City of Sherwood

INTEGRATED PEST MANAGEMENT PROGRAM

August 2013

INTEGRATED PEST MANAGEMENT STATEMENT

The intent of the Integrated Pest Management Plan (IPM) is to provide an effective and environmentally sensitive approach to pest management that relies on a combination of common sense practices.

Pesticides alone will not solve the problem of controlling pests. In fact, the widespread use of pesticides has created new problems, including damage to the environment, hazards to human health, and increased resistance of pests to some pesticides.

This IPM has been developed as a way to control pests without relying solely on pesticides. The City's IPM is a systematic plan which brings together different pest control tactics into one program.

If you have any questions about the City's IPM please contact your department supervisor.

This program becomes effective August 1, 2013. All employees will receive a hard copy of the plan and are responsible to read and be knowledgeable of the program. The City will provide time and training during work hours for staff to familiarize themselves with the program.

_____ July 18, 2013

Craig Sheldon, Public Works Director Date

TABLE OF CONTENTS

POLICIES

APPENDICES

Integrated Pest Management Plan

Overview

The purpose of this plan is to outline efforts to control pest in a variety of settings in and around the community. As outlined in this plan, staff employs a number of methods to achieve pest control standards that have been established for city-managed areas. This plan also reviews decisions that shaped the City's current approach to pest management and provides analysis of several factors that influence these program decisions.

Mission Statement

The mission of the City's Pest Management Plan is to manage pest that are harmful to health, function or aesthetic value of the city's landscapes, parks and school sports fields in an efficient, effective, and environmentally responsible manner, while paying careful attention to public and employee safety. This progressive and sustainable approach uses multi-faceted strategies that minimize economic, health, and environmental risk to accomplish the principals of Integrated Pest Management. Sherwood will provide infrastructure to support the highest quality of life for our residents, business and visitors in a fiscally responsible manner.

Assets

Sherwood is the steward of over 11 community and neighborhood parks, streetscapes and all natural areas, 21 school athletic fields and 5 City facilities. Public Works is charged with maintaining the parks, sports fields and landscapes in a safe, attractive, healthy and useful condition. The City recognizes its responsibilities to its employees, park users, and the general public, and seeks to employ the highest professional standards. To best manage pest, public works personnel utilizes the principals of Integrated Pest Management.

General Requirements

Integrated Pest Management Plan (IPM) - is a decision making process for determining the need for pest and herbicide suppression treatments and determining time, location, strategy, and mix of tactics to use. The treatment is only made when and where monitoring indicates that the pest will cause unacceptable economic, medical or aesthetic damage. IPM is a system using multiple methods: a decision-making process, a risk reduction system, information intensive, cost effective, and site specific.

Material Safety Data Sheet (MSDS) - the city will maintain copies of the MSDS's for all pesticides- herbicides listed in the approved treatment procedures. The applicator will have the MSDS onsite for any pesticide-herbicide treatments on city and school district property.

Pesticide Disposal – City personnel applying pesticides will follow city and manufacturer disposal recommendations. Contractors will not dispose of treatment residuals such as containers or container rinse water in city or school district waste streams (e.g. storm wastewater, sanitary sewer, dumpsters, and catch basins).

Treatment Recording – all pesticide use will be logged on the appropriate form and will be reported to the Department of Agriculture (ODA) in accordance with the ODA pesticide use reporting system program.

School District Pesticide Application Recording- ORS 634.750 states that beginning July 1, 2012 if a pesticide is applied to a school campus, the school integrated pest management coordinator shall place the labeling information and MSDS sheet for the pesticide on file at the school on the campus. The plan coordinator shall record and make available the following information:

- The brand name or trademark of the pesticide product.
- The USEPA registration number assigned to the pesticide product.
- The pest condition that prompted the application.
- The approximate amount and concentration of the pesticide product applied.
- The type of application and whether the application proved effective.
- The pesticide applicator's license number of the person applying the pesticide.
- The name of the person applying the pesticide.
- The dates on which the plan coordinator gave any notices required by ORS 634.740
- The dates and times for the placement and removal of warning signs under ORS 634.740
- Pesticide application records must include copies of all notices given under ORS 634.740
- The school district shall retain pesticide application records required by section ORS 634.740 for a minimum of four years following the application date.

With the City providing landscape services to School District Property, the City will provide the information above to the School District by September (before the first day of school and then by the end of December). The school IPM coordinator will be responsible for the required notification and retention as indicated in the last 4 bullets above.

Pesticide Use

Pesticide applicators are required to comply with all pesticide label directions, federal, state, and local pesticide regulations, applicable safety laws, and City policies. Applicator shall adhere to all requirements for safe and efficient use of pesticides.

Safety

The City will provide appropriate training; define careful processes for pesticide product approval, and expect employee adherence to label directives and safety procedures during use.

When pest management equipment (sprayers, broadcasters, etc.) is being used and materials are being applied all appropriate Personnel Protective Equipment (PPE) shall be used following manufacturer's product label requirement. Use of PPE is an important part of your safety while applying pesticides.

Laws and Regulations

Several federal and state agencies regulate the use of pesticides. Sherwood will conform to all applicable pesticide laws and regulations. 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, IPM, and other subjects. Applicators are legally liable if they apply pesticides contrary to state and federal laws and label directions within their category.

Oregon State Department of Agriculture certified continuing education is provided to licensed applicators to satisfy state requirements for renewal of employees' applicator licenses. Once licensed, applicators must accumulate forty credit hours of state approved recertification training over a five-year period to maintain their license. The city provides sufficient recertification training hours to its employees to maintain their license.

Applicators are required by law to record specific information when applying pesticides. The City has designated forms for these purposes.

Worker Protection Standard (WPS) - is designed to protect employees engaged in pesticide application from occupational exposure to pesticides. WPS contains requirements for notifying employees of applications, the use of personal protective equipment (PPE) and restrictions on entry into treated areas.

Specific PPE information is available on the product label and in the Material Safety Data Sheets. Personnel who have any contact with pesticides shall follow all PPE requirements.

Integrated Pest Management Methodology

Approved Pest Management Strategies - Prevention of pest problems through good policy and planning are assessed first. Next to be assessed are cultural practices, avoidance measures, and physical means to manage pest problems. Last to be assessed are mechanical practices, trapping, biological controls, and use of natural and synthetic pesticides. All of these IPM measures are then evaluated and considered together so that the best overall pest problem solutions are chosen and implemented.

Pest Prevention

Through policy - Management of pests through adoption of policy can be highly effective and low in cost. Such policies can often eliminate problems before they begin. Some examples are:

- Prioritization of parks for control measure may be considered. Different park areas make have varying standards of acceptable care and appearance. Determining whether a particular park area requires control of pests and the level of that control must therefore take these differences into account. Careful attention to public desires and needs must be part of the prioritization process.
- Establishment of thresholds for action and the tolerance level for different pests are part of the IPM process. These thresholds vary according to plant, pest and site. Determinations of action thresholds are made on a case-by-case basis.

