

## Pesticides & The Chesapeake Bay Watershed Project

### *Integrated Pest Management (IPM) and Organic Policy on Government-owned & Managed Land in the United States*

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**State policies eliminating or restricting pesticide use** on state-owned and managed property serve as an important measure of public health and environmental protection, given the widespread chemical exposure associated with the management of 195 million acres of land area across the United States, affecting virtually all residents. Land and buildings can be managed cost-effectively through Integrated Pest Management (IPM), a precautionary approach that adopts preventive practices for insect, rodent and landscape problems and reduces or eliminates toxic chemical use. Organic landcare eliminates chemical pesticide use. Given the current concerns regarding nutrient and pesticide runoff impact on the Chesapeake Bay, agencies of state and local government can assist in runoff reduction and be a model for Maryland by working toward a goal of making government-owned land phosphorus and pesticide-free.

**Four states** require or recommend the use of IPM practices in the management of state property. Of those, four states – CA, CT, ME, NJ – have the goal of pesticide reduction, minimization, or elimination of unnecessary use. This is known as “prioritized strategic IPM.”

**Six states** – AZ, MI, MN, OH, OR, WA – which have non-prioritized IPM policies for state property, do not specifically establish a goal of pesticide reduction and simply use a combination of methods without priority being given to non-chemical practices, reduction goals or least-toxic chemicals.<sup>1</sup>

**IPM** is a term that is used loosely with many different definitions and practices. Central to this concept is the degree to which the IPM definition allows toxic chemical use or gives priority to preventive non-chemical and least-toxic management. Organic land care focuses on feeding the soil, as a healthy soil can eliminate the need for chemicals. The U.S. Environmental Protection Agency and the Centers for Disease Control recommend the use of an IPM program emphasizing non-chemical ways of reducing pests, such as sanitation, maintenance, and good soil health.

IPM promotes non-chemical methods of pest prevention and management and then using least toxic pesticides only as a last resort. Within an IPM program for turf and landscapes, there is an established protocol. It is based on a systems approach that integrates soil health, plant vigor, and proper cultural practices. The goal is to put a series of preventative steps in place so that problems do not arise. If problems do become an issue, they generally are easier to deal with. Careful monitoring and the development of acceptable threshold levels must be established in the protocol. This complete program should mitigate most serious pest pressures. If a pest has not successfully been managed or controlled by the above strategies, the least toxic chemical controls can be used. Preference is given to a natural product first, and then to least toxic synthetic pesticides.

**Organic Land Care** eliminates the use of and exposure to pesticides in management of public spaces, playing fields, lawns, and landscapes. It promotes non-chemical methods of pest prevention and high-quality turf management. This is achieved by establishing and maintaining a soil profile rich in microbiology – producing strong, healthy turf that can withstand insects, weeds, disease, drought and heat. Within a program for turf and landscapes, there is an established protocol, based on a systems approach integrating soil health, plant vigor and proper cultural practices. The goal is to follow a series of preventive steps to reduce the chance that problems will arise. Then, if problems do become an issue, they generally are easier to address. Only non-chemical products are used to address turf and landscape issues. Careful monitoring and development of acceptable threshold levels must be established in the protocol. This complete program should mitigate most serious pest pressures.<sup>2</sup>

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<sup>1</sup> <http://www.beyondpesticides.org/stateipm/stateipmreport/stateofipm-lowres.pdf>

<sup>2</sup> <http://www.osborneorganics.com/index.html>

**State policies can influence** the direction of practices used by local jurisdictions (villages, towns, cities and counties) and private lands – setting a tone that either encourages or discourages pesticide-dependent practices. State IPM policy seeks to reduce or eliminate hazardous pesticide use on state-owned property and requires the use of clearly defined least-toxic pesticides only as a last resort (two states: CA, NJ). Local ordinances are increasingly important in institutionalizing IPM and organic landcare and similar concepts in the management of public property. Local efforts share a common goal of pesticide reduction or elimination through prevention and non-chemical strategies.

**Local policies** often include pesticide reduction or elimination goals. Some towns are adopting organic practices on parkland or all town properties (e.g. Plainville, CT, Lawrence, KS, Townsend, Marblehead, MA, Cleveland Heights, OH. Pesticide reduction policies, such as bans on the most toxic categories of pesticides and pesticide reduction goals (e.g. New York City, San Francisco, Seattle, and other cities), protect public health by contributing to pollution prevention. More than 100 political subdivisions have IPM/pesticide reduction ordinances, which vary from county-wide policies to pesticide-free parks, within 17 states (CA, CO, CT, FL, IA, KS, ME, MA, MN, NJ, NM, NY, NC, OH, OR, PA, WA), not counting school IPM laws. Eight of the 17 states have some form of state IPM policy, and all but one have a state preemption law restricting localities from limiting pesticide use on private property.<sup>3</sup>

**A majority of Canadian provinces** have taken the strongest measures in North America regarding bans on cosmetic pesticide use and encouragement of IPM and organic landcare. The strongest of these laws is in Ontario, Canada’s most populous province.

Alberta	Bans weed-and-feed combination products. Considering cosmetic pesticide ban.
British Columbia	Requires all landscape and lawn-care companies use IPM techniques; province is considering a comprehensive ban on cosmetic lawn pesticides, similar to Ontario.
Manitoba	Bans cosmetic fertilizers; actively considering a comprehensive ban on cosmetic pesticides.
Newfoundland	Actively considering ban on cosmetic lawn pesticides.
New Brunswick	Comprehensive ban on lawn care pesticides. Targets combination fertilizer/pesticide products, granular spreadable weed killers, hose-end products and lawn care pesticides that require measuring, mixing or dilution by the homeowner.
Nova Scotia	Provincial government is formally planning a comprehensive ban on cosmetic pesticides, similar to Ontario.
Ontario	Comprehensive ban on use of more than 250 lawn care pesticides and over 80 pesticide ingredients for cosmetic use. Bans sale of pesticides "for cosmetic purposes on lawns, gardens, parks and school yards, and includes many herbicides, fungicides and insecticides". Ontario’s environment minister reported in April 2011 that two years after the ban went into effect, urban water quality has improved markedly. <sup>4</sup>
Prince Edward Island	Comprehensive ban on lawn care pesticides; covers 240 products, many of which contain 2,4-D. Also bans any pesticide sold in concentrated or granular form.
Quebec	Comprehensive ban on cosmetic pesticides; particularly targets 2,4-D.
Saskatchewan	Considering ban on lawn care pesticides.

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**The Pesticides and the Chesapeake Bay Watershed Project** was established in 2007 by the Maryland Pesticide Network and the Johns Hopkins Center for a Livable Future. The Project is the first working group in Maryland dedicated to reducing the occurrence and risks of pesticides in the Bay watershed, in order to protect water quality, aquatic life, wildlife and public health. Project participants include scientists, public health experts, waterkeepers, watermen, federal, state and county government agency representatives, representatives of the agricultural and pest management industries and environmental organizations.

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[www.mdpestnet.org](http://www.mdpestnet.org)

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<sup>3</sup> <http://www.beyondpesticides.org/stateipm/stateipmreport/stateofipm-lowres.pdf>

<sup>4</sup> [http://news.sympatico.cbc.ca/local/on/pesticide\\_ban\\_improving\\_water\\_quality\\_minister/d0f6872c](http://news.sympatico.cbc.ca/local/on/pesticide_ban_improving_water_quality_minister/d0f6872c)