

- MDCH Fact Sheet -

Pilot Exposure Investigation: Dioxin Exposure in Adults Living in the Tittabawassee River Flood Plain, Saginaw County, Michigan

The Michigan Department of Community Health (MDCH), in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR) and the Michigan Department of Environmental Quality (MDEQ), will conduct a **Pilot Exposure Investigation (PEI)** of dioxin levels in 25 people that are currently living on the flood plain of the Tittabawassee River.

Purpose of the PEI:

- to provide information on the levels of dioxins in soil, indoor dust, and blood samples for 25 adult residents of the Tittabawassee River flood plain.
- to provide information about how to conduct a future exposure investigation that could include several hundred people from the city of Midland, the Tittabawassee River flood plain, and a comparison community.

PEI Activities:

- The MDEQ is currently conducting residential soil sampling at about 25 properties within the Tittabawassee River flood plain to support the MDCH investigation. Soil sampling is the first step in the investigation and will be used to confirm that dioxin contamination is present at the participants' properties. The MDEQ expects to complete these efforts before the end of December.
- Based on the soil sampling results, MDCH will contact people living in the flood plain on contaminated property and ask them if they are willing and able to participate in the Pilot Exposure Investigation. Participants will be asked to give a blood sample for dioxin analysis. They will also be asked questions about their occupations and whether they eat sport-caught fish or game from the flood plain since these activities could contribute to dioxin body burdens. Indoor dust samples will be taken from participants' homes and analyzed for dioxins.
- The MDCH expects to begin contacting flood plain residents early in 2004 and will begin taking blood samples soon after.
- The MDCH expects to provide an investigation report by the end of 2004.

For More Information:

- The protocol for the Pilot Exposure Investigation is available on the MDCH web page at <http://www.michigan.gov/mdch>, or by calling the MDCH toll free at 1-800-648-6942.
- Questions about the MDCH Pilot Exposure Investigation may be directed to Dr. Linda Dykema, Toxicology and Response Section, at 1-800-648-6942.

EXPOSURE INVESTIGATION INFORMATION

What is an Exposure Investigation (EI)?

ATSDR defines an EI as the collection and analysis of site-specific information to determine if human populations have been exposed to hazardous substances.

Why conduct an EI?

As part of the public health assessment process, an EI can better characterize past, current, and possible future exposures to hazardous substances in the environment, to evaluate the plausibility of health effects being related to those exposures.

What are the benefits of an EI?

An EI can fill specific data gaps, is completed in a relatively short time period (days or months versus years), supports a collaborative public health process by involving stakeholders, and provides a scientific basis to support public health actions.

What are the limitations of an EI?

Although exposure may be defined, exposure to a chemical does not mean an effect would be expected or would occur. The source of the exposure may not be identified. The EI may represent only current conditions.

What is the end-product of an EI?

The results can be used to identify appropriate follow-up public health actions for the site under study.

DEFINING ATSDR TERMS

Many people use the word “study” when talking about MDCH/ATSDR activities. ATSDR has specific definitions for these activities.

A **Public Health Assessment** or **Public Health Consultation**, as an activity, is the *evaluation* of the environmental and health data and community health concerns about a site. An Assessment, which looks at the broad picture, is more comprehensive than a Consultation, which usually focuses on a specific element. Each of these activities results in the preparation and release of a document by the same respective title. These are *not* Health Studies, however recommendations made in these documents may lead to an EI or a Health Study.

Exposure Investigation is defined in the section at the top of this page. An EI is considered a service, *not* a health study. The results of the EI are site-specific and applicable only to the community involved in the EI; they are not generalizable to other individuals or populations.

A **Health Study** of exposed persons is designed to assist in identifying *effects of exposure* on public health. Health studies can also define the health problems that require further inquiry by means of, for example, health surveillance.