

The University of British Columbia - Okanagan Campus

Facilities Management

# Integrated Pest Management Plan

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a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

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## 1. DEFINITIONS & BACKGROUND

Integrated Pest Management refers to a process for managing pest populations, where pests are defined as plants or animals that are detrimental to a property, a nuisance to building occupants, or unwanted on a building's grounds for other reasons.

IPM uses a combination of techniques in an organized program to suppress pest populations in effective, economical, and environmentally sound ways. An integrated pest management (IPM) approach integrates preventive and corrective measures to keep pests from causing significant problems, while minimizing risk to humans and the environment. IPM programs have a proven track record of significantly reducing the risks related to pesticides, while improving the quality, health, and welfare of the environment.

Integrated Pest Management includes the following elements:

- planning and managing ecosystems to prevent organisms from becoming pests
- identifying pest problems and potential pest problems
- monitoring populations of pests and beneficial organisms, damage caused by pests and environmental conditions
- using injury thresholds in making treatment decisions
- suppressing pest populations to acceptable levels through biological, physical, cultural, mechanical, behavioral, and chemical controls in appropriate combinations and with consideration for environmental and human health protection
- evaluating the effectiveness of pest management treatments

Pesticide application and pest control activities are regulated in BC by the [Integrated Pest Management Act](#) and [Regulations](#).

The primary goals of the IPM Act and Regulations are to:

- Establish regulatory requirements based on degree of risk to human health and the environment
- Promote environmental stewardship and integrated pest management; and
- Set clear and enforceable standards for the protection of human health and the environment.

The regulations cover the sale, use, and handling of pesticides in the province. Pesticides are categorized into 3 groups - permit restricted pesticides, excluded pesticides, and non-excluded pesticides. All applications of non-excluded pesticides require a license and a certificate. The regulations also prescribe specific record-keeping and reporting requirements, as well as public notification of pesticides application, labeling, transportation, storage, disposal practices, and precautionary measures for application.

## 2. PURPOSE

The primary purpose of this plan is to minimize the potential health, safety, and environmental risks associated with the use of pesticides.

It intends furthermore to expand upon the *UBC Board of Governors Pest Control Policy and Procedures*. As recommended in those *Procedures*, this plan will aim to minimize pesticide use by following two “critical principles”:

1.3.1: maintaining and sustaining plant and landscape health as a means of reducing the emergence of pest problems; and

1.3.2: use of the least noxious means to control a pest when it reaches a particular threshold where it is no longer tolerable to the plant and/or the property owner.<sup>1</sup>

In addition, the effective implementation of an IPM plan at the university supports UBC Okanagan initiatives such as the [Whole Systems Infrastructure Plan](#) (2016) and [Okanagan Campus Plan](#) (2015), as well as the [UBC Landscape Design Guidelines](#) (2019)—all of which emphasize the promotion of biodiversity, ecological well-being and resilience, and the protection of the natural integrity of the ecosystems on campus grounds.

Finally, following this plan will facilitate compliance with the BC Integrated Pest Management Act and Regulations.

## 3. SCOPE & APPLICABILITY

This plan applies to all interior and exterior portions of the site and grounds belonging to the core structures maintained by UBC Okanagan Facilities Management. This plan will be consulted prior to taking action on pest management in buildings or on the building grounds. All

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<sup>1</sup> [UBC Board of Governors Pest Control Policy \(UP7 – July 2019 version\) and Procedures Associated with the Pest Control Policy \(UP7 – July 2005 version\).](#)

areas where non-excluded pesticides may be used are affected by and need to comply with the above Act and Regulations, and with this plan.

## 4. BUILDING PEST CONTROL

### 4.1 Standard Operating Procedures and Implementation Strategies

- **Implementation:** The building interior and exterior will have an initial bait station program implemented and detailed on building floors plans, strategically located by the pest control vendor.
- **Maintenance:** The building interior and exterior will be inspected by the pest control vendor for the presence of pests, preventive measures will be taken to avoid pests as necessary, and maintenance of established bait stations will be performed no less than once per month. If any pests are detected, integrated (nonchemical) methods will be implemented as the first control step, followed by sanitation measures, the completion of identified exclusion measures, and the use of traps.
  - **Sanitation:** Potential food and water sources available to pests will be identified and minimized or eliminated. This can be done by thoroughly cleaning and maintaining food service areas and breakrooms, fixing leaking pipes and faucets, and altering landscape features to eliminate standing water.
  - **Exclusion:** Cracks, crevices, and holes in the building envelope will be sealed. A plant-free zone will be maintained immediately adjacent to the building.
  - **Traps:** For insects, non-chemical baits will be used to trap pests. No chemical baits for rodents will ever be used inside food services areas. Chemical rodent baits installed outdoors will only be placed in locked outdoor dispensers.
- **Pesticides:** If integrated pest control measures are unable to resolve the problem, least toxic pesticides will be used prior to resorting to the use of non-least toxic pesticides. Products that are not regulated as pesticides by the EPA because they primarily contain low-risk ingredients, such as garlic oil, may also be considered least toxic options.

