



Project Summary

Characterization of Household Hazardous Waste from Marin County, California, and New Orleans, Louisiana

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There is a growing concern that certain constituents of common household products, that are discarded in residential garbage, may be potentially harmful to human health and the environment by adversely affecting the quality of ground and surface water. A survey of hazardous wastes in residential garbage from Marin County, California, and New Orleans, Louisiana, was conducted in order to determine the amount and characteristics of such wastes that are entering municipal landfills. The results of this survey indicate that approximately 642 metric tons of hazardous waste are discarded per year for the New Orleans study area and approximately 259 metric tons are discarded per year for the Marin County study area. Even though the percent of hazardous household waste in the garbage discarded in both study areas was less than 1 percent, it represents a significant quantity of hazardous waste because of the large volume of garbage involved. The comparison of estimates for the New Orleans and Marin County study areas shows that the types of hazardous wastes discarded in the two areas are very similar in both the rate of discard and composition, even though the communities are very different in socio-demographic structure.

This Project Summary was developed by EPA's Environmental Monitoring Systems Laboratory, Las Vegas, NV, to announce key findings of the research project that is fully documented in a

separate report of the same title (see Project Report ordering information at back).

Introduction

There is a growing concern that certain constituents of common household products may be potentially harmful to human health and the environment by adversely affecting the quality of ground and surface waters. These household products are often discarded in residential garbage. The accumulation of these wastes in municipal landfills and other solid waste disposal facilities regulated under Subtitle D of the Resource Conservation and Recovery Act is of major concern. A survey of hazardous wastes in residential garbage from Marin County, California, and New Orleans, Louisiana, was conducted in order to determine the amount and characteristics of such wastes that are entering municipal landfills. Based on measurements of household wastes discarded in the New Orleans and Marin County study areas, it appears that, at least, 0.35 to 0.40 percent of the garbage being discarded is hazardous. The average household in this study discarded approximately 55 to 60 grams of hazardous waste per week (not including contaminated containers and articles such as used paint brushes, oily rags, etc.). This is approximately 642 metric tons of hazardous waste discarded per year for the New Orleans study area and approximately 259 metric tons per year for the Marin County study area.

The preliminary analysis of the data reported here only includes the weight of that portion of the waste that contains the hazardous ingredients. Therefore, the total weight of hazardous waste reported in this study will represent a conservative estimate of the actual hazardous waste generated when compared to other EPA studies in which contaminated container weights, contaminated article weights, etc., are included in the hazardous waste estimates.

A total of 11.4 and 15.4 metric tons of household garbage was collected from the New Orleans and Marin County study areas, respectively. Based upon an analysis of this waste, it was estimated that the New Orleans study area generated 17,120 grams of household garbage per household per week for a total of 3,533,572 kilograms per week or 184,381.8 metric tons per year. Likewise, it is estimated that the Marin County study area generated 13,990 grams of household garbage per household per week for a total of 1,240,993 kilograms per week or 64,755.1 metric tons per year. Even though the percent of hazardous household waste in the garbage discarded in both study areas was less than 1 percent, it represents a significant quantity of hazardous waste because of the large volume of garbage involved.

The two most numerous hazardous waste type groups in both the New Orleans and Marin County study areas were batteries and electrical materials, and selected cosmetics. It was estimated that the batteries and electrical materials hazardous waste type group was discarded at the rate of 0.1637 items per household per week for a total of 1,762,949 items per year and made up 29.9 percent of the hazardous household waste discarded in the New Orleans study area. In the Marin County study area, this group was discarded at the rate of 0.2834 items per household per week for a total of 1,311,921 items per year and made up 48.8 percent of the hazardous household waste discarded. The selected cosmetics hazardous waste type group was discarded at the rate of 0.1622 items per household per week for a total of 1,746,775 items per year and made up 29.7 percent of the hazardous household waste discarded in the New Orleans study area. In the Marin County study area, this group was discarded at the rate of 0.0999 items per household per week for a total of 462,536 items per year and made up 17.2 percent of the hazardous household waste discarded.

The predominant hazardous waste type group by weight in both the New Orleans and Marin County study areas was the household maintenance group. It was estimated that the household maintenance hazardous waste type group was discarded at the rate of 25.8 grams per household per week for a total of 278.4 metric tons per year and made up 43.4 percent of the total weight of hazardous household waste discarded in the New Orleans study area. In the Marin County study area, this group was discarded at the rate of 15.5 grams per household per week for a total of 71.9 metric tons per year and made up 27.8 percent of the total weight of hazardous household waste discarded. The second most predominant hazardous waste type group by weight in the New Orleans study area was the automotive maintenance group which was discarded at the rate of 12.6 grams per household per week for a total of 135.6 metric tons per year and made up 21.2 percent of the total weight of hazardous household waste discarded. However, in the Marin County study area, the second most predominant hazardous

waste type group by weight was the batteries and electrical group which was discarded at the rate of 14.9 grams per household per week for a total of 69.0 metric tons per year and made up 26.6 percent of the total weight of hazardous household waste discarded.

The comparison of estimates for the New Orleans and Marin County study areas shows that household hazardous waste discarded in both areas is very similar in both rate of discard and composition, even though the communities are very different in socio-demographic structure. However, there were some differences. For example, the batteries and electrical group and the pesticide and yard maintenance group were discarded at a higher weight per household in the Marin County study area while the automotive maintenance group and the household maintenance group were discarded at a higher weight per household in the New Orleans study area. The similarity between the two communities should be interpreted with care until further studies are conducted in other communities.

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The complete report, entitled "Characterization of Household Hazardous Waste from Marin County, California, and New Orleans, Louisiana," (Order No. PB 88-102 439/AS; Cost: \$11.95, subject to change) will be available only from:
National Technical Information Service
5285 Port Royal Road
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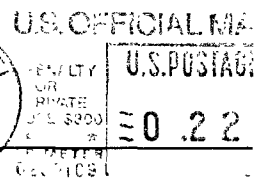
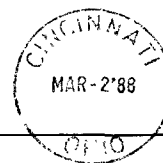
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