



# BEYOND PESTICIDES

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Statement of  
Beyond Pesticides  
for  
Maine Board of Pesticide Control Board Meeting

August 19, 2016

Thank you for the opportunity to address Maine's Board of Pesticide Control (MBPC). I am presenting these comments on behalf of Beyond Pesticides, a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to improve protections from pesticides and promote alternative pest management strategies that reduce or eliminate a reliance on toxic pesticides. Our membership spans the 50 states, the District of Columbia, and groups around the world. We are submitting this statement on behalf of our members who are residents of the state of Maine.

We appreciate the opportunity to speak to MBPC regarding the need to protect the health of Maine residents and the wider environment from the adverse effects of pesticide exposure. These chemicals have been linked to a range of diseases that are all too common in today's world, including cancer, reproductive problems, respiratory illness and asthma, Parkinson's, Alzheimer's, diabetes, and learning disabilities. Children and the elderly, vulnerable population groups that suffer from compromised immune and neurological systems, as well as those with preexisting health conditions are at particular risk from the effects of pesticide exposure.

## **Toxic Effects of Pesticides May Be Unaddressed by the State of Maine**

Recent developments in understanding the toxicity of pesticide and other industrial chemicals underlines the urgency of reducing and eventually eliminating use and exposure to hazardous substances. Modern toxicological science is currently upending the classical adage that "the dose makes the poison." Endocrine disrupting chemicals (EDCs), defined as any substance or mixture that alters the function of the endocrine (hormonal) system, and consequently results in adverse effects on an organism, reveal this concept to be outdated. Rather than showing increased adverse effects on an individual as the amount exposed to an EDC increases, the latest science finds in fact that low, infinitesimal amounts of exposure to EDCs can result in the greatest adverse health impacts.<sup>1</sup> These chemicals, many of them pesticides, are often found in our waterways at environmentally relevant concentrations. A study performed by the United States Geological Survey (USGS) found 85% of male smallmouth bass and 27% of male

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<sup>1</sup> Vandenberg et al. 2012. Hormones and Endocrine-Disrupting Chemicals: Low-Dose Effects and Nonmonotonic Dose Responses. *Endocrine Reviews*. 33(3): 378-455.

largemouth bass tested in waters in or near 19 National Wildlife Refuges, including two located in the state of Maine, were intersex, a condition where one sex develops characteristics of the other sex. As USGS notes in its press release on the study, “[intersex] is tied to the exposure of fish to endocrine-disrupting chemicals that can affect the reproductive system and cause the development of characteristics of the opposite sex, such as immature eggs in the testes of male fish.” Fred Pinkney, PhD, a USFWS contaminants biologist and study coauthor, ultimately recommends, “To help address this issue, the U.S. Fish and Wildlife Service encourages management actions that reduce runoff into streams, ponds and lakes -- both on and off of refuge lands.”<sup>2</sup> While EDCs can result in intersex conditions for fish and amphibians, the effects on humans are often more subtle. Because EDCs act by mimicking and/or blocking estrogen and androgen receptors in the body, studies have linked EDCs to developmental and reproductive effects such as endometriosis and fibroids, and breast, thyroid, and testicular cancers.<sup>3</sup>

### **Local Protections Must Not Be Preempted by Inadequate Standards at the State and Federal Level**

In order to truly protect the health and environment of communities in Maine, Beyond Pesticides strongly encourages local efforts to stop the unnecessary use of hazardous pesticides applied for aesthetic purposes. We find this approach, facilitated and empowered by the state of Maine’s laudable support of local authority and home rule, to be the most effective in filling the gap in health and environmental regulation left unaddressed by current state and federal regulatory systems. And communities in Maine show no signs of allowing this authority to languish. Over 25 local communities have in some fashion restricted pesticide use beyond minimum state requirements, with 19 of these localities addressing pesticide applications to both public and private properties. In 2014, the town of Ogunquit adopted through a ballot initiative a comprehensive measure eliminating the unnecessary use of toxic pesticides on public and private green spaces. Ogunquit did not eliminate all pesticide use, but instead aligned itself with the growing recognition that for a wide range of purposes, particularly cosmetic appearance, the benefits of toxic pesticides simply do not outweigh the risks to health and the environment. It is in this same vein that the City of South Portland has passed through its first reading of comprehensive aesthetic pesticide restrictions, and the City of Portland is looking on and considering its own action on this issue.

Given the significant interest of Maine communities to go beyond state and federal law, Beyond Pesticides would like to respectfully express its concern that MBPC is not presenting the public with an even-handed consideration of pesticide reform. Over the last year, MBPC had indicated it would promote a consumer education campaign on pesticide use, yet such a campaign has not materialized to date, and the current agenda does not provide a platform to discuss this issue. A letter published in the *Portland Press Herald* criticizing South Portland’s ordinance was added to the agenda packet, yet a rebuttal, co-authored by Beyond Pesticides’ executive director and Heather Spalding, deputy director of the Maine Organic Farmers and Gardeners

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<sup>2</sup> USGS. 2015. Intersex Prevalent in Black Bass Inhabiting National Wildlife Refuges in Northeast. <https://www.usgs.gov/news/intersex-prevalent-black-bass-inhabiting-national-wildlife-refuges-northeast>.