**Non-least toxic pesticides:** Non-least toxic pesticides include all chemical rodent baits and may only be used under the following circumstances:

- Alternative, integrated, and least-toxic pest control measures have been exhausted and the pest issue persists.

- In this situation, notification (according to the procedures below) must be given to building occupants at least 24 hours before the pesticide is applied to the building or grounds
- Emergency action is required:
  - In this situation, notification (according to the procedures below) must be given to building occupants no more than 24 hours after the pesticide is applied to the building or grounds

The use of non-least toxic pesticides or rodenticides as pest control in areas requiring frequent treatment on a permanent basis is not an acceptable strategy. Non-least toxic pesticides will not be continuously applied in the building and on the site. Integrated and alternative pest control measures will be resumed once the pest issue has been resolved.

## 4.2 Quality Assurance/Quality Control Processes

On a quarterly basis, the Manager of Landscape and Building Services will evaluate the performance and completion of work orders. If adjustments are necessary, the pest vendor will be notified of potential performance concerns and, if applicable, building occupants will be educated on the adjustments made to the plan.

On an annual basis, the Manager of Landscape and Building Services and the pest control vendor will review overall performance based on the above-stated Purpose identified in the IPM Plan.

## 4.3 Pesticide Application Notification

The vendor will notify Facilities Management, who will notify via email the relevant building administrators, including Campus Security and Health, Safety & Environment, of the pesticide application, including the pesticide name, the EPA registration number, the treatment location, and date of the application. The building administrators are then responsible for distributing the notification to the occupants in their space.

In addition, the vendor will post a sign at the application site, such that an occupant reading the sign can choose to avoid the application area (for example, if the pesticide is applied in a break room, all entrances to the break room shall have a sign posted). The sign will also include the pesticide name, EPA registration number, treatment location, and date of application.

For an emergency application of a pesticide, anyone who requested notice must be notified within 24 hours of the application and provided with an explanation of the emergency.

## 5. LANDSCAPE PEST CONTROL

### 5.1 Standard Operating Procedures and Implementation Strategies

- **Implementation:** The landscape maintenance vendor will implement a Pest Management Plan, approved by the Manager of Landscape and Building Services, for all lawn, planting bed, and rough-cut areas of the campus. The Pest Management Plan will incorporate a Pest Prevention Plan in order to minimize need for pesticides, in accordance with the recommendations made in the BC Ministry of Environment *Integrated Pest Management Regulation - Summary of Requirements and Explanatory Notes for Landscape Pest Managers*<sup>2</sup>.

At the start of each landscape season, the landscape maintenance vendor will also provide a Schedule for annual pesticide application to UBCO for review by Risk Management Services. All work must conform to Regional District of the Central Okanagan and City of Kelowna relevant bylaws regarding noxious weed control and application of pesticides. The pesticide applicator must have a current Pesticide License from the Province of British Columbia.

- **Maintenance:** The grounds will be regularly inspected by the landscape maintenance vendor for the presence of plant pests, and preventive measures will be taken to avoid pests wherever possible. Preventative measures may include:
  - Avoiding the use of fast-acting, high nitrogen fertilizers that promote succulent, susceptible plants
  - Removing and properly disposing of dead, infested, and fallen twigs
  - Using good sanitation practices, including disposal of waste cuttings and cleaning of equipment between jobs to reduce the spread of weeds and diseases
  - Annual application of organic mulches to garden beds, including shredded leaf mulch made from campus leaf-fall
  - Using proper horticultural and arboricultural practices, including good pruning and planting techniques, as well as proper water management and drainage
  - Using optimum site design with proper soil preparation, fertility and pH for the intended plants

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<sup>2</sup>[Integrated Pest Management Regulation - Summary of Requirements and Explanatory Notes for Landscape Pest Managers](#) (February 2008), section 3.1.1: "Use of Preventative Measures Prior to Pesticide Use".

