



**MASSACHUSETTS AUDUBON SOCIETY
POLICY ON THE USE OF PESTICIDES
June, 2004**

Background

Pesticides include a variety of chemicals developed for controlling organisms that are considered pests by humans. They are widely used in agricultural, residential, commercial, and industrial settings. Pesticides have also been used in ecological management to control undesirable invasive plant and animal species, pests and diseases. They are also widely used to control animals that spread human diseases.

No matter how worthy the goal, the use of pesticides incurs some risk to the environment and human health, even when pesticides are used in full accordance with label recommendations. Pesticides have been implicated in the decline of various species of birds, the deaths of non-target plants and animals, and negative effects on human health. In addition to direct toxicity to target and non-target organisms, some pesticides may bioaccumulate in the food chain and cause lethal and sub-lethal interference with biochemical processes in non-target organisms. Sub-lethal effects may include reduced reproductive success, disruption of a variety of hormonal systems, teratogenic effects (i.e., malformation of embryos), and other effects. Documenting sub-lethal effects has proven difficult and many claims of deleterious effects remain controversial. Target organisms may also develop resistance to pesticides, resulting in reduced control of target populations and the emergence of secondary pests. It is clear that the long-term ecological and health effects are not fully understood, and some level of risk is involved in the use of pesticides. Because pesticides can be effective tools in ecological management but potentially pose some level of ecological and human health risk, care must be exercised in deciding, if, when, and how they will be used.

Definition and Exclusions

This policy is intended to govern the use of pesticides on Massachusetts Audubon Society (Mass Audubon) properties. Pesticides are defined under United States law to include any substance or mixture of substances intended for preventing, destroying or mitigating any pest. This definition includes the following classes of substances: algicides, antifouling agents, antimicrobials, attractants, biocides, disinfectants and sanitizers, fungicides, fumigants, herbicides, insecticides, miticides, microbial pesticides, molluscicides, nematocides, ovicides, pheromones, repellants, rodenticides, defoliants, desiccants, insect growth regulators, and plant growth regulators. All pesticides are registered and regulated by the United States Environmental Protection Agency.

This policy is primarily intended to govern the use of pesticides for the following purposes: terrestrial and aquatic vegetation management and aquatic algae control; insect pest control; invasive species control; and, plant disease control, including diseases caused by fungi, bacteria, and nematodes.

This policy does not apply to the use of insect and tick repellants, disinfectants, sanitizers, or

chemicals used to increase the decay resistance of wood.

Any proposed use of a pesticide not specifically included or excluded in the previous two paragraphs will be evaluated and approved or disapproved by the Conservation Science and Ecological Management Division (CSEMD) Vice President, in consultation with the Programs Division Vice President, on a case-by-case basis.

Policy

Because invasive species are one of the most significant threats to biodiversity and the nature of Massachusetts, Mass Audubon recognizes the need to use pesticides for ecological management and the protection of biodiversity when alternative measures are not feasible.

Mass Audubon recognizes that while there are beneficial uses for pesticides, damage to the environment and human health may result from the indiscriminate, improper, or excessive use of pesticides. Since we do not fully understand the long-term sub-lethal effects of pesticides, damage to the environment is possible with some pesticides even if they are used according to approved protocols. For these reasons, Mass Audubon's policy is to limit the use of pesticides only to address significant ecological management issues in support of clearly defined management goals, threats to public health and safety, and other applications where reasonable alternatives do not exist.

Mass Audubon's use of pesticides will be in accordance with the principles of adaptive management. Pesticides will only be used as part of an integrated pest management (IPM) approach which includes: monitoring for pest presence and population levels; avoidance of property management practices that encourage the establishment or spread of pest species; implementation of preventative measures to avoid pest establishment and spread; identification of thresholds for action; consideration of a full range of viable alternatives for control, including a no action alternative; and accurate record keeping to inform future management decisions. Pesticide use will be monitored to assess efficacy and non-target effects, and the results of monitoring will be used to inform future decisions on pesticide use.

When pesticides are used, they will be used only in accordance with label requirements and in a manner that minimizes potential non-target effects. Pesticide use will be in full accordance with all federal and state regulations and any applicable local requirements. Mass Audubon will seek to use target-specific, non-persistent pesticides that do not bioaccumulate. Where feasible and cost-effective alternatives exist, pesticide use will be avoided. Pesticides used on Mass Audubon properties will only be applied by properly trained and licensed personnel, and all such pesticides will be securely stored, handled, and disposed of in a manner consistent with all federal, state, and local requirements.

