Everett Parks & Recreation Department

Integrated Pest Management (IPM) Guidelines

June 2014

For more than fifteen years, the Everett Parks & Recreation Department (Parks) has employed Integrated Pest Management (IPM) procedures to determine the most appropriate pest control strategies, in accordance with federal and state regulations, to maintain assigned open space. To detail the processes, criteria and procedures employed by Parks, IPM guidelines have been developed.

These IPM Guidelines provide:

(1) An overview of Parks staff training, planning, and criteria for application of IPM procedures;

(2) The results of staff research into current methods and materials available for pest control;

(3) The department's objectives for the care and ongoing maintenance of open space; and

(4) The procedural baseline for employing the range of pest control techniques available for the maintenance of Parks-managed open space, landscaped areas, forests, waterways and trails.

1. Staff Training, IPM Criteria, and Notification:

a. Parks Department staff responsible for implementing the IPM program in the parks system are trained, licensed, and certified through the Washington State Department of Agriculture (WSDA). The licensing program includes twelve license types and more than 25 examination categories. Each candidate is required to receive initial training, which consists of a two day course followed by a half-day

of testing to become licensed as a public operator. This training includes compliance with state laws, safe practices, knowledge of and adherence to labeling instructions, recordkeeping, and the calculation and calibration of tank mixing, application rates, and frequencies. After completion of the required laws & safety portion of licensing, additional training and testing for endorsements is needed. Among endorsements possessed by Parks Department public operators are those for turf and ornamental weeds, rights-of-way, insect & disease control and aquatic pest control. All licenses must be renewed annually.

Additionally, each public operator must obtain a total of 40 educational credits within a five year period to re-certify licensure. All re-certification credit classes offered must be authorized by WSDA.

With this training, licensing and re-certification structure, Parks Department public operators are qualified to assess, consider and provide recommendations and implement IPM procedures as detailed in the IPM program criteria.

b. IPM program criteria identify control techniques for pests that favor alternative uses to chemicals whenever feasible. These techniques are cultural practices, mechanical controls, biological controls and chemical controls.

- Cultural practices are management activities that reduce the incidence of pests developing due to enhancement of desirable vegetation, which "out-competes" or otherwise resists the pests. Aeration of turf, promotion of appropriate drainage, and application of mulch in bed areas are cultural practices to limit the emergence, growth and spread of weeds and invasives.
- Mechanical controls are activities performed using physical methods and/or mechanical equipment.
- Biological controls are activities that primarily use competing vegetation to control pests.

- Chemical controls are activities using a range of current U.S. Environmental Protection Agency (EPA) and WSDA-approved herbicides, fungicides, and/or insecticides.

Parks staff monitors park lands for presence of pests and pest damage, and implements control techniques as described above with the objective of managing and controlling pests in preference to eradication or elimination.

c. In instances when chemical controls are employed, notification is provided by the advance placement of signage. The department objective is to post signage at least twelve (12) hours in advance of the application, and to post signage in or near the most common public entrance area(s) of the property. Signs will indicate the planned date and time of the application; the general area; e.g., fence line, landscape bed, turf; the product applied; if needed, the timeframe to allow the product to take effect; and the phone number of either the public operator performing the work or the operator's supervisor. Notification to individuals who are registered with WSDA as pesticide-sensitive will be made at least two (2) hours prior to application. In other than emergency eradication situations directed by higher authorities, it is Parks intent to perform such applications when wind speed is five miles per hour or less, and to limit application to the specific area intended.

2. Research:

The Parks Department, through staff research and learning opportunities derived from certification class attendance at a variety of WSDA-approved class sessions, seeks the most current information on advances in IPM. Research that enables the department to effectively reduce the net usage while achieving the control objective of pesticide/herbicide/fungicide applications ranges from products that specifically target the pest to be controlled and limit broadcast applications, to products consisting of new components and blends.

As products are introduced that proclaim and demonstrate effectiveness in our testing and achieve IPM objectives, the department will employ them in the IPM program.

3. Objectives:

The IPM guidelines include the following seven objectives:

a. Establish and adhere to maintenance standards that provide for the health and safe use of Everett's variety of park lands – turf, in the form of open spaces, greenways, athletic fields, and golf courses; landscaped areas; gateways; urban forests; waterways, and park trails and their adjacent borders.

b. Use vegetation planning and design of parklands to promote healthy plants while minimizing the onset of pest problems, and thereby reducing the need for control techniques.

c. Encourage the acceptance of natural settings and appearances for the purpose of reducing pest control measures and maintenance costs. Decreasing the reliance on pesticide use in general also helps to prevent pesticide resistance in target organisms and therefore increases the effectiveness of pesticides when they are deemed necessary.

d. Manage park land condition and appearance through four established usage zones that support differing levels of maintenance.

e. Establish thresholds of IPM procedures for each zone to set action levels for maintenance.

f. Continue to train staff in IPM procedures, regulatory conditions, and Washington State Department of Agriculture licensure requirements as public operators.

g. Be equipped to comply with State directives involving the eradication of noxious weeds and emergency eradication of pests determined by the State to be hazardous to public health, economic injury, or environmental impact.

4. Procedural Baseline – Usage Zones:

Parks-managed properties are categorized in four usage zones for maintenance, including IPM assessments. These are not geographic zones, but areas that receive different levels of maintenance and consideration of IPM control techniques based on type, volume and intensity of use:

- High use
- Medium use
- Low use
- Natural settings/ no use

It is common for one park to have more than one maintenance zone, as types and levels of use within a park can and often do vary widely. For example, a park may consist of a children's play area and also athletic fields for organized sports. In this example two maintenance zones, one with more weed-tolerant protocols than the other, would be in place.