- Purchasing healthy, disease-resistant plantings
- Planting selected garden beds with weed-suppressing ground covers, such as Knick-Knick and Woodruff
- Avoiding monocultures by using a diversity of species and families of trees and shrubs
- Incorporating plants known to attract beneficial insects

Where plant pests are detected, integrated (nonchemical) methods will be applied as the first control step. These methods may include:

- Hand-weeding
  - Targeted small-flame weed burning in hardscape areas (\*seasonally, as conditions permit)
  - Solarizing (covering an area of weeds with a heavy plastic sheet)
  - Application of vinegar, salt, and/or soapy water to weeds and/or insects
- **Pesticides:** If integrated pest control measures are unable to resolve the problem, and it has been determined that the injury threshold<sup>3</sup> for the plants in question has been exceeded, least-toxic pesticides, such as Iron Chelate (Fiesta) will be used prior to resorting to the use of non-least toxic pesticides. Products that are not regulated by the EPA because they primarily contain low-risk ingredients may also be considered least toxic options.

Non-least toxic pesticides: Non-least toxic pesticides such as glyphosates (Roundup) may only be used when integrated and least toxic pest control measures have been exhausted and the pest issue persists.

- In this situation, notification (according to the procedure in 5.3) must be given to all affected users of the area at least 48 hours *before* the pesticide is applied.

The use of non-least toxic pesticides or pesticides as pest control in areas requiring frequent treatment on a permanent basis is *not* an acceptable strategy. Non-least toxic

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<sup>3</sup> “Injury threshold” means the point at which the abundance of pests and the damage they are causing or are likely to cause indicates that pest control is necessary or desirable. (As detailed in the *Integrated Pest Management Regulation - Summary* [February 2008], section 3.1.4: “Determining the Injury Threshold for Each Pest and Applying it to the Determination of When to Use a Pesticide”.)



pesticides or pesticides will not be continuously applied to the site. Integrated and alternative pest control measures will be resumed once the pest issue has been resolved.

All applicators must be aware of the appropriate handling and use procedures required to protect human health and the environment. Applicator must implement the appropriate precautions to prevent unprotected human exposure to pesticides, and protect domestic water sources and soil.

Prior to January 31 of each year, the landscape maintenance vendor will submit a BC Ministry of Environment annual report on pesticide application to the Administrator, Integrated Pest Management Act, documenting use of all non-Excluded pesticides in that calendar year<sup>4</sup>.

## 5.2 Quality Assurance/Quality Control Processes

On a quarterly basis, the Manager of Landscape and Building Services will evaluate the effectiveness of current IPM measures. If adjustments are necessary, the landscape maintenance vendor will be notified of potential performance concerns and, if applicable, affected stakeholders will be educated on adjustments made to the plan.

On an annual basis, the Manager of Landscape and Building Services and the landscape maintenance vendor will review overall performance based on the above-stated Purpose identified in the IPM Plan.

## 5.3 Pesticide & Pesticide Application Notification

The landscape maintenance vendor or licensed applicator must provide the appropriate public notification when such notification is required<sup>5</sup>.

At least 72 hours prior to using a non-least toxic pesticide, the licensed applicator or landscape maintenance vendor must provide a Treatment Notice to the Manager of Landscape and Building Services.

Public Notification is required least 48 hours prior to using a pesticide in an outdoor area that is

- within 5 metres of an entrance or a window to living accommodations, or

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<sup>4</sup> As specified in the [BC Integrated Pest Management Regulations](#) (2012), section 2.16: "Reporting and Record Keeping Requirements".

<sup>5</sup> As specified in the BC Ministry of the Environment *Integrated Pest Management Regulation – Summary* (February 2008), section 2.4: "Public Notification".

- maintained for purposes of public passage or recreation

Immediately following use of a non-least toxic pesticide, the licensed applicator must provide written notice to the Manager of Landscape and Building Services, giving notice that the pesticide use occurred and of any differences between the information given in the treatment notice and the actual pesticide use.

A Public Notification posted treatment notice must contain the following information:

- Description of the treatment area
- Name of the targeted pest(s)
- The pesticide registration number and active ingredient
- Proposed date and start time of the pesticide use
- Name and license number of the applicator, contact name, and phone number
- Precautions that should be taken to minimize exposure to a pesticide or its residues
- Safe re-entry time

The notice must be legible to an approaching person adhering to the following requirements:

- Size of posting: at least 550 cm<sup>2</sup>
- Made of water-resistant material
- Contain a clear cautionary symbol and bold, block letters with the words "NOTICE OF PESTICIDE USE" or "HERBICIDE".