

Hazardous Waste Sites, Stress, and Neighborhood Quality in USA

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Summary

Seven neighborhoods adjacent to hazardous waste sites were surveyed. The authors found that respondents did not rate their neighborhoods as highly as Americans as a whole, but, like most Americans, they did rate their present neighborhood better, or the same as, their previous one. The adjacent hazardous waste site was mentioned as distressing more often than any other neighborhood characteristic. Yet in four of the seven neighborhoods, dilapidated buildings and streets, odors and smoke from sewage treatment plants and factories, noise from trains and traffic congestion, or another neighborhood characteristic was mentioned as more stressful than the hazardous waste site. It is argued that government needs to be more aggressive about understanding community viewpoints before proposing multi-million dollar hazardous waste remediation plans that could be resisted by a community.

Introduction

Approximately two million Americans live within a mile of one of the 1,200 abandoned hazardous waste sites considered sufficiently dangerous to be on the US Environmental Protection Agency's (EPA) National Priority List (NPL) for cleanup (MMWR, 1992). The EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) in the USA are charged with determining health and environmental impacts at these sites. They conduct risk assessments which estimate the likelihood that additional cancers, birth defects, and other health and environmental impacts may occur as a result of exposures to toxins originating at waste sites (National Research Council, 1991; MMWR, 1992). But hazardous waste sites may impact life in ways that might not be related to the outcomes of risk assessments. A site may frighten residents into selling their homes at a loss, may cause people to suffer depression and other symptoms of stress, and may cause them to hate their neighbors and neighborhood even if it does not cause additional cancers. Economic impacts have been studied using contingent valuation and hedonic forecasting

models. The bulk of research suggests impacts do occur, but usually are limited to an area within one-quarter mile (400 m) of the site (Smith and Desvousges, 1986; 1987; Hoehn, Berger and Blomquist, 1987; Skaburskis, 1989; McClelland *et al.*, 1990; Michaels and Smith, 1990; and Greenberg and Hughes, 1992 and 1993).

The frequency and magnitude of any psychological impact is less well documented and is the focus of this paper. There are good reasons to expect serious psychological stress. Many national surveys show that hazardous waste is perceived to be one of the public's major concerns. The Roper, December 1987 and January 1988 surveys for the EPA reported that over 60 percent of respondents believed that hazardous waste sites are "very serious" problems (Roper Organization, 1987-1990). Out of the 28 environmental/occupational issues, active and inactive hazardous waste sites ranked first and second. The proportion answering "very serious" actually rose in the 1989 and 1990 Roper surveys. Sixty-eight percent of respondents to the August 1990 Roper survey considered hazardous waste sites a "very serious" threat to nature and 65 percent considered them a threat to public health. Louis Harris surveys (1980, 1990) also found that the public believes hazardous waste sites are a threat to health and the quality of life. The importance of hazardous waste sites is also apparent among citizens' groups. Freudenberg (1984) asked 100 community groups to rank

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