Zone maintenance applies to three general vegetative elements of Parks-managed properties:

- Turf, including ball fields for organized use, open space & play areas, and areas bordering and beneath fence lines
- Forested areas and trails, including pathways & adjacent landscapes
- Ornamental landscape beds, including containers, gateways, borders, and curb & gutter areas

Tolerance for pests is based upon thresholds established for each zone and physical element. Thresholds are used to prioritize and set action levels for maintenance of each of the four zones.

Procedures:

Turf Areas

Zone 1: High Use Turf Areas
Highly visible, public use turf areas such as sports fields, with little to no user tolerance for weeds and pests. IPM criteria in these areas are considered and generally employed to achieve the objective that no more than one to five percent of the surface has weeds present.

Zone 2: Medium Use Turf Areas
Moderately visible, public turf areas, where some weed and pest tolerance is acceptable. These may be informal open spaces for unprogrammed play, relaxation, or walking. IPM criteria are considered and generally employed when at least 15 percent of a small (36 square foot) representative sample area is weed infested or general turf quality and health is compromised in at least 10 percent of the surface area.

Zone 3: Low Use Turf Areas
A low use, low visibility, public use turf area. Higher weed and pest tolerance is acceptable in these areas, which may border playgrounds or other park amenities. IPM criteria are considered and generally employed when approximately 50 percent of a small (36 square foot) representative sample area is weed infested or general turf quality and health is compromised in at least 20 percent of the surface area.

Zone 4: Natural Turf Areas
A lawn or turf area that is naturalized, or not irrigated, or minimally irrigated, and browns out in the summer. IPM criteria are considered and generally employed for severe infestation or the presence of noxious weeds.

Forestry
Management of tree health in the urban parkland environment is part of the IPM program. These areas are maintained differently in each zone, depending upon the character of the zone and intensity of use. The numbers of pests and degree of damage that are tolerated will vary according to the assigned zone.

Zone 1: High Use Urban Forestry Areas
Features: Trees in high traffic areas such as public plazas, gateways, high visitation parks, well developed park areas, view areas, other public access areas and other properties with reasonably high visitations. Trees are generally in highly visible landscape beds or turf areas.

Pest Management: The control objective is for problems to be either reduced or observed at a very early stage and controls applied when thresholds are exceeded.

Insects and Disease: Assess insect and disease populations and identify organisms, establish proper timing of controls, and apply as thresholds are exceeded. Controls are applied when disease or insects are inflicting noticeable damage, reducing vigor of plant materials, or could be considered a risk or bother to the public. Some minor problems may be tolerated.

Zone 2: Medium Use Urban Forestry Areas
Features: Associated with trees in locations of moderate to low levels of development and/or moderate to low levels of visitation. Examples include trees in landscape beds, turf areas, medians, transportation trails, (e.g. the Interurban Trail), interpretive trails, park areas, adjacent to waterways, and golf courses.

Pest Management: Controls are for epidemics or considered when serious indications are noted, or verified concerns are communicated. Control measures may be put into effect when the health or survival of the plant material is threatened.

Insects and Diseases: Apply controls for disease or insects that are inflicting noticeable damage, reducing vigor of plant materials or could be considered a bother to the public. Some minor problems may be tolerated.

Zone 3: Low Use Urban Forestry Areas
Features: Moderately low level usually associated with low level of development, low visitation, undeveloped areas or remote parks, trees in wooded areas, green belts, and forested areas with developed trails areas designated as scenic view areas.

Pest Management: Controls may be applied when epidemic conditions threaten resources or the public.

Insects and Diseases: Controls may be applied when epidemic conditions threaten resources or the public.

Zone 4: No Use Urban Forestry Areas
Features: Little to no use areas without regular visitation and no interests for visitors. These are areas such as undeveloped remote areas or remote parks, trees in wooded areas, greenbelts, less-accessible or inaccessible waterways, or forested areas. No developed trails and no designated scenic areas.

Pest Management: Controls not usually applied, but may be applied when epidemic conditions threaten resources or the public. May also be applied to control invasive or noxious weeds as determined by Parks staff or advised to apply by County or State agencies.

Ornamental Landscapes

Ornamental Landscapes are part of the IPM program. The agency properties that are maintained include regional parks, community parks, neighborhood parks, mini parks, agency facilities, open space, gateways, rights-of-way, view overlooks, and other agency owned properties. Vegetation in the scope of the Ornamental Landscapes includes, but is not limited to: shrubs; summer annuals; winter annuals; perennials; and groundcover. Only high, medium, and low use maintenance zones apply to landscapes.

Zone 1: High Use Landscapes
Relatively high level maintenance applied to the landscape. These areas are associated with well-developed park areas, public areas and facilities with high visitation. Minor damage is tolerated at this level.

- Soil may be maintained at a level of quality that promotes healthy plant growth and reduces weeds. Soil sampling may be performed as often as needed. Mulch to retain moisture, reduce weed growth, and to present a neat appearance.
- Controls may be applied for quality of appearance.

Zone 2: Medium Use Landscapes

Medium level maintenance applied to the landscape. These areas are associated with well-developed park areas, public areas and facilities with moderate levels of visitation. Moderate damage is tolerated at this level.

- Soil may be maintained at a level of quality that promotes healthy plant growth and reduces weeds. Soil sampling may be performed as often as needed. Mulch to retain moisture, reduce weed growth, and to present a neat appearance.
- Controls may be applied for quality of appearance.

Zone 3: Low Use Landscapes

Maintenance associated with a low level of development and visitation.

- Soils may be maintained in an unaltered state or with minimal amendments. Mulch may be used to maintain weed control as needed.
- Fertilizer applied at the appropriate rate and time when necessary for plant health.
- Generally, no pest control except for epidemics, or emerging issues seriously impacting plant health. Weed control for noxious weeds.