Through Design and Plant Selection - Proper park design and plant selection are significant ways to avoid pest problems. While no landscape can be designed to be free of pest management needs, such considerations need to be part of the planning process. Examples are:

- Use of disease or pest resistant or tolerant plant species or varieties.
- Removal of pest-susceptible plants, or replacement with pest resistant plants or varieties.
- Elimination or modification of problematical areas.
- Proper spacing of plant material to reduce the incidence of pest problems.
- Maintenance of species diversity and elimination of monocultures in plantings where applicable.
- Elimination of alternate hosts for diseases.
- Establishment of over-story plantings, occluding groundcover plantings and other design techniques benefiting both the establishment of plants and the reduction of weed problems.

Pest Management

Through Cultural Practices - Proper cultural practices are essential in establishing healthy landscapes and can often help to maintain their resistance to pest problems. Examples are:

- Knowledge of cultural requirements of plants to best provide proper conditions for optimum plant health and resistance to pests.
- 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 fertilization to eliminate over and under-fertilization.

- Aeration, over-seeding, and top-dressing to improve turf health and suppress weeds.
- Raking and debris removal to remove 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.

Through Mechanical and Physical Controls - Mechanical and physical methods are often employed to manage pests. Examples are:

- Mechanical clearing of weeds in rough areas.
- Hand weeding in shrub beds.
- Mowing of rough turf for vegetation control.
- String trimming to control unwanted vegetation.

Through Biological Controls - Where applicable, biological control of pests is useful to manage pests. Typically most important is minimizing disruption of natural pest controls that may be present. Examples are:

- Minimizing the use of disruptive techniques and materials in landscapes that may destroy natural pest control organisms.

Through 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 IPM approach. Examples are:

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

Criteria for Choosing a Pest Management Method

When choosing a pest management method or pesticide material from the approved lists located in Appendix 1, all personnel should consider the following factors and any additional factors relevant to the selection.

Nature of the Site

- Erosion susceptibility and potential movement of soil through runoff.
- The intended use and function of the landscape.
- The feasibility of the method given the area and scope of the problem.
- The relative importance and public expectation of a site or plantings.

- Site conditions such as soil type, grade, drainage patterns, and presence of surface water.

Possible Health and Safety Effects

- Consider both short and long term toxicological properties and any other related potential health effects of the materials or methods, both to the applicator and the public.
- 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 Effect

- Consider both acute and chronic toxicity and any other related potential effects of the material or method to non-target organisms including mammals, birds, amphibians, fish, invertebrates and other organisms.
- Environmental effects from potential bioaccumulation.
- Potential impacts to no-target plants and other organisms form materials or methods.
- Potential impacts to federally listed threatened or endangered species.
- Possible introduction or establishment of invasive plants

Costs

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

Characteristics of the Product

- Target pests and target sites of the product being used.
- Possible residual effect, decomposition pathways, rates, and breakdown of 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 pesticides combinations.
- Other use restrictions as identified on product label.

Special Considerations

- Application equipment availability
- Method of delivery.
- 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
- For natural area invasive plant removal, the presence of nesting birds in area to be treated.

Policy #1
Licensing, Certification, and Continuing Education of Pest Control Personnel

Background

The policy defines the education and licensing requirements of personnel who are applying pesticides or supervising others applying pesticides. Sherwood desires to remain current in the practices of the trade. Continuing education helps to keep staff up-to-date on pest control methods.

Sherwood requires that pesticides be applied by a, Oregon Department of Agriculture licensed pesticide applicator. In order to maintain licensing, the applicator must acquire a minimum of 40 hours of accredited supplementary education over a fire-year period or pass the follow up testing. No more than 15 hours may be accumulated per year. Sherwood will make available training for staff to maintain their license.

Policy

All staff handling or applying pesticides shall be licensed applicators or supervised by a licensed applicator. Sherwood will continue to provide supplementary education to maintain licensing. All pesticide applicators are expected to participate in these training opportunities to enhance and maintain their license.

The City will keep staff pesticide applicators informed of, and will pay for, approved supplemental education and licensing fees to meet continued certification and licensing requirements.

Policy #2
Management Methods for Pest Problems

Background

Sherwood utilizes the principles of Integrated Pest Management in managing city and school district properties. IPM is a coordinated decision-making process that uses the most appropriate management strategy on a site specific basis. The IPM process first determines if a pest needs to be managed, and if so, how best to do it. Key elements of an IPM program are information gathering, well-informed decision making and monitoring of results. Through proper decision making, the IPM process promotes effective, low-risk management strategies to manage pests.

The management techniques used in this program include cultural, physical, mechanical, manual, biological and pesticidal methods and materials. Often a combination of methods is used. Methods selected to manage specific pest populations are evaluated by licensed and trained staff on a case-by-case basis. The following terms are used as defined:

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

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

Policy

Sherwood shall employ integrated pest management principles in managing pest problems. Staff will monitor plant health status, landscape conditions, and the presence of unwanted vegetation. Supervisors and other licensed applicators will assess appropriate thresholds, and determine action levels on a site-by-site basis. All licensed applicators shall use the list of "Approved Management Strategies" to determine an effective, feasible, and economically sound pest management method that does not create undue risk to the public or the environment. If a pesticide is chosen as the best method for pest management, licensed applicators shall choose appropriate materials only from the list of Approved Pesticides specific to their task. The suitability of the material, nature of the site, potential health and safety effects, potential weather and 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, the site should be monitored to assess any impact and the efficiency of the measures taken.

Policy #3
Pesticides Approved for Use

Background

Pesticides vary widely in their characteristics and their legally labeled uses. Not every registered pesticide will be appropriate for use within our IPM program. Also, certain pesticides may be suitable for one kind of park 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.

The City's IPM 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 IPM program use. For these reasons, approved lists need to be flexible to allow for additions and deletions.

Parks, facilities, and streetscapes experience and IPM principles show that it is more desirable to have a specialized selection of products that target specific pests, rather than a smaller number of general-purpose pesticides. This aids in limiting the effects of the control to the target pest only. It also may aid in reducing the number of resistant pests that can arise from continued use of a small number of controls. It also leads to an overall reduction of pesticide usage required.

Policy

Sherwood Public Works pest management program coordinator shall maintain work unit/site based lists of pesticides approved for use by Public Works personnel on City property. The lists shall be reviewed by the coordinator no less than annually to assure currency, and more frequently when needed.

Requests by staff to add or delete products to the approved lists are made by submission of a request form to the Coordinator. This request will include information regarding the product and its characteristics, expected uses, comparative costs, and how the product will improve the IPM program. The Coordinator will then research the product's characteristics, including toxicological, environmental, and physical properties. All aspects of potential use of the product and possible impacts to City users, park infrastructure and the environment will be examined. The Coordinator will then bring the request and associated regulatory information of the pesticide up for approval and review. Proposed additions and deletions from the lists shall be

approved by a committee consisting of at least four of the following Public Works staff persons: Park Lead Worker, Storm Lead Worker, Parks Maintenance Supervisor and IPM Program Coordinator. The pesticide review committee shall be coordinated by the IPM Program Coordinator.

