

DOC-OR HR/H. "Environmental Radiological Surveillance Report on Oregon Surface Waters."

En8/2. 1994: 961-93. (Reviewed by Tracy Maloney)

This informational report is a government document released by the Oregon Department of Human Services, Radiation Protection Services sector. Through graphs, figures, and simple explanations, the text documents the impact of worldwide atmospheric nuclear weapons testing and discharges in the Columbia, Snake, Willamette, Klamath, and Coastal river basins. Furthermore, the material and data were taken to observe possible human health effects due to waterborne radionuclides. The task was to evaluate the public health significance of the levels of radioactivity in the Oregon environment. The report documents changes in radioactive waste effects from 1961 to 1993.

Radioactivity in the Willamette surface waters originated from both natural and artificial sources. Aside from the description of how and where these pollutants entered the river, the report also gives a detailed historical account of the Gross Beta Activity flux since 1961. The Hanford site in Richland, Washington for example was a major contributor to Oregon Rivers during the early 1960s and 1970s. By taking samples of river water, the Health Division of the Department of Human Services has monitored radioactivity levels, as well as specific radioactive elements, because of the potential public health significance.

Critique

This report is very informational and illustrates the data clearly with graphs, pie charts, and pictures. These graphs also reveal pollution levels of the rivers in comparison to the others, allowing the reader to easily determine which rivers were at the greatest risk during specific time periods. This report is a wonderful resource for a variety reasons.

First of all, it is a government document and therefore the data is reliable and thorough. It also provides historical information on the Gross Beta Levels (radioactivity) of various Oregon Rivers throughout the years since 1961. Additionally, there are complete, evidence-supported descriptions of the various sources of radioactive pollution within the rivers, ranging from the Hanford nuclear site in Washington to atmospheric nuclear weapons testing in China.

One disadvantage to the general reader however is that certain radioactive elements are referred to without description of what they are. For example, the article uses terms such as ruthenium 103, 106, zirconium-95/nickel-95. Without some necessary layman's terms, a reader without a scientific background could be confused. Just the same, this report is very helpful in tracking pollutants within the Willamette and other rivers that are potentially harmful to human health.

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