



# THE COLLABORATIVE ON HEALTH AND THE ENVIRONMENT - WASHINGTON



## RESEARCH AND INFORMATION WORKING GROUP

### DRINKING WATER

#### FACT SHEETS ON HEALTH AND ENVIRONMENT IN WASHINGTON

##### INTRODUCTION

Access to a supply of clean, safe drinking water is essential for human life. Without water, human life cannot be sustained for more than about three days.

The average person consumes about half a gallon of water a day. Drinking water can contain chemical contaminants and micro-organisms harmful to health. Contaminants in drinking water have been linked with a variety of different types of diseases and disabilities, including cancer and birth defects. Exposure to toxic chemicals and micro-organisms in lakes and rivers can result in health effects as well.

Many chemical contaminants, including heavy metals such as lead and cadmium, pesticides, and other types of organic chemicals have been detected in drinking water. Some of the greatest concerns are associated with the presence of chemical by-products in chlorinated drinking water.

People are exposed to contaminants in drinking water through washing, showering and cooking, as well as by actually drinking.

##### DRINKING WATER IN WASHINGTON STATE

- Between 1998 and 2002, a total of 84 contaminants were found in tap water in Washington, including pollutants from agriculture, the urban environment and industry. Tap water also contains water treatment and distribution by-products, naturally occurring substances, and unregulated compounds.<sup>1</sup>
- Seattle's watershed controls are among the best in the country according to the Natural Resources Defense Council (NRDC), but 14% of Seattle homes tested for lead exceeded the national action level of 15 parts per billion.<sup>2</sup>
- More than five million of Washington's nearly six million residents are served by 16,717 public water systems. Most of them are privately owned.

- The U.S. Environmental Protection Agency (EPA)'s school action level for lead is 20 parts per billion. In 2004-2005, 7.2% of samples from Washington state public elementary schools were at or above this level.<sup>3</sup>
- The U.S. Geological Survey found pesticides in 30% of public supply wells in Washington. Frequently detected pesticides included atrazine, simazine, prometon, DDE, te-buthiuron and metribuzin. Another study with different detection levels detected pesticides in 6% of wells.<sup>4</sup>
- The National Water-Quality Assessment (NAWQA) Program studies surface and ground water in a large part of Washington, including the central Columbia plateau. DDE, the most common breakdown product of DDT, was found at study sites on the plateau. At 22% of these sites, DDE concentrations exceeded guidelines established for protection of aquatic life.<sup>5</sup>
- Many other compounds were detected in the waters of the central Columbia plateau. Of these, only Lindane and DCPA (Dacthal) have not been banned from use.<sup>6</sup>

## **COMPARING WASHINGTON STATE NATIONALLY**

According to a national assessment, Washington state's drinking water quality was the 17th worst of 42 states from 1998-2000, as judged by the number of contaminants detected, the number of contaminants over health limits, the total population exposed, and the population exposed over the health limits.<sup>7</sup>

## **SOURCES**

- 1 <http://www.ewg.org/tapwater/statereports/statereport.php?state=WA>
- 2 <http://www.nrdc.org/water/drinking/uscities/pdf/seattle.pdf>
- 3 [http://www.doh.wa.gov/ehp/dw/Publications/331-326\\_11-05\\_web.pdf](http://www.doh.wa.gov/ehp/dw/Publications/331-326_11-05_web.pdf)
- 4 <http://wa.water.usgs.gov/pubs/fs/fs122-96/>
- 5 <http://wa.water.usgs.gov/pubs/fs/fs170-96/>
- 6 [http://wa.water.usgs.gov/pubs/fs/fs170-96/images/fs-170-96\\_other.gif](http://wa.water.usgs.gov/pubs/fs/fs170-96/images/fs-170-96_other.gif)
- 7 <http://www.ewg.org/tapwater/national/>