Implementation

1. The Annual Planning Process is the Standard Review and Approval Procedure

In most cases pesticide use for ecological management projects will be identified, reviewed and approved as part of the annual planning process. During this process, written proposals for projects involving the use of pesticides will be prepared as specified in section 2(b) below. Proposals will be submitted to and reviewed by the sanctuary director or site manager responsible for the property where the proposed pesticide use will occur, the regional director, and the regional scientist and approved in accordance with annual planning procedures. The Advocacy

Department will be provided with copies of proposal application forms for review and comment. The regional scientist will forward a copy of all proposals for pesticide use to the CSEMD Vice President for review and approval or disapproval.

Pesticide use for ecological management will only be approved for projects consistent with site management goals, as specified in the site ecological management plan, or in accordance with ecological management goals approved by the sanctuary director or site manager, the regional director, and the regional scientist.

2. The Review and Approval Procedure for Other Projects

Anyone proposing a project that involves the use of pesticides is expected to submit that project for review during the annual planning process as described in section 1 above. Other projects, except for minor uses, as provided in section 4 below, and emergency uses, as provided in section 5 below, will be reviewed and approved in accordance with the following provisions:

- a) Specific proposals for the use of pesticides will be prepared by or in close coordination with the appropriate regional scientist and sanctuary director or site manager responsible for the property where the pesticides will be used. The regional scientist for the region in which the proposed pesticide use will occur will be responsible for coordinating the review process and will consult with the regional director. The regional scientist and sanctuary director or site manager responsible for the property where the pesticides will be used must approve the proposal.
- b) Proposals for the use of pesticides will be summarized on the Pesticide Application Project Summary Form appended to this policy and will include the following:
 - 1) identification of the project manager and personnel;
 - 2) a description of the proposed project and how it is consistent with site management goals and the goals of the Mass Audubon Invasive Species Strategy where relevant;
 - 3) a discussion of alternatives to pesticides that were considered;
 - 4) a description of the pesticide to be used;
 - 5) citations for references regarding use restrictions, environmental persistence and degradation products, and potential environmental and health concerns;
 - 6) a description of pesticide application methods;
 - 7) a description of any issues related to compliance with federal, state, and local regulations;
 - 8) the identification of any abutting properties, drinking water supplies, rare species, or other sensitive resources potentially affected by the proposed pesticide use;
 - 9) a description of the proposed monitoring program;
 - 10) for projects involving the control of invasive plants, a description of restoration measures planned for areas cleared of vegetation; and
 - 11) estimates of the cost and labor required for the project.

Information contained in the Mass Audubon Invasive Species Management Handbook should be incorporated by reference to fulfill project information requirements wherever possible.

- c) People submitting proposals for research projects that involve the use of pesticides on Mass Audubon sanctuary lands will file a Sanctuary Research Application. This might include

research on the non-target effects of certain pesticides or the efficacy of specific levels of pesticide to control an invasive species. Contact the CSEMD for this application.

- d) The regional scientist will forward a copy of the proposal to the Advocacy Department. The Advocacy Department will relay any concerns that department may have over the proposed pesticide use (e.g., consistency with Mass Audubon advocacy positions on the use of chemicals to control power line rights of way) to the regional scientist, regional director, and CSEMD Vice President.
- e) Proposals will be submitted to the CSEMD Vice President, or his designee, for final review and approval or disapproval.

3. Multi-Year Projects and Project Changes

- a) Projects involving multi-year use of pesticides shall be reevaluated annually by the project manager, the sanctuary director or site manager responsible for the property where the project is located and the regional scientist. Multi-year projects will be reviewed and re-approved through the annual planning process.
- b) The regional scientist and/or project manager will inform the sanctuary director or property manager responsible for the property where the pesticide use occurs, the regional director, the Advocacy Department, and the CSEMD Vice President any time significant departures from the original project plan are proposed (e.g., change in the type of pesticide used, change in the application method, increase in area of application, etc.) or if there are obvious major unintended or unexpected consequences of the use of pesticides. The CSEMD Vice President will determine if the proposed departure from the project plan requires further review and approval.