Once approved, the product will be placed on the approved list and staff informed. Deletion of products will be made known to staff as soon as practicable. A pesticide deleted from the general approved list but placed on the “Use Up Do Not Restock List” is approved for use within specified units until current supplies are exhausted unless otherwise noted. All federal and state laws addressing use of pesticides will be upheld. Deletion of a pesticide due to loss of federal or state registration will be upheld without committee approval as per the schedule set by law.

Once approved, the list "Criteria for Choosing a Pest Management Method," shall be used by applicators when determining the proper pesticide for a given purpose. Pesticides shall be chosen after assessing toxicological impacts, environmental impacts, efficacy, feasibility, cost, and all other pertinent aspects of their use within an IPM approach. Only pesticides from the approved lists shall be chosen. Special consideration is to be taken when applications covered under the Waterways Program take place. Pesticides allowed for those purposes are specifically defined within that program.

List of approved pesticides can be found in Appendix 1.

Policy #4
Notification of Pesticide Use at a Site

Background

Public Works understands that patrons may want to be informed of treatments on City and School District properties. Label requirements for pesticide applications may also mandate that entry to treated areas be avoided for a specific interval. Park users may also wish to find out further information about pest management activities occurring at a park site. To satisfy these needs, all pesticide applications will be accompanied by on-site notification signage.

Policy

Sherwood will inform park visitors of pesticide application sites through the use of notification signs. These signs are posted before an application begins and during the application and will remain in place as defined on the label or until the liquid pesticide is dry or any dust has settled in dry or granular applications. Signage is placed in clearly visible locations such as conspicuous entrances or trail heads, and/or application site perimeters, with a maximum interval of 200 feet between each sign in open areas. The intent of the signs is to ensure that park users will encounter them before they have had an opportunity to enter a treated area during an application. 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.

Signs shall be removed after the re-entry specification has been met. For most products, this interval is limited to until the liquid application has dried or until any dust has settled from a dry or granular application.

In addition to signage on school district property or adjacent city owned properties, contact will be made to the School District IPM Coordinator before an application is made.

In the special case of application of pesticides to right of way or neighborhood parking strip tree canopies, signs will be placed on these street rights-of-way 24-48 hours prior to the application to allow car owners to relocate their parked vehicles if they desire.

Policy #5
Pesticide Application on Park Property and Street Rights-of-Way

Background

Sherwood employees and or contractors shall apply pesticides in a legal manner and adhere strictly to all precautionary requirements for their use. This policy outlines procedures for pesticide application in parks, city owned property, street rights-of-way and school owned property. All registered pesticides are accompanied by a legal label specific to each product that defines all legal uses. Pesticides must be used according to these label directions.

Policy

Pesticide must be used only on sites and targets specified in the label. Higher dosages, higher concentrations, or more frequent applications than the label allows for are not permitted. Directions for use, safety, mixing, diluting, storage, and disposal, as well as any restrictions on re-entry must be met. The following criteria shall be met when applying pesticides. Some of these are addressed more specifically in other policies.

- The label is the law.
- Personal Protective Equipment (PPE) shall be used wherever indicated and it must be maintained in a workable and safe condition.
- Spray equipment shall be maintained in a safe and useful condition. Where applicable, spray equipment shall be calibrated regularly.
- Anti-siphoning devices shall be used when filling large spray tanks.
- “Criteria for Choosing a Pest Management Method", as outlined and shall be considered in making choices.
- Pesticides used shall be chosen from the approved lists as provided for the appropriate work units.
- Pesticides shall be applied only when appropriate weather conditions exist.
- Notification signs shall be posted in areas where pesticides are being applied.
- All applications shall be recorded on approved application record forms.

Procedures

Applying Pesticides

1. Staff identifies or is informed of a pest problem.
2. Determine if actions need to take place. Thresholds and action levels are determined by a licensed applicator or supervisor for the specific pest problem in question.

3. Management strategies are determined by a licensed applicator. Special situations may require expertise from outside Public Works such as university diagnostic laboratories.

If pesticides are to be used:

1. Choose the pesticide using the "Criteria for Choosing a Pest Management Method and "Approved List of Pesticides" for the appropriate work unit/task.
2. Check application equipment for safety and mechanical problems, calibrate if necessary.
3. Check weather conditions and temperature extremes. Applications should be done when calm wind conditions exist to minimize drift. Adjustments should be made for spray droplet size and pressure if/when conditions warrant. No application should take place where there is unacceptable drift (air pressure/temperature volatility).
4. Post notification signs before use to inform the public of the application. For specific rules, see
   the Notification Policy #4.
5. List re-entry specifications on the signs if required by the label.
6. Apply material according to the label and in accordance with state and federal regulations.
7. Record applications of pesticides on the approved forms. See appendices.
8. 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.
9. Evaluate the results of management measures.

Policy #6
Pesticide Application Record Keeping

Background

Methods that detailed record keeping is an essential part of IPM implementation, and is vital in communicating, reporting, and analysis 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.

Policy

It is the policy of the City of Sherwood to record and retain records of all pesticide applications performed. Appropriate forms for this use will be provided by the City.

Each application event will require an application form to be completed. Copies of completed application records should be sent to the Pest Management Program Coordinator on a monthly basis. A master file of these records shall be kept at a central location and maintained by the IPM Coordinator. Each operating unit shall keep a record file related to pesticide applications by their own personnel. These records shall be retained for no less than three years.

Policy #7
Use of Remaining Pesticide Solutions and Rinses

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 to conduct our pesticide operations so that disposal of remaining material is not necessary.

Policy

Pesticide solutions and rinses should be applied according to the label directions, and to legal target sites so there are no pesticide residues remaining. This shall be accomplished by accurately gauging the amount of pesticide needed for the job. Sherwood 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, it is the City's policy to 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.

Procedures

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

Advance Considerations

- Weather conditions and predictions.
- Acreage/square footage of the job site.
- Calendar: special events, mowing, irrigation, etc.
- Type and size of the equipment appropriate to do the job.
- 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 nozzle.

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.
- Before the long term storage of the equipment.

Use the Following Rinse Process:

- Read the pesticide label. The following 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 product 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. For large tanks where shaking or agitating is not an option, use a 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 step 3 and 4 above until the tank is clean.

Policy #8
Storage of Pesticides

Background

Attention to the proper storage 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. Agencies involved include State of Oregon Department of Agriculture, Oregon Department of Environmental Quality, U.S. Environmental Protection Agency, Oregon State Fire Marshall, and the Tualatin Valley Fire & Rescue.

Policy

Pesticides or pesticide containers shall be kept in secure and safe locations in accordance with existing laws. They shall be kept in a secure location and, if possible, 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, photodecomposition or moisture. All pesticides in storage shall be inspected regularly and, if necessary, rotated on the shelf to assure that the oldest dated items are used first.

Central warehousing of pesticides shall take place at the Sherwood Public Works Yard facility. Storage facilities will be cleaned and will take place when necessary, however at a minimum of once per year.

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

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

Policy #9
Disposal of Empty Pesticide Containers and Unusable Pesticides

Background

The City of Sherwood 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. Sherwood will comply with all relevant laws governing the proper disposal of these materials.