<sup>3</sup> Vandenberg et al. 2012. Hormones and Endocrine-Disrupting Chemicals: Low-Dose Effects and Nonmonotonic Dose Responses. *Endocrine Reviews*. 33(3): 378–455; Hunt et al. 2015. Costs of Exposure to Endocrine Disrupting Chemicals in the European Union. *The Journal of Clinical Endocrinology and Metabolism*. <http://dx.doi.org/10.1210/jc.2015-2873>.

Association (MOFGA) also published in the *Potland Press Herald* shortly after, was glaringly absent until requested to be added by a well-respected scientist and citizen. We appreciate the addition of our op-ed albeit belatedly. To ensure its widespread distribution and your consideration of the points made, we are including it here. With more and more communities in Maine interested in moving toward safer practices around pesticide use, we hope that MBPC will work to expand education on alternatives to pesticides through public outreach and applicator training, such as it is currently doing through its accreditation of the Northeast Organic Farmers Association's Organic Land Care program for continuing education credits for pesticide applicators.

We look forward to working with MPBC to ensure that communities across the state of Maine implement the strongest possible protections from toxic pesticides. Thank you for the opportunity to submit these comments.

## Appendix A

Portland Press Herald

MAINE VOICES

Posted 4:00 AM June 21, 2016

# Maine Voices: As debate over pesticides ramps up, let's dispel a number of myths

The EPA hasn't provided a long-term look at the effects of toxic lawn and garden materials.

BY JAY FELDMAN AND HEATHER SPALDING SPECIAL TO THE PRESS HERALD

Towns and cities nationwide are going organic in the management of land within their jurisdictions because it eliminates the use of chemicals that have known environmental and public health hazards.

Maine is on the forefront for good reason, being a coastal state with waterways that need protection and steeped in the tradition of marine biologist Rachel Carson, who, with the publication of "Silent Spring" over 50 years ago, alerted the nation to the adverse effects of DDT and other pesticides on people and wildlife.

Since the 1960s, as U.S. pesticide use to kill insects, weeds and fungus has climbed to nearly a billion pounds a year, with per-acre use in parks, home lawns and golf courses in some cases higher than in agriculture, a number of safety myths have emerged and are voiced in Charles McNutt's June 17 Maine Voices on South Portland's proposed lawn-pesticide ban.

- **Myth 1: Our health is adequately protected by the federal Environmental Protection Agency and the Maine Board of Pesticides Control.**

While Maine relies on the EPA for the underlying assessment of pesticides' legal use patterns and allowable harm, epidemiologic and laboratory studies link pesticide use to disease outcomes, including cancer, neurological and immune system effects, reproductive disorders, Alzheimer's and Parkinson's disease, respiratory problems and learning disabilities. The effects on vulnerable population groups, such as children and those with pre-existing health conditions, are elevated. The American Academy of Pediatrics concluded in 2012: "Children encounter pesticides daily and have unique susceptibilities to their potential toxicity. ... Recognizing and reducing problematic exposures will require attention to current inadequacies in medical training, public health tracking and regulatory action on pesticides."

- **Myth 2: The environment is adequately protected by the EPA and the state.**

The ecological hazards of pesticides and their impact on complex biological systems in nature

are even less studied than human health effects. With the severe decline of bees and other pollinators, the EPA recently acknowledged that bees experience many indirect exposure pathways to a widely used bee-toxic insecticide, such as contaminated surface water, plant sap, soil and leaves, and said it “lacks information to understand the relative importance of these other routes of exposure and/or to quantify risks from these other routes.” This deficiency extends to the life-sustaining microbiome, or microbes, in the soil and in mammalian species, performing critical digestive, immune and biological functions.

• **Myth 3: EPA toxicity classifications assess the full range of acute and chronic effects.**

The toxicity classification of pesticide products does not tell the full story because it is limited to immediate effects and not long-term illnesses, such as cancer. Equally important, incomplete data are not a part of the classification. So the public is not aware that the pesticides have not been tested for their ability to disrupt the endocrine system, the message center of the body, or the increased toxicity associated with mixtures of multiple pesticides on a treated lawn or playing field.

• **Myth 4: Pesticides used on private and public property stay where they are used.**

Pesticides move off the use site through drift and runoff. Those not allowed for indoor use find their way into houses through air currents and being tracked inside. According to the U.S. Geological Survey, the overwhelming majority of the most popular pesticides have been detected in surface waters, including popular herbicides.

In referring to various pollutants, including pesticides and fertilizers, the Maine Department of Environment Protection [states on its website](#), “Individually small amounts of pollutants may seem insignificant, but collectively they add up to create the largest source of pollution to Maine’s waters.” As a result, pesticide use on all property is a community public and environmental health concern.

• **Myth 5: Beautiful lawns require toxic pesticides.**

Toxic pesticides are not necessary for beautiful turf, just as they are not needed in a \$40 billion organic food industry. Organic turf systems focus on building soil health to support healthy lawns that do not threaten the health of children and pets that play on them.

Numerous practices and organic-compatible products work in concert with nature to enhance soil biology and the resiliency of grass and other plants, and cycle nutrients naturally. They also reduce energy and water use, sequester atmospheric carbon and provide business opportunities for retailers and service providers. It’s a win-win for health, the environment and business.

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#### ABOUT THE AUTHORS

**Jay Feldman** is executive director of the Washington-based Beyond Pesticides, a national group with membership in Maine. **Heather Spalding** is deputy director of the Maine Organic Farmers and Gardeners Association in Unity.