4. Minor Uses

The following uses of pesticides are deemed minor uses. As such, the sanctuary director or site manager may authorize these uses without additional approvals, except as specified in this section. All sites subject to the requirements of the Massachusetts Children and Families Protection Act (Chapter 85 of the Acts of 2000) must have an up-to-date Integrated Pest Management Plan prepared in accordance with the requirements of the act, prior to any use of pesticides, including minor uses, and the use of pesticides must be in full accordance with that plan. All minor uses will be recorded and reported annually to the regional scientist. All minor pesticide uses must be in full compliance with federal, state, and local requirements. Wherever feasible, minor uses should be avoided by employing physical controls, modification of operating procedures, or other alternative approaches.

- a) Application of insecticides for the control of hornets, bees, and wasps that pose a potential health threat to humans.
- b) Application of herbicides to control poison ivy in program areas, which are defined as spaces where program participants may be assembled for nature study, play, or rest, and areas of passage such as walkways, stairs, steps, bridges, boardwalks, and the linear space immediately adjacent.
- c) Control of termites, ants, and other pests posing a threat to the structural integrity of buildings and other infrastructure.

- d) Application of small quantities of herbicides to control vegetation interfering with line of sight and creating a bona fide safety hazard at traffic intersections on Mass Audubon properties, provided such use is implemented as the initial step of a plan to permanently solve the problem through physical, cultural, or other methods not requiring repeated or regular herbicide use. For example, where woody vegetation is removed to clear lines of sight at intersections, stump painting with herbicides may be used to prevent resprouting, provided provisions are made to prevent the reestablishment of woody vegetation through regular mowing, physical barriers, or other methods not requiring the use of herbicides.

5. Emergency Uses

The President of Mass Audubon may authorize the emergency use of pesticides in a manner consistent with all applicable federal, state, and local requirements, if deemed in the best interest of Mass Audubon and in compliance with the organization's goals, priorities, and policies. An authorization of emergency use will obviate the review process specified in sections 1 and 2 above. In authorizing emergency use of pesticides the President will consult with the CSEMD Vice President and the Programs Division Vice President.

6. Standards of Use

The following standards will be applied in projects involving the use of pesticides.

- a) All pesticide use will be in accordance with all federal, state, and local requirements. Mass Audubon or contractors hired to apply pesticides will be licensed as required by the commonwealth of Massachusetts.
- b) All projects involving the use of pesticides will include monitoring to assess the efficacy of the treatment and a description of the monitoring protocols is required in the project application. Monitoring results will be summarized annually for multi-year projects. The regional scientist will approve all monitoring plans. A final monitoring report will be prepared at the completion of the project by the project manager. Copies will be maintained by the sanctuary director or site manager responsible for the property where the pesticide use occurs and the CSEMD. Monitoring for minor and emergency uses may be anecdotal.
- c) Complete records of pesticide application will be maintained as required by state law. This will include: the pesticide used, the name of the applicator, method of application including equipment used, strength of active ingredient, and application rate. The amount of time required to perform the treatment on a unit area basis will also be recorded. A copy of the material safety data sheet will be included with the record of pesticide application. Copies of records will be maintained by the pesticide applicator, sanctuary director or site manager responsible for the property where the pesticide use occurs and the CSEMD. Pesticide applicators will use the appended Pesticide Application Record to record pesticide applications and will maintain and submit all reporting forms required by the Massachusetts Pesticide Bureau.
- d) All pesticides will be securely stored, handled and disposed of in a manner consistent with all federal, state, and local requirements.
- e) Appropriate personal protective equipment (PPE) will be worn by all pesticide applicators and personnel likely to be exposed during pesticide use.

- f) Any contractors hired to apply pesticides will be properly licensed by the commonwealth of Massachusetts and properly and adequately insured. A certificate of insurance with required coverage must be obtained in advance from the proposed contractor prior to the application of pesticides and reviewed with the Vice President for Operations. Required insurance coverage includes worker's compensation, vehicle liability and general liability, and pesticide/herbicide applicators liability coverage for bodily injury and property damage in the amounts specified in the appended Contractor Pesticide Application Record. Any chemicals used by said contractors will be reviewed and approved by the sanctuary director or site manager responsible for the property where the pesticide will be used. The sanctuary director or site manager should consult with the regional scientist regarding proposed chemical use and application procedures by contractors. Contractors must complete the appended Contractor Pesticide Application Record.
- g) If volunteers are used to assist in implementation of projects involving the use of pesticides, care will be taken to prevent any exposure of volunteers to pesticides. Only volunteers that are licensed as pesticide applicators in Massachusetts may assist with the actual application of pesticides on Mass Audubon properties. Volunteer pesticide applicators must provide proof of the same insurance coverage required of contractors (see appended Contractor Pesticide Application Record).
- h) Where pesticides are used in areas open to the public, appropriate educational materials and/or signage will be developed and provided to the public to explain the purpose and goals of the project.

