

# Integrated Pest Management Plan

March 9, 2021

## City of DuPont



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## General Information

The purpose of this document is to provide City of DuPont employees with an overview of integrated pest management principles and specific policy-based direction for implementing those principles.

## Mission Statement

The mission of the City of DuPont Integrated Pest Management Program is to manage pests that are harmful to the health, function or aesthetic value of park landscapes in an efficient, effective, and environmentally responsible manner, while paying careful attention to public and employee safety. To accomplish this, the principles of Integrated Pest Management (IPM) are utilized. This progressive and sustainable approach uses multi-faceted strategies that minimize economic, health, and environmental risks.

## Asset

The City of DuPont's Public Works (PW) employees are trusted with maintaining these diverse park landscapes in a safe, attractive, healthy, and useful condition. Our parks, greenways, and facility properties represent a major component of the city's capital assets. Public Works department recognizes its responsibility to protect and preserve these economic investments to the best of its abilities. Public Works also recognizes its safety responsibilities to its employees, park users, and to the public. We seek to employ the highest professional standards while performing of their duties. To eliminate pests on city property, PW personnel utilize the principles of Integrated Pest Management (IPM). The IPM plan applies to all facilities and grounds managed by the City of DuPont.

On March 9, 2021, DuPont City Council passed a resolution that directed City of DuPont Public Works to "adopt and begin implementation of a grounds maintenance policy embodying the principles of Integrated Pest Management." Integrated Pest Management is one of the major strategies used by City of DuPont in the maintenance of parks, greenways and facilities.

## Introduction to Integrated Pest Management

Pests are small creatures that can be quite destructive to crops, food, and livestock. The Integrated Pest Management (IPM) addresses a sustainable approach to managing pests by integrating several techniques that include but are not limited to biological, cultural, physical, mechanical and chemical tools to reduce and eliminate infestations. This management plan is constructed to comply with laws and regulations.

The five objective elements of IPM plan include:

1. Preventing pest problems;
2. Monitoring for presence of a pest problem;
3. Establishing tolerable levels based on plant/human health, economic and aesthetic thresholds;
4. Treating pest problems to reduce populations below established tolerable thresholds; and
5. Evaluating the effects and efficiency of pest treatments.

IPM is based on two main principles:

1. Prevention of disease and infestation;
2. Preference for non-chemical methods for controlling pests. Synthetic chemicals will be used only when non-chemical methods are shown to be ineffective.

## Statement of Purpose

The purpose of IPM plan is to direct all City of DuPont operations to manage pests, including weeds, on all city managed property in an environmentally safe manner while also addressing health, safety, economic, legal and aesthetic requirements. The IPM plan provides a common basis for pest and vegetation management with an overall goal of applying multiple methods to include biological, cultural, physical, mechanical and chemical tools to reduce and eliminate infestations.

The IPM plan provides a holistic approach to pest management, with short and long term strategies that integrate prevention, mitigation, education and direct control techniques. It incorporates feasible and practical recommendations into ongoing practices and adoption of "best practices" where it makes sense. An effective plan requires identifying and monitoring pest populations, and then selecting the safest most effective control method.

## Pesticides

Pesticide is a widely used term for any substance used to control pest. Our main concern is for park pests. These pests include weeds, insects, disease organisms, rodents, and burrowing mammals. Our efforts to minimize and eliminate these pests, Public Works staff will determine the best methods available per guidelines and only selecting chemicals as a very last resort. Such chemicals listed in Appendix A.

City of DuPont's Public Works employees are required to comply with all pesticide label directions, federal, state, and local pesticide regulations, safety laws, and City of DuPont's practices. Misuse of pesticides will not be tolerated.

## Safety

City of DuPont's Public Works department has an exceptional safety record with respect to our use of pesticides. This is a direct result of our training and licenses required prior to application of use.

When staff uses pesticides in our public park and greenspace notifications of signs will be used as described in Posting and Notification of Pesticide Applications section of this IPM.

## Laws and Regulations

Several federal and state agencies regulate the use of pesticides. City of DuPont's Public Works conforms to all pesticide laws and regulations.