Policy

Sherwood employees shall dispose of pesticides and empty pesticide containers in accordance with all State and Federal regulations and label recommendations. The disposal of these materials requires care in handling and use of all necessary protective equipment.

Procedures

Read the pesticide label. The following steps should not conflict with 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.

For 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.

For 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 being 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.
- Place in a plastic bag and mark as to contents.

Storage of Containers

- Containers must be stored in plastic bags in a secure area until they can be taken to a secure collection site.
- Containers must be transported to, and placed in the designated secure container box at the City Public works Yard storage area. Each container product name and size must be recorded by a licensed applicator on the designated form at that time.
- For each container, record the date, name of the pesticide, quantity and size of the container, park area used, and the applicator signature. These records shall be maintained at the site, and copies forwarded to the Pest Management Program Coordinator twice a year in July and December.

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.

- The Pest Management Program Coordinator should be informed of plans to dispose of pesticides and of results of the disposition.
- The Coordinator will contact the ODA, the manufacturer or dealer and/or a licensed consultant and find out if the product is still usable.
- If the pesticide has less activity due to long storage, moisture, or freeze damage, follow the recommendations of the dealer, manufacturer, or licensed consultant and use procedures in this policy as they apply.
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One option could be to apply the material realizing that the full control may not achievable using the damaged pesticides.

If this option cannot be followed legally, follow recommendations of the dealer or manufacturer or licensed consultant. It is not legal to transfer damaged or altered pesticides to another party for use. It may be necessary to arrange for disposal of the pesticide in a manner recommended by DEQ.

The Pest Management Coordinator is responsible for arranging disposing of pesticides. A record of these disposals should be kept on file for three years.

Disposal of Pesticides with Totally or Partially Canceled Registrations, Which are Rendered Legally Unusable.

- The coordinator shall keep up-to-date on the pesticide regulatory news and respond to pending actions appropriately to minimize or eliminate stocks of unusable pesticides.
- If unusable pesticides remain in stock, Public Works employees will follow recommendations of the regulatory agencies, manufacturer or dealer in finding a legal user for the pesticide.
- If the pesticide is unopened and/or still retains its integrity it may be possible to transfer the pesticide to a legally registered bureau, agency, or group to use.
- It may be necessary to dispose of the pesticide in a manner recommended by Oregon DEQ.

Policy #10
Use of Protective Clothing and Equipment

Background

Use of pest management tools, equipment, and materials may require the use of personal protective equipment (PPE). Use of such equipment is necessary to provide an adequate measure of safety for the applicator. This protective equipment may be clearly defined as in legal pesticide label directions or directives in equipment manuals. When such directives exist they must be adhered to. Use of appropriate protective 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.

Policy

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 PPE must be adhered to. Use of related power and mechanical equipment must be accompanied by appropriate PPE as determined by equipment manuals or supervisor's directives.

Required PPE appropriate to satisfy specific pesticide label requirements shall be provided by Public Works to employees for their use. These label mandated PPE may include, but are not limited to: respiratory protection, eye protection, coveralls, rain gear, mixing aprons, chemically resistant boots, and chemically resistant 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 PPE and equipment in a safe and useful manner. Applicators may also provide their own additional PPE if desired, but only if such equipment and its use have been previously approved by their supervisor.

If applicators apply organophosphate and carbamate insecticides in amounts and frequencies determined by health professionals to require cholinesterase blood tests, Public Works will provide for these tests. This testing monitors the potential depletion of the enzyme cholinesterase in the blood, an indicator of exposure to these materials.

Policy #11
Emergency Information Concerning Accidental Pesticide Exposure

Background

The handling of public inquiries should be prompt, professional, and well supported. While staff can answer general questions, staff does not have medical professionals 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 community.

Policy

Public Works will inform applicators of proper procedures to be taken in case of pesticide exposure.
Anyone inquiring about pesticide exposure will be referred to his or her own personal physician, the Oregon Poison Center (OPC), or the Pesticide and Analytical Response Center (PARC). A list of these authorities and their phone numbers are listed in the appendices.

Material Safety Data Sheet information about all hazardous substances in the workplace is available to all personnel for their own use. This information includes symptoms of exposure, and procedures for handling overexposure to individual pesticides. If symptoms of illness occur during a period of time after applying pesticides, the OPC should be contacted or the individual should receive medical attention immediately

Non-emergency questions received by Public Works shall be referred to the Pest Management Program Coordinator. The Coordinator will provide information to the questioner or refer them 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 product 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, or product label and MSDS.
- Call for emergency assistance if necessary.
- Refer to Oregon Poison Center. **1-800-222-1222**
- Take the product label for reference for medical personnel if it is necessary to leave the site.
- Inform your supervisor as soon as possible.
- Inform the Pest Management Program Coordinator as soon as possible.

In Response to a Non-Emergency Inquiry

- Respond to questions to the best of your ability.
- Refer detailed or technical questions to the Pest Management Program Coordinator.
- Inform your supervisor.

Policy #12
Pesticide Spill Response

Background

Several state and federal regulations apply to an emergency release of hazardous materials. The Department of Transportation (DOT) and the Public Utilities Commission (PUC) regulate the transport of hazardous waste resulting from a spill and the release of chemicals if it occurs when they are being transported. The Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (DEQ) protect the environment through regulation concerning prevention of and response to the contamination of water, land, and air resulting from an emergency release of a hazardous material. They are also concerned with proper disposal of waste generated from a spill. The Occupational Safety and Health Administration (OSHA) are concerned with the proper training and protection of workers handling hazardous materials. These regulations are incorporated into the procedures outlined here.

Policy

Through training, spill prevention, planning, preparation, work practices and increased awareness Sherwood will ensure that spills are minimized.

Training and Responsibility - Depending on staff assigned tasks a level of training awareness will be provided to ensure that staff responds accordingly.

The Base Level is for individuals who become aware of a possible pesticide spill. They must be able to recognize and respond to an emergency situation by keeping people out of the area and immediately inform a supervisor

The Intermediate Level is for licensed applicators that apply or transport small volumes of pesticides. The level includes response to incidental spills and is covered by OSHA's Hazard Communication regulations. Individuals at this level are trained to prevent spills from occurring. Should one occur, they are trained to stop the release, keep it from spreading, and do cleanup. Licensed pesticide applicators are in the category.

The Highest Level of training is for individuals who apply or transport over 50 gallons of dilute pesticide or more than 1 gallon or 10 pounds of concentrate. They are trained to stop releases, keep the pesticide from spreading and perform cleanup.

Spill Prevention - Sherwood will employ a variety of practices to reduce the potential of a pesticide spill.

These will include the following:

Purchasing - When procuring chemicals, a factor in determining which chemical formulation to purchase will be the ease with which it can be cleaned up in the event of a spill. Types of packaging and formulations that may help to prevent a spill from occurring will be factors as well. Characteristics of the pesticide, such as toxicity and reactivity that may affect the seriousness of a spill, will also be considered.

Preparation - Planning, training of personnel, and acquisition and maintenance of equipment and supplies will be done to reduce the risk of a spill occurring, and to minimize damage should one occur. For example, regular preventative maintenance will be done on sprayers, replacing hoses and valves before they wear out.

