

# summary of report

## inner-city pesticide use as an environmental injustice



**a boston neighborhood case study**  
neighborhood pesticide action committee



NPAC



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## summary of report

It has been well established that working class communities and communities of color in Massachusetts are disproportionately burdened with environmental toxins due to the unequal distribution of such hazards as toxic waste sites and commercial/industrial polluters. This report contends that the use of pesticides may be an additional contributor to the toxic burden in many of these communities. In the pages that follow, we show the application of pesticides to be a significant additional assault in the case of one Boston neighborhood, Jamaica Plain. This case provides evidence that pesticide use must be among the environmental hazards that are weighed in determining environmental risk and burden in our communities.

This report provides a detailed analysis as to why we need to replace current pesticides with safer alternatives. At the present time, there are more than 6,000 certified pesticide products on the market with over 500 registered active ingredients. Of these 500 ingredients, 90 percent were certified 25 to 45 years ago. This means that there are hundreds of pesticides sold to the public containing ingredients that were assessed based on standards much less rigorous than those that are deemed acceptable today.

Our city and town parks departments and our state government have become habituated in their use of pesticides to kill weeds and insects, often justifying their use with research

conducted as much as 20 to 30 years ago. Many of our public health departments include pesticides in their arsenal against such illnesses as West Nile virus and Eastern Equine Encephalitis (EEE), despite the relatively low risk these illnesses pose to overall public health. Residential pesticide use has increased by over 25 percent in the past decade in Massachusetts. The Centers for Disease Control and Prevention has found that, at any given time, 25 percent of Americans contain 2,4-D (the most commonly used chemical pesticide in the U.S.) in their bodies, with children carrying higher levels than adults. 2,4-D has been linked to human cancer and was banned by the European Union in 2003. Nevertheless, our state government, local municipalities, and the general public continue to overlook the facts. What is now known and supported by indisputable evidence is that when we use chemicals to harm other living things, they almost always cause similar harm in humans.

The writing of this report was inspired by the discovery that the neighborhood of Jamaica Plain (where the Neighborhood Pesticide Action Committee [NPAC] is conducting a campaign for pesticide-free parklands) has been identified as the 15th most intensively environmentally burdened of the state's 362 communities. A study from the Philanthropy and Environmental Justice Research Project documenting the unequal distribution of environmental hazards in poor and minority communities has found that

*pesticide use needs to be among the environmental hazards that are calculated in determining environmental burden.*

Jamaica Plain has more active hazardous waste sites within its borders than 348 other communities in Massachusetts. NPAC has re-analyzed the original data used for this study with respect to Jamaica Plain. We have found that within the three square miles of Jamaica Plain's borders, there is a one-square-mile section that is burdened with over three-quarters of all of its environmentally hazardous sites and a full two-thirds of its most severely hazardous sites. In this one square mile, there are currently 76 unremediated hazardous waste sites in what we refer to in this report as the Southwest Corridor Park (SWCP) community. A joint report by MIT and the Boston Public Health Commission has called the SWCP community "a hot spot of environmental risk."

Our research and analysis has found the following:

- **There is an historical legacy of toxic-waste dumping, poor air quality, and industrial pollution in minority communities throughout Massachusetts.** Because environmental pollutants play a role in the health disparities seen in poor communities of color in the state, these facts need to be communicated to residents, health and environmental groups, and public officials.
- **Jamaica Plain ranks as the community with the sixth largest percentage of people of color in the state.** Fifty percent of the

population are ethnic minorities, and 21 percent of the population live below the poverty level.

- **Asthma rates in poor communities of color in Massachusetts are 50 percent higher than in the state's white affluent communities.** The asthma hospitalization rate among children ages five and under living in Jamaica Plain is 20 percent higher than the overall Boston rate. In contrast, the three predominantly white neighborhoods surrounding Jamaica Plain have rates 35 percent below the overall Boston rates.
- **There is now ample evidence that pesticide exposure increases a person's risk of developing asthma and cancer, among other illnesses.** Similar to other toxic chemicals produced by polluting industries and leaching waste dumps, pesticides have the potential to cause harm to humans. Common pesticide products that have been used in parks, such as 2,4-D, Roundup, and resmethrin, are known respiratory irritants that have been reported to trigger the onset of asthma attacks. Children under the age of one that have been exposed to pesticides show increased rates of asthma.
- **Research studies have consistently found a greater likelihood of susceptibility to the adverse effects of pesticides among children.** The National Academy of Sciences Committee on Children's Health states that the

“critical differences” between child and adult susceptibility to illness have prompted the need for children’s health to be held to a standard different from that used for adults. For example, a six-month-old child will receive twice the exposure of an adult when in the presence of a pesticide, and that child’s lungs and cells, which are not yet fully developed, can sustain permanent damage. In six recently published studies, home pesticide use during pregnancy or childhood was found to be associated with childhood acute leukemia.

- **Inner-city children especially bear the burden of greater exposure to numerous environmental toxins, including pesticides.** Use of pesticides in urban areas carries particular risks due to urban density coupled with other factors, such as the persistence of pesticides in both the outdoor and indoor environment, which are detailed in this report.
- **There is no system in place that allows a citizen of Boston to know on any given day what pesticide is being used and where.** The MBTA regularly sprays herbicides along its tracks without notifying the public. Warning flags in city parks are highly ineffective at keeping kids away; children either cannot or do not read them. Adults not fluent in English cannot read them either and often do not know their meaning. Pesticides typically remain dangerous for weeks to months after flags have been removed.

- **In certain areas of Jamaica Plain, residents have no choice but to use the public parks, even if they fear for the parks’ effect on their health.** The most densely populated areas of the city contain much more built environment than private open space. Residents of these neighborhoods simply have fewer choices as to where they might enjoy outdoor space or where their children might play. If residents must use public parks as their only source of outdoor space, then this becomes an environmental justice issue, especially when that lack of choice is disproportionately born by a poor minority community.
- **State and local policies do not adequately protect citizens and often reach poor communities last.** The evidence presented in this report suggests that preventing public exposure to chemicals suspected of causing cancer and asthma should be a priority. Yet state laws protect children only while they are on school grounds, and local laws protect only our wealthiest communities.

In order that residents’ health be protected, the public has, first and foremost, a right to know and be adequately informed of risks to their health that are before them. Additionally, policies that protect all citizens must be instituted and passed by state legislators. (For up-to-date information about bills before the Massachusetts legislature concerning pesticides and public health, go to

www.healthytomorrow.org.) Lastly, local actions to reduce pesticide use should be employed by residents and encouraged by city and state officials.

We hope this report will

- (1) provide information for SWCP residents on their community's environmental burden and serve as a model for others to follow in researching their own community's pesticide burden;
- (2) increase health and environmental organizations' understanding of the effects of pesticides on human health and the environment and its link to environmental injustice so that the practice of promoting environmental justice can be effectively integrated into the work that these organizations undertake; and
- (3) communicate to public officials and city and state agencies the need for changes in the policies and practices in the use of pesticides at the community, city, and state levels.

This could be accomplished firstly by employing the precautionary principle\* to protect the public from the hazards of using pesticides in public spaces; and secondly by expanding the state's environmental justice definition to include pesticides as hazards that can impact the environmental burden in a community.

\*The precautionary principle holds that "precautionary measures" should be taken when an activity threatens to harm human health or the environment, even if it has not been fully established scientifically that harm will result.





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