



UNIVERSITY OF NORTH DAKOTA

INTEGRATED PEST MANAGEMENT PLAN

Reviewed/Approved
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I. PURPOSE

The University of North Dakota (UND) endeavors to provide safe, effective pest control that is compatible with all the research laboratories and buildings across campus. UND has implemented this Integrated Pest Management Plan for use in all UND work places as pest control is important because insects, rodents, and other pests:

- Carry disease-causing organisms on or in their bodies
- Can cause physical damage to building facilities
- Contaminate and compromise the research environment

The overall goal of this plan is to achieve zero pest population in all UND buildings and inter-connecting pedestrian tunnels. The UND Integrated Pest Management Plan is based on the World Health Organization's Laboratory Biosafety Manual, 3rd Edition, Centers for Disease Control and Prevention (CDC) Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Edition (Appendix G), and National Institutes of Health (NIH) Biomedical and Animal Research Facilities Design Guidelines.

II. SCOPE

The Integrated Pest Management Plan will address these common pest problems in building across UND and procedures for dealing with them. This Plan should be used by Facilities Management or assigned individual whose duties include implementation of this Pest Management Plan. The Integrated Pest Management Plan may be managed by an outside source, such as a pest management contractor. The Director of Facilities Management will determine the selection of the pest management contractor.

III. RESPONSIBILITIES

All Faculty, Staff, and Students: Responsible for reporting the Director of Facilities Management and Office of Safety for pest species infestation upon their first observation. The Director of Facilities Management will notify the Associate Director of Safety if pests are observed in the laboratories or process equipment. All staff members are responsible for keeping food containers secured with a lid during transport. All staff must be respectful and clean by wiping up their spills in hallways or on tables where food is present.

Director of Facilities Management: Manage the pest management contractor and contracted cleaning activities.

Biological Safety Officer (BSO): Will share the Pest Management Contractor reports with the Institutional Biosafety Committee (IBC).

Building Service Technicians: Will ensure that all food wastes are removed from the facility on a daily basis and that all spills or food remnants are removed from environmental surfaces daily. All recycle containers and trash receptacles that receive food waste must be clean and dry.

Pest Management Contractor: Will provide written reports as well as findings and observations directly to the Director of Facilities Management and Associate Director of Safety.

Office of Safety: Responsible for reviewing and updating the Integrated Pest Management Plan annually or more frequently if necessary to reflect any new or modified tasks.

IV. PEST MANAGEMENT

The Integrated Pest Management Plan will include the following coverage by the Pest Management Contractor or by the Facilities Management:

- All species of crawling insects and related arthropods. This includes, but is not limited to cockroaches, silverfish, ants, crickets, spiders, bees, flies, wasps, and all other arthropods. Mosquitoes are included.
- Rodents to include but not limited to rats, mice, gophers, rabbits.
- Pest birds, including pigeons, sparrows, and starlings.

V. PROCEDURE(S)

General Practices for the control of unwanted pests at UND include the following actions:

1. **Securing Garbage and Trash:** Since garbage may contain food leftovers attractive to rodents and insects, all collected waste are stored for pickup in rat-proof containers or are kept in a rat-proof room constructed of materials that cannot be easily gnawed.
2. **Sanitation and Housekeeping:** Cleanup to reduce cockroaches and mouse in the office environment at UND focuses on the food residue in and around coffee machines, microwave ovens, refrigerators, trashcans, and furniture where exposed food is stored. Occupants are encouraged to store all food in tightly sealed containers and for cleaning surfaces on which food is prepared or consumed. Daily trash pickup is recommended for all food service areas at UND. Common practices include removal of corrugated cardboard as it provides excellent harborage for cockroaches. Furthermore, regular steam cleaning or pressure washing of all possible structural crevices and equipment is carried out in trash rooms and food service areas for cockroach control. Similarly, for mouse control strict attention to cleanliness is followed in all food service areas.
3. **Caulking:** Permanent reduction of cockroach populations may be achieved by eliminating harborage. UND employs this strategy to control cockroach population by completely sealing the entire crevice so that cockroach access is totally eliminated. Types of space where caulk or grout has been most effective include food service areas, restrooms, and janitors' closets.
4. **Sealing Entry Points:** For rodent control the common practice utilized at UND is blocking of access routes or entry point with caulk, copper mesh, steel wool or polyurethane foam. This method has been beneficial to control infestation by young mice as they can squeeze through cracks just wider than one-quarter inch.
5. **Crack and Crevice Spraying:** At UND spraying is the most practical and effective way to apply pesticide in food service areas, restrooms and trash rooms. Spray is precisely applied in small amounts only to cracks and crevices. A "crack and crevice" treatment implies that the stream of insecticide is never visible during the spraying process.
6. **Sticky Traps:** Many types of cardboard or plastic sticky traps are available at UND to help the pest control technician or installation personnel pinpoint sources of cockroach infestation, or monitor areas where occupants have complained but no infestations can be visually detected. Sticky traps are not intended for control but rather to guide and evaluate control efforts as part of the inspection process at UND.
7. **Trapping:** Indoor control of rats and mice is accomplished with snap traps and large glue boards. Traps and boards are checked regularly during weekly service visits by the Pest Management Contractor.

General Practices for the control of unwanted pests (insects, rodents, predators, etc.) in the Center for Biomedical Research (CBR) facility housing animals at UND include the following actions:

The Pest Management Contractor visits the CBR animal facility every week and also comes upon request. The CBR Director reviews and approves all products used and any required modifications within the program. In non-animal areas and in outside areas of the center, such as in storage, feed, receiving, and mechanical rooms, and entrance areas, mouse glue boards and mouse traps are used and replaced as needed (i.e., seasonal). The CBR office notifies each principle investigator individually if a potentially toxic insecticide is deemed necessary for pest control. To date, the UND pest control program has been effective and no insecticides have been used in the CBR facility.

VI. REPORTING PROCEDURE

UND requires the Pest Management Contractor to provide reports on work performed. UND requires reports and logs must be maintained to date and must contain at least the following information:

- A. Pest Problem: Target pest, pest identification.

- B. Pesticide applied, trade name or chemical name (EPA Registration Number optional), quantity and rate of application expressed as a percentage of product applied.
- C. Location of infestation and treatment area.
- D. Date and time of treatment.
- E. Signature and license number of certified pest control technician who did the work.
- F. Signature of UNDs Facilities personnel attesting to the work completed.
- G. Follow-up reports as required by UND.

VII. PROGRAM EVALUATION

Each department is required to comply with the Integrated Pest Management Plan. UND expects its employees to adhere to all aspects of this Plan. These procedures have been established to eliminate or reduce exposure to pests. Without commitment of both employer and employees to safety and health in this workplace, employees are likely to suffer illness.

It is procedure to evaluate the effectiveness of this Integrated Pest Management Plan on a regular basis. It may accomplish these evaluations in a variety of ways including:

- Employee self-evaluations and safety recommendations
- Self-directed audit