Work Practices - Sherwood Public Works personnel will use practices to minimize the potential for a spill to occur, and to ease clean up should one occur. For example, pesticides should be placed in a leak-proof container while being transported.

Policy #13
Mosquito Management

Background

Mosquitoes breed in wetlands, slow moving waterways, drainage ditches and other standing water locations. Effective control focuses on eliminating standing water where mosquitoes breed. The safest and most useful approach is to eliminate unnecessary pools of water and to maintain swimming pools, catch basins and birdbaths. Because mosquitoes spread some diseases, their presence may concern residents and result in complaints and requests for action from public agencies.

Policy

Washington County provides for mosquitoes control within our jurisdiction. Through an Intergovernmental Agreement (IGA), the City of Sherwood provides resources to apply and monitoring sampling. Staff will treat City owned catch basins as outlined in the Counties Mosquito Control Management Practices for Catch Basins.

Policy #14
General Criteria for Pesticide Use in Water Sensitive Areas

Background

Sherwood has a number of properties that are adjacent to or has waterways (creeks, streams, ponds, water quality facilities of vegetated corridors) within the property. These properties provide habitat for plant and animal communities, and their direct link with other waterways requires specific policies. Using IPM, typically the first step in pest management is a non-chemical prevention. Although we strive to minimize the use of pesticides, the following will provide guidance for applicators and meet Clean Water Services (CWS) IPM.

Policy

It is our intent to not make pesticides applications within 3' of the water's edge with exception to mosquito abatement as outlined in Washington Counties Mosquito Management permit 2300A. The following list specific sites or area's and limited use.

Site-Specific Pesticide Use

Water Quality Sensitive Areas - Pesticides may be used only for the control of non-native, invasive species that threaten the health of the habitat. Plants and other pests may be controlled using spot or area application of appropriately labeled chemicals above the water line or within the wetland boundary. Pesticides should not be used more than once per year except for control of invasive species that threatens water quality or habitat value.

Vegetated Corridors - Pesticide use within Vegetated Corridors is limited to the control of non-native, invasive species that threaten the health of the habitat or hinder the establishment or maintenance of native plant communities.

Water Quality Facilities - Pesticide use within Water Quality Facilities is limited to the control of non-native, invasive species that hinder proper facility function or the establishment or maintenance of native plant communities. Plants may be controlled using spot or area application above the water line when such a line is apparent.

Streamside Recreational Areas - Where regular lawn maintenance must occur (e.g., manicured parks) and there are no Vegetated Corridors, the City will maintain a minimum 25-foot buffer for streams and wetlands in which neither fertilizers nor pesticides are applied, except for invasive species control.

Developed Landscapes - Pesticide use within the context of IPM is allowed in Developed Landscapes to control undesired vegetation or other pests. Developed Landscapes exclude Sensitive Areas, Vegetated Corridors and Water Quality Facilities and Streamside Recreational Areas.

Policy #15
Use of Pesticides on School Property and Athletic Fields

Background

Sherwood utilizes the principals of Integrated Pest Management in managing all property. IPM is a coordinated decision making process that uses the most appropriate management strategy on a specific site. These strategies and decision making processes are defined in greater detail by ORS 634.700 - 634.750 beginning July 1, 2012. The key concepts of this IPM is to coordinate the Cities process for applying Pesticide/Herbicides to School District property as well as coordinating communications to the School District IPM Coordinator, supplying information and data, and communicating times when treatments will be performed .

Policy

Sherwood will employ IPM principals in managing pest problems on school district grounds. Supervisors and Licensed applicators shall monitor plant health status, landscape conditions, and the presence of unwanted vegetation. They will assess appropriate thresholds, and determine action levels on a site- by- site basis. Approved Management Strategies to determine an effective, feasible, and economically sound pest management method that does not create undue risk to children, the general public or the environment.

The City uses low impact pesticides/herbicides and will provide the School District a list along with the labeling and the MSDS sheet for all product used on either properties. A low impact pesticide has a signal word of “caution.”

ORS 634.725 requires any low impact pesticide/herbicide application on school property be made only by a valid licensed pesticide applicator or licensed trainee.

This includes:

- Applying weed control products with a mechanical / boom sprayer
- Applying weed control products with a backpack sprayer
- Applying over the counter pesticides like wasp, yellow jacket killers or ant bait
- Applying granular

As agreed with the School District IPM Coordinator, Sherwood will provide the required posting to meet the School Districts IPM. Also as agreed, the School District IPM Coordinator will provide the role of notification of students, school district staff, and parents as required to their IPM.

Signage will be placed 24 hours before an application and removed no earlier than 72 hours after the application occurs.

Prior to September Cities IPM Coordinator will provide a list of pesticides that will be placed on school property. This will provide the School's IPM Coordinator the necessary information for notification of students/students and teachers. Then again prior to the end of December the Cities IPM Coordinator will provide documentation to the application of pesticides on School District's property for the current year.

Policy #16
Rodent and Other Vertebrate Pest Management

Background

The presence of rats and mice in structures and landscapes is considered a health and safety problem, due to the fact that these rodents can vector diseases to humans. Moles and gophers can create turf and landscape problems. Rodent tunneling and hilling can be tolerated in many park areas; however in some sites the damage from rodent activities cannot be tolerated. Such soil disturbance can also present safety hazards for park users, particularly in turf areas.

Policy

Mechanical control of burrowing rodents such as moles and gophers is allowed with an Ornamentals and Turf category endorsement of the Public Pesticide Applicators license currently held by applicators. Where a need exists, gophers and moles may be mechanically trapped in tunnels by licensed personnel or their licensed apprentices.

Consideration of the use of mechanical traps shall be taken to assure that set traps are hidden from view and do not create a safety hazard.

All non-lethal and lethal rodent control methods must comply with local, state and federal laws. The use of chemical rodenticides must follow IPM guidelines.

Rat and mouse control within structures such as community centers should be carried out by a qualified structural pest management contractor that utilizes sound IPM principles. Rodenticides and other vertebrate pesticides may have potential for secondary toxicity to non-target organisms and may pose a potential threat to users with access to baited areas (the placement of rodenticides in public accessible areas shall have appropriate licenses).

Policy #17
Vegetation Management in Wood Chipped Child Playground Areas

Background

In all of our IPM activities, Sherwood seeks to minimize any potential impacts to our park users while still providing responsible, effective, and efficient care for our facilities. Engineered wood fiber playground areas in particular focus attention on our activities and require a special set of best management practices..

Policy

Personnel are to adhere to this policy when they are undertaking weed management activities in engineered wood fiber playground areas and their immediate borders or margins.

The deep chip layers that serve as a safety cushion for falls also act as effective weed control mulch and reduce the need for other active weed control measures. Herbicides will not be used to control vegetation in chipped play areas or their margins. Weed control in these play areas will be accomplished primarily through the use of the wood chip mulch or manual weeding. To be a safe surface for play and as an effective weed barrier, the chip layer should be kept at the established minimum depth. If the mulch layer is not adequate for weed control it should be amended as soon as is practicable. Mulch layers that have broken down over time and provide a medium for good weed growth should be replaced or amended with fresh chips.

