

# Introduction

## Purpose

*The Environmental Health of Multnomah County* provides an assessment of our environment, and highlights hazards in the community that may impact human health. It fulfills a core public health service, that of monitoring health status to identify community health problems. This resource document is the second in a series of health assessment reports conducted by the Multnomah County Health Department, and is part of our continuing commitment to provide the community with important health information. We hope that it will bring new depth to a continuing dialogue between the community and health professionals on factors that influence public health, so that together we can establish health priorities and continue to realize our vision of healthy people in healthy communities.

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## What is environmental health and why is it important?

Environmental health is a branch of public health that “focuses on the relationships between people and their environment, promotes human health and well-being, and fosters a safe and healthy environment.”<sup>1</sup> According to a recent national survey, Americans are very much aware of the link between environment and human health. Ninety percent of Americans believe that environmental pollutants are important causes of disease. Further, 75% feel that they or a close family member live in a community where environmental pollutants such as air and water contaminants, hazardous wastes, and pesticides are a problem.<sup>2</sup> Scientific evidence linking environment to human health supports this belief.\* The Centers for Disease Control and Prevention has estimated that 16% of all preventable deaths in the United States can be attributed to environmental factors. Researchers at the World Health Organization estimate that environmental factors may cause up to 33% of diseases worldwide. And one study of pediatric illnesses indicates that environmental pollutants may account for 5% of cancers, 30% of asthma cases, and 10% of neurobehavioral disorders, with costs exceeding \$55 billion annually.<sup>3-5</sup>

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Although many public health departments take seriously the possible health threats coming from the environment, others have noted public health’s shortcomings. More than a decade ago, the Institute of Medicine (IOM) presented a report arguing, in part, that environmental health had become disconnected from public health: “The removal of environmental health authority from public health agencies has led to fragmented responsibility, lack of coordination, and inadequate attention to the health dimensions of environmental problems.” Among IOM’s many recommendations was a call to public health departments to identify, understand and control environmental problems as health hazards.<sup>6</sup>

\* *Social environment, biology, behavior, and health care access also play important roles in human health.*

**Who is this report for?**

This report is for anyone interested in an examination of Multnomah County’s environment and its possible impacts on human health. Anyone living within the Portland metropolitan region may find this report of special interest. We anticipate that this report will also appeal as a resource document to community organizations, public agencies, policy makers, public health professionals, and students.

**What does this report cover?**

This report is a community resource on Multnomah County’s environmental health. It provides an in-depth examination of selected environmental factors that influence human health. Each chapter focuses on nationally recognized environmental factors and provides data for several environmental health indicators, along with baseline data from previous years in order to highlight trends. We have examined the quality of our County’s air and water, its waste, occupational health, food-borne illnesses, unintentional injuries, and other environmental factors, and we have linked these to human health data- where it exists.

**What is not covered?**

While this report contains a wealth of information on the County’s environmental health, it is not a report of solutions. It does not prioritize issues or direct steps to be taken to address environmental health problems. In most cases, we do not advocate for or against any environmental health policies. We have sought simply to identify and understand factors in the physical and built environment in Multnomah County that may be health hazards. A more focused environmental health assessment is under way to address environmental problems in specific communities within the County (see PACE EH below).

This report addresses many environmental health issues; however, the list of topics is not exhaustive. There are other environmental health issues that do not appear in this report. Examples of topics not covered are radiation, mold and mildew, institutional health, environmental noise, and odors. In some cases, data for these environmental factors were difficult to obtain, inconsistently collected, or nonexistent. In other cases, time and staff resource constraints limited the number of environmental factors we could cover.

Finally, we were not able to show direct links between environmental exposures and human health problems. Measuring the actual health problems stemming from the environment is difficult, especially for chronic diseases such as cancer, birth defects and asthma.<sup>7</sup> Cancer is especially difficult to tie to environmental causes, primarily because the time between exposure and the detection of the cancer can take many years. Therefore, many chapters in this report rely upon environmental health indicators.

**What are environmental health indicators?**

Environmental health indicators are measures that assess health status or risk as

it relates to the environment. The best indicators, according the Centers for Disease Control and Prevention, are those that “reliably predict the relationship between human health and the environment, are routinely collected, and have well-accepted definitions and data collection standards.”<sup>8</sup>

We relied greatly upon environmental health indicators developed by the Washington State Department of Health. Health researchers from this state recognized the need for an environmental health addendum to the Assessment Protocol for Excellence in Public Health (APEX/PH), developed by the National Association of City and County Health Officials (NACCHO) in 1991. These indicators are organized into major environmental topics – air, water, food, etc. – and each topic presents several environmental indicators. Indicators are of two types. Health status indicators measure health outcomes that can reliably be assumed to result from environmental exposure. An example of this is the foodborne illness indicator stemming from contaminated food. Environmental exposure indicators measure conditions or activities with the potential to expose humans to a contaminant or hazardous condition. Examples of these include air contaminant releases and hazardous waste sites.

### Sources and Objectives

All data used in this report are secondary data – that is, data collected by other organizations. No primary data – i.e., new data, for the purpose of this project – were collected. The data were obtained from local, state, and federal agencies charged with monitoring a specific environmental factor. We have provided the most currently available data, and present data over several years in order to analyze trends. In many cases, data go back five years or more. We cannot guarantee the quality of the data, and in most cases we are not able to provide an in-depth analysis of data limitations. The availability and quality of the data vary by public agency.

Data by themselves are not very meaningful without something to compare them to. In many cases we compare ourselves to Oregon. In some cases we compare the County to the Nation and to other counties. The most useful comparisons come from national objectives found in **Healthy People 2010**, a resource developed by the U.S. Department of Health and Human Services, with input from more than 350 national organizations and 250 State public health and environmental agencies. It provides 467 10-year health objectives in 28 focus areas to target national health improvement activities for the Nation. Healthy People 2010 includes many health objectives that are relevant to the indicators in this report, including 30 environmental health targets. Environmental health indicators for Multnomah County are compared against Healthy People 2010 objectives whenever possible\*.

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\* For more information on the development of Healthy People 2010, visit their website at <http://www.healthypeople.gov>.