The Geographical Information System (GIS) and Its Implication for Use At The Agency For Toxic Substances and Disease Registry (ATSDR)

by

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ABSTRACT

The Geographical Information System (GIS) is a computer based tool for facilitating, managing and analyzing environmental data.

The Agency for Toxic Substances and Disease Registry (ATSDR), has the responsibility to implement the health-related sections of the law that protect the public from hazardous wastes and environmental spills of hazardous substances.

A critical step in performing health assessments is the evaluation of the relationship between site contamination and potentially exposed human populations. This evaluation involves multiple spatial analysis of demographics and environmental information. Currently ATSDR's technical staff performs these analyses using their "best professional judgement" without the benefit of on-line computer-based synthesis and analysis.

A case study has been performed to evaluate the above process with the addition of a GIS augmenting the assessment process.

It was found that the lack of standardized data (environmental and health), and the collecting, storage and formatting of this data for use in the GIS system precluded its utility in support of ATSDR assessments. At this time, GIS preparation for use is too costly, labor intensive and would not positively impact the overall assessments.