Manual weeding is usually adequate to keep weeds from establishing within the chipped areas. Effort shall be made to respond quickly to weed presence so that this kind of control will be feasible and efficacious.

Use of powered weed control equipment, such as line trimmers and tillers, may be used in chipped areas to control weeds, but careful attention to the dangers they present must be taken. This kind of equipment should not be used when nearby park users may be put at risk.

Playground/turf interface borders will be maintained by hand or mechanical means. Establishment of a structured border is preferred and encouraged for installation where possible as it provides a lower maintenance interface between play areas and turf. These structures also reduce weed and turf infiltration

The only pests that will be regularly controlled in wood chipped play areas are weeds and other unwanted vegetation. The need to control other pests, such as insects or diseases, is not expected.

One exception would be the presence of venomous stinging insects such as yellow jackets in the play area. In these circumstances the use of a targeted insecticide to eliminate the immediate safety hazard may be required.

Policy #18
Venomous Insect Management

Background

Wasps, hornets and yellow jackets may quickly establish nests above and below ground in both natural areas and in developed parks. European honeybees form above ground nests, and may also form swarms when seeking new nest sites. Not every wasp or bee nest creates a problem for our users or staff. Public threat is dependent on insect species, nest location, time of year and other factors.

Yellow jackets and some wasp species can be particularly aggressive towards people, especially near their nests. Other wasps, such as paper wasps are less aggressive and are more benign depending on location of their nest. Honeybee swarms generally do not create a large stinging potential as bee behavior is altered during this time. Nest location is also important when determining threat. Nests located near walkways, buildings, playgrounds or similar sites are more problematic than those located in remote areas. Nests in areas where vegetation management or restoration planting is being carried out can also create problems. Wasp behavior may also vary with the time of year. Yellow jackets in particular will exhibit increased defensive behavior as the season progresses. Normally, yellow jacket and paper wasp colonies only live one season. Honeybee nests usually persist from year to year.

Policy

Evaluation - When wasp or bee nests are discovered, staff should evaluate the safety threat they pose. If the nest is considered to create a safety hazard for park users or staff, demarcation and control measures should take place. Nests that create an immediate hazard, such as those near playgrounds, community centers, walkways, trails and work sites, should be addressed as soon as possible. Other criteria that may constitute a hazard are nests that have been disturbed and nests sites with aggressive individuals. Nests occurring within inhabited structures such as community centers create an immediate safety hazard and control of these should be immediately referred to a qualified professional contractor.

Demarcating Nests or Swarms - Where possible, nests or swarms that present an immediate public hazard should be demarcated by either signage, cones, taping, flagging or by other means so that the area of danger can be avoided by park users. This demarcation should stay in place until the nest is eliminated or the swarm is removed.

Honeybee Swarms and Nests - When discovered, honeybee swarms should be marked as described above until the bees have been collected. Qualified bee removal businesses should be contacted to collect the swarm.
Honeybee swarms should not be sprayed with insecticides. Unless location of the nest presents a hazard, honeybee nests should be tolerated where possible. If removal is required, qualified contractors should physically remove nests when feasible. Spraying of honeybee nests should be a last resort.

Spraying Wasp and Hornet Nests - Aerosol jet stream products labeled for use on wasp and hornet nests can be effective against both yellow jackets and paper wasps, but they must be used with extreme caution. Wasps will attack when they sense an application to their nests, and even freeze-type products are not guaranteed to stop every individual. For this reason extreme caution must be used when nest applications are taking place. The following practices should be adhered to:

- Nests should be sprayed at night or before dawn, when all members of the hive are present and most docile. Daytime spraying is not recommended except in certain emergency cases where the public is not placed at risk from resultant increased hive activity.
- Nests should not be disturbed before treatment. Disturbed nests should not be approached.
- Nest location should be demarcated as described above. Demarcation must be left up until the nest has been eradicated.
- Nests that are situated high in trees, or in otherwise difficult to access locations should be treated by professional contractors. Do not attempt to control a nest if you cannot easily do so.
- Nests in structures, building voids etc., should be treated by professional contractors only.
- Approved Sherwood staff may use wasp and hornet jet sprays available at Stores.
- Pesticide application notification signage must be placed as per the Sherwood *Notification Program*.
- All applications shall be documented.

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Approved Applicators - In general, park staff with valid ODA pesticide applicator licenses with an insecticide category endorsement should be the designated employees carrying out applications. However, there may be instances where these employees are not available and a nest presents an immediate health and safety threat to the public or staff. In these instances, available personnel with ODA pesticide applicator licenses or their apprentices of any category are approved to use jet spray wasp and hornet products to treat nests. In rare emergency safety situations where no licensed personnel are able to respond in a timely fashion, other personnel may be approved to carry out an application, but only if they have had prior

supervisor approval, prior training in the safe use of these sprays, and instruction in the proper management of wasps and bees. Staff members with known wasp or bee allergies will not carry out any wasp or bee control.

Use of Traps - When yellow jackets are a continuing serious problem at a site from year to year, use of commercial traps to target emerging queens in the spring can be considered. Trapping queens during the 30- to 45-day emergence period has the potential to provide an overall reduction in the yellow jacket population for the season, The more traps put out in spring on an area-wide basis, the greater the likelihood of reducing the number of nests later in the summer. Usually one trap per acre is adequate in spring for depletion trapping of queens. Use of traps to reduce yellow jacket numbers later in the season is considered ineffective

Disclaimer

The use of pesticide trade names in this document does not constitute an endorsement by the City of Sherwood. Descriptions of pesticide use and management practices are provided in this program for employees use, and are not intended as public recommendations.

Appendix 1
Approved Pesticide Lists

Following are lists of pesticides that are approved for use on specific type of properties (parks, sports fields, facility landscapes and open spaces). A good IPM approach allows for the choice of ideal materials for specific needs. IPM also anticipates the need to manage pest resistance with rotations of products with differing modes of action rather than relying on a "one material fits all" approach. Despite the lengthy appearance of these approved lists, most of these pesticides are not used in a typical year, or are used in a very minor way.

It is also important to understand that pesticide applications are used after many other IPM strategies have first been either employed, or considered. The vast majority of Sherwood pest management practices never involve the use of pesticides. Similarly, the vast majority of park acreage never receives any kind of pesticide application. Other IPM strategies include prevention of pests through policy, design and selection, and management of pests through cultural practices, physical means, and mechanical methods.

All pesticides available for use must first be placed upon an approved list after undergoing a review process that carefully examines the individual characteristics of the product and whether it would be an appropriate addition within our program. Issues of efficacy, public health and safety, potential environmental impacts, overall plant health requirements, land management needs, and other concerns are taken into account during this process. Applicators must then make their choices of materials from their own approved list. Individual work units have different responsibilities and pest management requirements for the lands under their care. The individually tailored approved lists reflect these differences.

Pesticides not appearing on their particular list are not available for their use. Careful attention should be paid to the further limitations of pesticides available for use within waterway buffer zones and aquatic sites as outlined and defined in the Pest Management Program. Additions to the approved lists must follow the process as described in the "Pesticides Approved for Use in Parks" Program.

Format:
Product trade name (active ingredient) Description of purpose and use within IPM program.

Parks Approved List

Areas of pest management: General community, neighborhood, regional, urban parks, facility landscapes and streetscapes.

Herbicides

Primary choices:

Gallery 75 DF (isoxaben) Used on shrub beds, tree circles, and other areas. Can be used in combination or rotation with oryzalin to broaden the spectrum of weeds prevented.
Garlon 3A, Greenlight (triclopyr amine) Selective products for woody, difficult to control perennials. Used in spray and cut-stem applications, also for invasives and habitat restoration.
Ranger Pro, Roundup Pro, Rodeo, (glyphosate) Primary vegetation control product used with other methods in shrub beds, tree circles, bare ground, and on invasive weeds.
Surflan AS, WDG (oryzalin) Used in shrub beds, tree circles, fence lines and other park areas for weed control. A primary liquid form preemergent product.
XL 2G (benefin+oryzalin) Combination product for wider spectrum weed control. Useful in sites where liquid products are more difficult to apply. This is a primary granular preemergent product.

Specialty uses:

DeMoss, Garden Safe Moss and Algae Killer, others (fatty acids) Moss control desiccant. For structures and non-vegetated surfaces. Not typically used, but possible sporadic use.
Fusilade II (fluazifop-P-butyl Butyl) used on shrub beds tree circles and other areas.
Casoron (Dichlobenil) weed and grass control.
Dimension (Dithioptr) a granular used for weed and grass control.
Ornamec (fluazifop-P-butyl) Used for grass and ground cover removal.
Speed Zone Red (Canfentrazone-ethyl) Used for clover and broad leaf removal in turf.
Cross bow (butoxethyl ester) used for general weed control.

Fungicides

Fertilome Liquid Systemic Fungicide (propiconazole) Possible use for disease control for high value plants in short term, special situations where long term plant health is affected. Typically not used,in park zones but retained for unusual circumstances.
Microcop (copper sulfate) **Copper soap** (copper octanoate) Possible use for disease control for high value plants in short term, special situations where long term plant health is affected. Typically not used in park zones, but retained for unusual circumstances.

Insecticides

Aerosol Wasp Sprays Directed jet sprays used for individual wasp and hornet nest treatments posing health and safety threats to park users.
Azatin XL (azadirachtin) Neem tree extract used for control through growth regulating and anti-feeding effects. Specialty use product typically not used in park zones, but retained for unusual circumstances.
Bacillus thuringiensis Primarily for lepidopterous insects, although subspecies can be used for other targets. Typically not used in park zones, but retained for unusual circumstances.
Beneficial nematodes Predatory nematodes for insect control treatments for susceptible targets where needed. Typically not used in park zones, but retained for unusual circumstances.
M-Pede, Safer Insecticidal Soap, others (soaps) General soft body insect control. Typically not used in park zones, but retained for unusual circumstances.
Merit (imidacloprid) Systemic/Contact product for special plantings and needs. Typically not used in park zones, but retained for unusual, short term use where long term plant health is affected.

Miscellaneous

Wasp/yellow jacket traps (pheromone trap) Yellowjacket trap for certain areas. Not typically used, but retained on list for use if safety issues are created by wasp and yellow jacket presence.

Special Approval Products:

Requires manager level/policy approval prior to use.

Aquashade (acid blue 9, acid yellow 23) Blue colorant used to suppress algae growth in certain ponds in developed parks. Used only within approved framework for noxious invasive weeds and algae as part of weed management strategy specific to site as outlined in Waterways Policy.
Cutrine Plus (chelated elemental copper) Aquatic algae control. Used only within approved framework for noxious invasive weeds and algae as part of weed management strategy specific to site as outlined in Waterways Policy. Minor to zero use material retained on list for specific situations.
Horsepower(MCPA,triclopyr,dicamba) Selective weed control in turf. Used for turf renovation as part of overall IPM approach. Turf broadleaf herbicide use must be pre-approved per Turf Broadleaf Weed policy. Used very rarely, primarily for athletic field surface renovation. Not for general use on park turf.
Sonar AS (fluridone) For control of noxious invasive weeds that threaten the health of an aquatic system as part of approved overall IPM management plan specific to site; potential sites

and uses outlined in Waterways Policy. Minor to zero use material retained on list for specific situations.
Spotlight (fluroxypyr) Selective weed control in turf. Used for turf renovation as part of overall IPM approach. Turf broadleaf herbicide use must be pre-approved per Turf Broadleaf Weed policy. Used very rarely, primarily for athletic field surface renovation. Not for general use on park turf.

Athletic Field Services Approved List

Areas of pest management Natural Turf: Athletic fields such as softball, baseball, football and soccer fields.

Herbicides

Ranger Pro, Roundup Pro, RU ProDry, Rodeo, Aquaneat, Aquamaster (glyphosate) Primary vegetation control product used along with other control methods on infields, fence lines, field lines and other areas.
Scythe (pelargonic fatty acid) Minor use contact herbicide used for top-kill of easily controlled weeds.
Speed Zone Red (Canfentrazone-ethyl)controls Broad leaf herbicide for turf and other areas.
Fusilade II (fluazifop-P-butyl Butyl) used on shrub beds tree circles and other areas.
Casoron (Dichlobenil) weed and grass control.
Dimension (Dithioptr) a granular used for weed and grass control.
Surflan AS, WDG (oryzalin) Used in shrub beds, tree circles, fence lines and other park areas for weed control. A primary liquid form preemergent product.

Miscellaneous

Activator 90, R-11, LI 700, Hasten, others (spray adjuvant-not a pesticide) Surfactant used in solutions to enhance spray coverage and increase efficacy.
Armorex (garlic, sesame oil, white pepper) Goose repellent for stadium turf. Trial use.
Turf Trax, Hi-light, Signal, others (marker colorant)(not a pesticide)Used in spray solutions to temporarily mark area of application.

Special Use Products

Horsepower (MCPA,triclopyr,dicamba) Selective weed control in turf. Used for turf renovation as part of overall IPM approach. Turf broadleaf herbicide use must be pre-approved per Turf Broadleaf Weed policy. Used very rarely, primarily for athletic field surface renovation. Not for general use on park turf.

Spotlight (fluroxypyr) Selective weed control in turf. Used for turf renovation as part of overall IPM approach. Turf broadleaf herbicide use must be pre-approved per Turf Broadleaf Weed policy. Used very rarely, primarily for athletic field surface renovation. Not for general use on park turf.

City Natural Areas Approved List

Areas of pest management: trees on streets, parks, other city property,

Herbicides

Garlon 3A, Greenlight Tough Brush Killer (triclopyr amine) Selective products for woody, difficult to control perennials, also for invasives and habitat restoration.
Garlon 4 Ultra (triclopyr ester) For basal and cut-stem applications during tree removal for view corridor establishment and maintenance.
Ranger Pro, Roundup Pro, RU ProDry, Rodeo, Aquaneat, Aquamaster (glyphosate) Primary vegetation control product used with other methods in shrub beds, tree circles, bare ground, and on invasive weeds.
Scythe (pelargonic fatty acid) Minor use desiccant used for top-kill of early-stage, easily killed weeds.
Surflan AS, WDG (oryzalin) Used in nursery, shrub beds, tree circles, fence lines and other park areas for weed control. A primary liquid form preemergent product.