7. Pesticide Use by Others on Mass Audubon Properties

- a) In some instances, the Mass Audubon allows others to lease or otherwise use Mass Audubon property for agriculture. These uses are sometimes longstanding and are continued for a number of reasons, including deed requirements and community relations. In some cases, pesticides may be used on these properties. Where Mass Audubon allows the use of its land by others for agriculture, it will encourage the use of integrated pest management approach and crop selection practices to minimize pesticide use and will otherwise encourage practices that are in conformance with this policy.
- b) Utilities own rights-of-way across some Mass Audubon sanctuaries. In some instances, pesticides may be used by utilities on these lands, particularly for vegetation control. Terms of the easement for these rights-of-way may grant utilities the right to conduct such management actions. Where such conditions exist, Mass Audubon will work to ensure that pesticide use is in full conformance with state and federal law and the legal requirements of the easement. Mass Audubon will encourage utilities to use an integrated pest management approach and practices in compliance with the principles of this policy.
- c) In instances where others propose to apply pesticides on or directly adjacent to Mass Audubon property in response to public health concerns, such as mosquito borne diseases, Mass Audubon will encourage compliance with the principles of this policy and Mass Audubon's policy on mosquito control.

Policy Review and Modification

The regional scientists and the Advocacy Department will assess the implementation of this policy annually and make recommendations to the CSEMD and the Programs Division regarding any modifications deemed necessary or desirable to ensure that pesticide use is in full accordance with the Massachusetts Audubon Society's mission and goals.

Laura A. Johnson, President

Date

Mass Audubon Pesticide Application Project Summary Form

Please provide the information requested below. Wherever possible, reference supporting and background information from the Mass Audubon Invasive Species Management Handbook rather than appending it to this form.

1. Project name and location:
2. Project manager and personnel:
3. Project description, schedule and goals:
4. Describe how the project is consistent with sanctuary management goals and, where relevant, the goals of the Mass Audubon Invasive Species Strategy:
5. Alternative to pesticides considered:
6. Indicate the pesticide that will be applied and the approximate quantity that will be used. Provide EPA registration number of the pesticide:
7. Append or cite background information on the pesticide to be used, including use restrictions, environmental fate, and potential environmental and health concerns:
8. Description of proposed pesticide application methods:
9. If any difficulties or issues relating to compliance with any local, state, or federal regulations are anticipated, please describe:
10. Identify abutting properties, drinking water supplies, rare species, or other sensitive receptors that could be impacted by the proposed pesticide use:
11. Describe the proposed monitoring program and attach monitoring protocol:
12. If the project involves extensive killing of vegetation, describe restoration measures proposed to avoid recolonization of the site by invasive or other undesirable species:
13. Estimated cost and labor requirements for the project:

Pesticide Application Record

Massachusetts Audubon Society, 208 South Great Road, Lincoln, MA 01773

Place of application:

Date of application:

The brand or registered name of the pesticide: Rodeo

Roundup

Other: _____

The EPA registration number of the pesticide: 524-343 (Rodeo)

524-475 (Roundup)

Other: _____

The amount of pesticide applied:

The purpose for which the pesticide was applied: Weed control. Target species: _____

Other: _____

The method of application:

Knapsack/backpack sprayer

Cut stump application; "painting" technique

Other: _____

The person(s) certified or licensed by the Dept. of Food and Agriculture who participated in the planning and execution of the application:

Accidents or incidents resulting from the use of a pesticide that caused pollution:

The amount of liability insurance carried and the name of the insurer:

Ground Application – Bodily Injury Liability	\$1,000,000 each occurrence
	\$1,000,000 aggregate
Property Damage Liability	\$1,000,000 each occurrence

Independent Insurance Agent: Brewer and Lord LLC : Norwell, MA

Company Name: Scottsdale Insurance, Co.

Any illness or injuries caused by or suspected to have been caused by pesticides and reported to the applicator:

