is responsible for:

1. Facilitating development of the Committee's work plan
2. Coordinating and monitoring implementation of the Committee's work plan
3. Providing lead direction to the IPM Coordinator pertaining to implementation of the IPM Coordinator's individual work plan.
4. Identifying issues that are preventing the Committee from operating efficiently and effectively and coordinating issue resolution.
5. Scheduling IPM Committee meetings
6. Developing Committee meeting agendas
7. Ensuring key Committee findings, conclusions, recommendations and actions are documented
8. Managing public records related to the Committee's business
9. Designing and facilitating efficient and effective Committee meeting.

ARTICLE VI GOVERNANCE

Section 1: Annual work plan and reporting

The IPM Committee shall develop an annual work plan that establishes goals, objectives and actions for improving Metro's IPM practices and outcomes in accordance with the IPM Policy and Plan. Initially, this will be based on the 2015 IPM Assessment. Annually, before the budget development process starts for the following fiscal year, the work plan will be revised. The IPM Committee discusses the

work plan as a group and approves the work plan by consensus, noting any projects that need additional financial support from the Sustainability Program budget or from a department budget. Progress on the annual work plan is reported in the annual Sustainability Report to Metro's Senior Leadership Team and to Metro Council.

Section 2: Budget development, tracking and reporting

This committee does not have a dedicated budget. The committee informs Sustainability Program departmental budgeting through the work plan process outlined above.

Section 3: Decision-making process

The IPM Committee will strive to make decisions via consensus (i.e., work toward unanimous decision). If consensus cannot be reached then one of the following decision-making processes will be applied:

- Vote:** In the absence of consensus voting is the preferred method, especially when a decision impacts all venues; affects the outcome of the annual work plan, including work plan goals, strategies and actions; or when changes are suggested to the IPM Plan or IPM Policy. The IPM Committee will make a decision by vote of a simple majority of a quorum; or
- In the event of a tie vote: the IPM Chair, using all available input from the committee members and IPM Coordinator would break the tie.
- In the event of a challenge to the decision: If a Committee member(s) believes it is important to challenge a Committee recommendation, the committee member(s) can request that the Committee issue majority and minority recommendations. These recommendations are then presented to the affected venue or department director for review and determination. The Director shall have a minimum of 30 days and a maximum of 60 days to make a decision. If the director does not respond during the time allotted by the Committee, the Committee recommendation stands.
- In the event that the director disagrees with the majority recommendation and the IPM Committee believes the decision should be moved up to the COO or Senior leadership team for decision authority, that decision must be appealed to the COO or SLT within 60 days. The COO or SLT has 60 days to respond or the Director's decision stands.

Section 4: Quorum

For items requiring a vote, a quorum of six (6) of the ten (10) IPM Committee members must be present at the meeting. Committee members may opt to send their proxy or alternate to the meeting for a vote.

Section 5: Manner of Voting

In the event a decision requires a vote, the voting process may take place in person at a committee meeting or by email. A simple majority of the quorum at the meeting (or a quorum of members if voting by email) will constitute a decision.

Section 6: Amendment of bylaws

The IPM Committee may propose amendments to the bylaws at any time. Proposed amendments must be approved by the Property and Environmental Services Director and Parks and Natural Areas Director or their designee. Directors shall have a minimum of 30 calendar days and a maximum of 60 calendar days to review and decide on proposed bylaw amendments.

ARTICLE VII MEETINGS

Section 1: Schedule of meetings

The full committee will meet a minimum of four (4) times per year and no more than monthly. Meeting locations may rotate between Metro Regional Center and other Metro facilities and venues, providing an opportunity for viewing IPM activities or projects at different facilities.

The IPM Committee Chair will send the agenda and meeting preparation materials to the team at least one week prior to meetings. Team members should notify the Chair of agenda topics to discuss at least two weeks prior to meetings. Team members are responsible for reviewing the materials prior to the meeting. Major status updates and project issues will be discussed at the meetings. The team will regularly revisit meeting days and times to ensure that they are still optimal.

Section 2: Minutes

The IPM Coordinator is responsible for taking high level summary notes of IPM Committee meetings, including Committee findings, conclusions, recommendations and action items. The IPM Coordinator will email notes to the Chair no later than one week after the meeting. The Chair will send notes via email to IPM Committee members, alternates and interested stakeholders and post notes to either a shared folder or web location on Metro's internal electronic network or directly by email to off-site members and stakeholders within two weeks after Committee meetings.

Section 3: Conducting a Meeting

The IPM Committee will begin each meeting with agenda review and the expected outcome for each agenda item. Meetings are expected to be a safe place to air concerns, question ideas and to be open and honest. This requires a commitment by each member to trust and respect each other and to challenge opinions and ideas and not people. Members can be passionate in their opinions, but are expected to be open to other's differing ideas. Personal attacks will not be tolerated. All members are responsible for sensitively monitoring their own and each other's behavior.

Meeting ground rules:

1. Arrive on time. Meetings will begin and end on time.
2. Come prepared to participate fully at meetings.
3. Review agenda and suggest changes if needed.
4. Help keep each other on topic, respectfully.
5. No side conversations.
6. Electronic devices silenced.
7. Actively participate and ask for what you need.

Meeting roles and responsibilities:

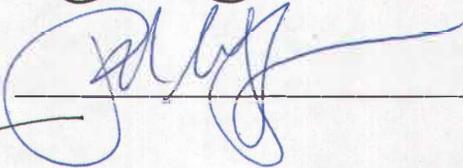
- Chair: Prepares agenda and ensures assignments are delegated. Facilitates resolution of differences of opinion. Ensures meeting outcomes are distributed to all team members.
- Facilitator: Facilitates team meetings, summarizes key meeting outcomes and next steps, and may facilitate resolution of differences of opinion. Facilitator role may rotate.
- Meeting Host: Hosts meeting at their work location, reserves meeting room and may offer and schedule a tour of IPM projects in progress.
- IPM Coordinator: Assists Chair in agenda development, may facilitate meetings, keeps minutes and records meeting outcomes, updates team verbally and visually about work plan actions and presents and leads team through IPM program materials for review.

Meeting roles and responsibilities:

- Chair: Prepares agenda and ensures assignments are delegated. Facilitates resolution of differences of opinion. Ensures meeting outcomes are distributed to all team members.
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- IPM Coordinator: Assists Chair in agenda development, may facilitate meetings, keeps minutes and records meeting outcomes, updates team verbally and visually about work plan actions and presents and leads team through IPM program materials for review.
- All members agree to assist with keeping track of time in relation to the agenda.

SIGNATURES/DATE

Committee Chairperson:  Date: 5/18/16

Department Director,
Property and Environmental Services:  Date: 5/18/16

Department Director,
Parks and Nature:  Date: 5/13/16

Deputy COO or Designee:  Date: 5/21/16