## Worker Protection Standard

The Worker Protection Standard is a Federal regulation designed to protect agricultural workers (people involved in the production of agricultural plants) and pesticide handlers (people mixing, loading or applying pesticides or tasks involving direct contact with pesticides). These rules apply only to agricultural settings, not park use. Applications of pesticides in these two areas are governed by both the City of DuPont's policy and the additional rules of the Worker Protection Standard.

These rules require training regarding pesticide exposure, protection and mitigation. They also require specific posting and reentry intervals for pesticide applications.

## IPM Guidelines and Procedures

The following is a list of IPM guidelines used when addressing and controlling pest problems on state property:

- For action to be taken, the pest population must pose a risk to human health, risk of lasting damage to property, or unacceptable aesthetic damage.
- Consider as many alternatives to managing the pests as possible, including the alternative of "no action."
- Determine each pest species' aesthetic, economic, plant, and human health damage threshold.
- Take no action against non-pests.
- Know the life cycle and natural enemies of the pest species.
- Use non-chemical methods to prevent or remove pests, such as pheromone traps, electrocuting lights, or snap traps, instead of toxic sprays and powders.
- Modify structures and change housekeeping practices to reduce pest entry and harborage opportunities.
- Replace toxic pesticides with less toxic ones, or use non-chemical techniques.
- Replace volatile sprays with non- or less-volatile baits, traps, etc.
- Use crack and crevice chemical application instead of space sprays.
- Develop strategies to maintain low ambient pest populations.
- Monitor pest levels continuously to catch infestations early.
- Recognize that in some cases there may be no viable alternative to the use of synthetic chemical pesticides.

## Landscape Management

The IPM plan considers site-specific characteristics when weighing pest management approaches. The plan includes practices that not only reduce chemical pesticide use, but also reduce energy and water use, minimize air pollution, solid waste, and chemical runoff, including gasoline, oil and antifreeze salts, compared with standard landscape practices. The plan addresses the following landscape management practices:

The planning and design of a landscape, facility or road right-of-way should take into account parameters that will:

- Enhance intended uses of the land and minimize pest problems. Designs must consider such factors as future use of the landscape, soil types, grading, slope, water table, drainage, proximity to sensitive areas, selection of vegetation, and vector control.
- Maximize landscape health by careful selection of vegetation, as well as adopting maintenance practices that keep the area healthy and as pest free as possible. Appropriate selection and retention of plants, irrigation, application of mulch or fertilizer, mowing, and many other practices all serve to maintain healthy landscapes that withstand pest pressures and support natural pest predators. A well-selected and maintained landscape reduces, often dramatically, the need for pest control.
- Ensure proper erosion and sedimentation control for ongoing landscape operations (where applicable) and future construction activity. The plan must address site, soil and potential construction materials, prevent air pollution from dust or particulate matter and restore eroded areas.

Additionally, ongoing landscape management practices will:

- Keep landscape materials out of the landfill by mulching, composting or other low-impact means.
- Limit synthetic chemical fertilizer use. The use of artificial chemicals can be minimized by planting locally adapted species. These plants typically have fewer pest problems, needless fertilizer, and have lower overall maintenance costs than non-native species.

- Include “green” landscape management practices when feasible, such as reducing the use of power equipment, improving storm water control, using fertilizer only when needed, composting landscape waste and creating wildlife habitat.
- Remove and avoid planting invasive and noxious plants, protect natural areas, and use plants to reduce heating and cooling needs of buildings and reduce heat-island effect of hard surface areas such as parking lots. Use mulching mowers when site conditions permit to reduce yard waste, fertilizer use and water consumption through build-up and retention of organic matter.

## Goals

The goals of the IPM plan are to:

1. Protect human health and the surrounding environment by employing a range of preventive strategies and using least-toxic products for pest control and eradication.
2. Inspect and monitor pest populations and locations to enhance control strategies.
3. Minimize environmental impacts by narrowly targeting application areas.
4. Establish clear criteria when pesticide use is necessary.
5. Provide tenants and visitors with advanced notice of IPM activities, especially the use of pesticides and other chemicals.

## Scope

The IPM plan applies to facilities, as well as the grounds managed by the City of DuPont.