Fungicides

Alamo (propiconazole) Trunk injection product for certain high value elms.
Arbortect (thiabendazole) Trunk injection product for certain high value elms.
Daconil (chlorothalonil) Disease control on high value trees in special situations. Typically not used, but retained for unusual, short term use where long term plant health is affected.

Insecticides and Miticides

Aerosol Wasp Sprays Directed jet sprays used for individual wasp and hornet nest treatments posing health and safety threats to park users.
Azatin XL (azadirachtin) Neem tree extract used for insect growth regulating and anti-feeding effects.
Typically not used, but retained for unusual, short term use where long term plant health is affected.

Bacillus thuringiensis Primarily for lepidopterous insects, although subspecies can be used for other targets. Typically not used, but retained for unusual, short term use where long term plant health is affected.
Beneficial nematodes Predatory nematodes for susceptible targets where needed. Typically not used, but retained for unusual, short term use where long term plant health is affected.
Conserve (spinosad) Typically not used, but retained for unusual, short term use where long term plant health is affected.
Floramite (bifenazate) Miticide as part of a carefully implemented plan to keep mites at non-injurious levels. Typically not used, but retained for unusual, short term use where long term plant health is affected.
M-Pede, Safer Insecticidal Soap, others (soaps) General soft body insect control. Typically not used, but retained for unusual, short term use where long term plant health is affected.
Merit (imidacloprid) Systemic product for specialty or high value plant material. Typically not used, but retained for unusual, short term use where long term plant health is affected.
Sunspray, others (horticultural oils) General insect control both for dormant and growing season use.
Not typically used in general parks. Typically not used, but retained for unusual, short term use where long term plant health is affected.
Tempo SC Ultra (cyfluthrin) Contact product for special or high value plant material. Typically not used, but retained for unusual, short term use where long term plant health is affected.

Miscellaneous

Activator 90, R-11, LI 700, Hasten, others (spray adjuvant-not a pesticide) Surfactant used in solutions to enhance spray coverage and increase efficacy.
No Foam (anti-foaming agent) Silicon based, reduces foaming, used in large agitated spray tanks

Turf Trax, Hi-light, Signal, others (marker colorant)(not a pesticide) Used in spray solutions to temporarily mark area of application.

Appendix 2
City of Sherwood Pesticide Application Record

Applicators Name: _____ License Number: _____ Section: _____

Helper: _____

	Location of Application	Pesticide Name and EPS Number	Mix Ratio for Each Product
Date:	**Site**		**Amount product / water**
Time In:	Specific area treated		
Time Out:			
Temp:			
Wind	General weed/weed in turf		
Equip Used Back Pack		Amount of Liquid Diluted Product Applied	
Boom		Granular product: LBS applied	
Other: Describe	Total Area Treated	Coverage for Granular Product (lbs. per sq. ft)	

Appendix 3

Phone Numbers

Emergency Phone Numbers

Fire, Ambulance, HAZMAT.....911
For Medical Emergencies & Immediate Health Concerns:
Oregon Poison Center- 24 hours Daily- Portland Area.....503-494-8968
Outside Portland Area 1-800-222-1222
DEQ Northwest Regional Office.....503-229-4263
Oregon Emergency Response System 1-800-452-0311
Sherwood Parks/Streets Supervisor 503-925-2334
Sherwood Water, Storm/Sanitary Supervisor 503-925-2319
Sherwood Public Works.....503-625-5722
School District IPM Coordinator 503-825-5920

Informational Phone Number

NPIC - National Pesticide Information Center 1-800-858-7378
Provides general information on pesticide products, including safety,
health, environmental effects, clean up and disposal.
6:30 am - 4:30 PM PDT 7 days a week excluding holidays

Oregon Department of Agriculture 503-986-4635
Provides information on pesticide products and registration, conducts pesticide use
investigations, and applicator licensing and certification.
Weekdays 8:00 AM - 5:00 PM.

Appendix 4
Pesticide Use Notification Sign

CAUTION

Pesticides are being applied by Public Works to control targeted weeds.

Application methods are designed to protect the Health, Safety and Enviromental risk to users.

Materials used:

_____

Date_____ Time:_____

Please keep pets onleach and refrain from contact with work area until spray (indicated by blue dye) has dried.

For More information , please Call:

Public Works

503-625-5722

Appendix 5

City of Sherwood
APPLICATION FOR PESTICIDE USE ON CITY PROPERTY

Business / Organization	Public/Commercial Applicator License Number
Address	Applicator's Name and License Number
City State Zip	
Phone Fax	
Business / Organization	
Contact Name(s)	Contact Numbers:
Name/Address of Park or Site	Specific Area to be Treated
Purpose of application	Method of Treatment – Formulas, Dilutions and Type of Equipment
Notification Procedures: Signage, Fencing, Etc.	Does Any Part of Treatment Take Place Within A Water Quality Site or Within 25 Ft. of a Body of Water?
Area To Be Treated (Approx. Sq. Ft.) Date(s) of Application	This Application is APPROVED _____ DENIED _____ Stipulations / Explanation:
	By:

Appendix 6

IPM Product List for Schools

Product Type	Active Ingredients	Product Name	Signal Word	Approved Use
Herbicide		Speed Zone	Caution	Broadleaf & weed control
Herbicide		Ranger Pro	Caution	Vegetation control, infields, fence
Herbicide		Round Up	Caution	Vegetation control, infields, fence
Herbicide		Dimension	Caution	Pre-emergent for pest control
Marker Colorant		Turf trax, signal & Other	Caution	Dye to mark sprayed areas
Herbicide		Surflan AS	Caution	Pre-emergent weed control product
Insecticide		Aerosol Wasp Spray	Caution	Yellow jacket, wasp killer

Appendix 7

PESTICIDE SPILL INCIDENT REPORT

Name _____ Date _____ Phone Number _____

Location of incident _____

Time release occurred _____ Temperature _____ Weather _____

Chemical(s) _____ Dilute _____ Concentrate _____

Approximate amount released _____

What caused the release? _____

Are there any injuries or chemical exposures? Y/N _____ Has 911 been called? Y/N _____

Are there any emergency response personnel on the scene? Y/N _____

Who? Fire _____ Police _____ Ambulance _____ HAZMAT _____

Is the pesticide near a drain or other waterway? Y/N _____ Is the drain protected? Y/N _____

Surface spilled on (soil, asphalt, etc.) _____

Are there any special problems?

_____

_____

_____

Other applicators/transporters on site? _____

Approximate amount recovered? _____

Witnesses

Name _____ Address _____ Phone _____
Name _____ Address _____ Phone _____
Name _____ Address _____ Phone _____

Injuries or Exposures?

Name _____ Address _____ Phone _____
Name _____ Address _____ Phone _____
Name _____ Address _____ Phone _____

Has an accident report been filled out? Y/N _____ Type _____

Other

_____

Name of person filling this report? _____ Date _____