The City of DuPont manages 12 buildings, more than 50 acres of developed grounds and public park property, 12 miles of designated trails, over 500 acres of open space and natural areas and approximately 70 lane miles of road right-of-ways.

## Responsibilities

- **Plan Review and Coordination** – The City of DuPont shall establish an IPM Advisory Committee to assist with the development and implementation of these practices.
- **IPM Plan** - The plan may contain, but is not limited to general approaches to be used by the city staff to implement this plan; planning, design and maintenance standards consistent with the IPM approach for landscapes, rights-of-way; pest tolerances (injury and action levels); typical pest management strategies for common sites or pests; noxious weed control plans; specific pesticide limitations; training plans; and monitoring, recordkeeping and evaluation strategies.
- **The IPM Supervisor** - This person is responsible for the implementation of the IPM plan to ensure that practices comply with state law, and for coordination of the pest management-related communications between the department, its tenants and the public. The coordinator must:
  1. Oversee a management plan for inspections, identification, monitoring and record retention.
  2. Coordinate IPM Advisory Committee meetings.
  3. Coordinate notification of pesticide applications.
  4. Maintain and conduct plan evaluation, recordkeeping and retention.
  5. Schedule annual training to ensure compliance with RCW [Chapter 17.15](#).
- **IPM Plan Advisory Committee** - Maintains the IPM plan and is responsible for annual review and update of the plan. The committee also assists the coordinator in resolving pest-related issues. The committee establishes an authorized products list for pesticides and other chemicals. (Appendix A) The committee, which meets annually, also addresses IPM issues. Minutes are

taken of committee meetings and kept on file by the Supervisor. The advisory committee includes the IPM Supervisor, Maintenance Works II affiliated with IPM, and City Grounds Maintenance Staff. (Appendix B)

## Training

The City of DuPont provides training to its employees on the IPM plan. Training must be provided to designated staff within six months of hiring and then on an annual basis. Training will include the rationale for the IPM plan and specific elements, including use of the pest-sighting log and prohibition on pesticide applications by non-certified individuals.

City of DuPont grounds staff are required to be Pesticide/SPI licensed and must meet Public Operator's requirements for the application of pesticides. The requirements must include 40 credits of training, and recertification every five years. Department grounds staff must have their license with them when applying pesticides. (Pesticide/SPI License: <http://agr.wa.gov/pestfert/licensinged/recert/>)

## Determining Pest Management Strategies

The following general outline will be followed when addressing pest problems:

1. **Emergency situations** - in the event of immediate threat to life, health or safety, IPM site coordinators are authorized to take action in accordance with pre-approved guidelines and follow-up with communication to the IPM coordinator regarding actions taken.
2. **Inspection** - site coordinators will direct the inspections performed for all non-emergent reported pest problems prior to any management strategy being employed. Inspections determine the actual presence and identity of the pest species, level of threat to health or property, the source of the problem, and the likelihood of further infestation. This is the point at which thresholds are determined to be exceeded or not. The inspection should also be used to determine the other factors that will influence control strategies, such as safety concerns or the presence of beneficial organisms.
3. **Recommendations** - after the inspection, the site coordinator will provide a management strategy for approval by the IPM coordinator, which may include the recommendation that no action should be taken. Management strategies should consider and include actions to achieve the following recommendations:
  - a. Monitor the pest population(s) and other relevant factors.
  - b. Accurately identify the pest(s).
  - c. Determine injury and action levels that trigger treatments.
  - d. Time treatments to the best advantage.
  - e. Spot treat for the pest.
  - f. Select least disruptive tactics.
  - g. Evaluate the effectiveness of treatments to fine-tune future actions.
  - h. Educate all involved with the pest problem.
4. **Evaluation and Approval** – A supervisor recommends and approves appropriate action.
5. **Documentation** - records should be kept of all activities, including chemical, physical, cultural and mechanical control methods. These records will be used to evaluate the results and to create a history for anticipating future pest management.

# Criteria for Selecting a Pesticide

## **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 application 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, windy or raining weather 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 effects
- 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, pollinators and other organisms.
- Environmental effects from potential bioaccumulation from materials used.
- Potential impacts to non-target plants, forage, and nesting habitat, from materials or methods.
- Potential impacts to federally listed as threatened or endangered species.
- Possible introduction or establishment of invasive plants.
- Nesting birds: For natural area invasive plant removal, the presence of nesting birds in area to be treated.
- Pollinator protection:

## **Costs:**

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:**

- Target pests and target sites of the product being used.
- Possible residual effect, decomposition pathways, rates, and breakdown products.
- Odor
- Volatility and flammability.
- Product formulation and package size.
- Leachability, solubility, and surface and soil bonding characteristics of the product.
- Ease of mixing.
- Ease of cleaning equipment after use.
- Positive and negative synergistic effects of pesticide combinations.
- Presence of “inert” constituents of the product formulation and their potential effects.

## **Other special considerations:**

- Availability of product
- 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.
- Storage considerations such as space and compatibility of materials

## Posting and Notification of Pesticide Applications

Washington State Department of Agriculture (WSDA) annually sends a list of pesticide-sensitive individuals to all certified applicators. It is the responsibility of the applicator to review this list and send appropriate notification per the WSDA notification guidelines.

The City of DuPont pesticide applicator should inform city supervisors, Grounds manager, Grounds property manager and any affected property managers of any upcoming pesticide applications. Including the pesticide being applied, method of application and location of application.

Supervisors and affected property managers should be informed of any upcoming pesticide applications being made by a contracted vendor.

## Recordkeeping

The City of DuPont will maintain records of all pest control treatments for at least three years. Information about pest management activities will be made available to the public.

The City of DuPont will use a standardized form for all pest control activities, to help with recordkeeping.

Pest management records will include:

- Target pest.
- Prevention and other non-chemical methods of control.
- Type and quantity of pesticide used, and the Safety Data Sheets for each product.
- Location of the pesticide application.
- Name of the pesticide applicator.
- Application equipment used.
- Summary of results.
- Disposal and decontamination records.

Landscape Management Records will include:

- Type and quantity of fertilizer or chemical applied and the Material Safety Data Sheets for each.
- Location of application.
- Date of application.
- Chemicals used for noxious weed control.
- Name of applicator.
- Application equipment used.
- Disposal and decontamination records.
- Summary of results.

## Definitions

- **IPM Plan** - the plan developed and used by City of DuPont to implement integrated pest management practices. The plan includes the general approach to manage specific types of sites, pests, implement training requirements, recordkeeping and evaluation practices.

- **Pest** - this includes, but is not limited to any insect, plant disease, rodent, nematode, snail, slug, weed and any form of plant or animal life or virus, except virus, bacteria or other microorganisms on or in a living person or other animal or in or on processed food or beverages or pharmaceuticals, which is normally considered to be a pest, or which the director of the Department of Agriculture (WSDA) may declare to be a pest. ([RCW 17.15.020](#))
- **Pesticide** - a chemical agent registered as a pesticide by the WSDA, which can be an herbicide, insecticide, fungicide or other chemical that repels, changes the regular growth rate of, kills or otherwise reduces levels of a targeted pest or pests.
- **Fertilizer** - any of a large number of natural and synthetic materials, including manure and compounds containing nitrogen, phosphorous, potassium and/or micronutrients, spread on or worked into soil to increase its capacity to support plant growth.

## Appendices

### Appendix A

City of DuPont Pesticide Inventory				
Location	Pesticide	Container Size	Number of Containers	SDS on hand
PW Shop	Ranger Pro	2.5 Gallon	2	yes
PW Shop	Surflan	2.5 Gallon	2	yes
PW Shop	Scythe	2.5 Gallons	1	yes
PW Shop	Talpirid	12 ox box	1	yes
PW Shop	Moss-B-Gone	32oz	2	Yes
PW Shop	Cross Bow	2.5 Gallons	1	Yes
PW Shop	Spectracide	16oz	10	Yes
PW Shop	Bifenthrin	16	1	Yes

### Appendix B

Integrated Pest Management Plan Advisory Committee	
Title	Role
Supervisor	Chair
Facilities Analyst	Tenant and Public Relations
Maintenance Worker II	Safety and Policy Review
Maintenance Worker II	Consultant
Grounds Worker	Consultant
Grounds Worker	Consultant