MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
John Engler, Governor • Russell J. Harding, Director

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DEQ ENVIRONMENTAL RESPONSE DIVISION
INFORMATION BULLETIN

TITTABAWASSEE/SAGINAW RIVER FLOOD PLAIN
Environmental Assessment Initiative
Midland, Saginaw counties
February 2002

INTRODUCTION

This is the first in a series of bulletins to inform area communities about progress, future plans, meeting dates, and other activities regarding the Tittabawassee/Saginaw River Flood Plain Dioxin Environmental Assessment Initiative. What follows is an overview of the Department of Environmental Quality (DEQ) efforts to identify flood plain areas where dioxin and dioxin-related compounds (hereinafter referred to collectively as "dioxin") could pose public health or environmental concern. Please refer to the accompanying document entitled "Dioxins Fact Sheet" for a more detailed account of public health and environmental issues associated with dioxin compounds. A map identifying the environmental assessment area is also included.

As always, DEQ staff is available to help clarify issues or address concerns you may have on any aspect of the environmental assessment initiative. Contact information for the DEQ project manager is provided at the end of this bulletin.

BACKGROUND

In carrying out its responsibility to oversee the investigation and clean-up of sites of environmental contamination, the DEQ confirmed in December 2000 the presence of significant concentrations of dioxin in soil located in an area of the flood plain near the confluence of the Tittabawassee and Saginaw rivers. The data suggests the possibility that dioxins have migrated along the Tittabawassee River, possibly during snow melt, spring runoff, or other high flow events and have been deposited onto the Tittabawassee River flood plain.

PHASE I ENVIRONMENTAL ASSESSMENT
Flood Plain Soil

Historical flow data indicates that during the spring and fall months it is common for the flow of water within the Tittabawassee River to increase to a level that causes the river to expand onto its flood plain. During these high flow periods it is possible that sediments, and dioxins that have come to be located in the sediments, are transported from the river bottom, or other unidentified source areas, and deposited onto the flood plain.

From December 2000 through July 2001, DEQ Environmental Response Division (ERD) staff collected soil samples from the Tittabawassee River flood plain at three locations: 1) at property near the headwaters of the Saginaw River, 2) at property located near the end of Arthur Street in Saginaw Township, and 3) along the northern perimeter of the Shiawassee National Wildlife Refuge. Soil samples from this sampling effort (referred to as Phase I) were submitted for laboratory analysis to determine if dioxins were present. The concentration of dioxins in these soil samples ranged from 0.035 parts per billion (ppb) TEQ (toxic equivalence) up to 7.261 ppb TEQ (see Dioxins Fact Sheet). The DEQ is currently working with the Michigan Departments of Community Health (DCH) and Agriculture (MDA) to identify the public health and environmental concerns associated with the presence of dioxins at these concentrations. In addition, the DCH is currently requesting collaboration and support from the Agency for Toxic Substances and Disease Registry (ATSDR) for the development and implementation of a public health assessment of affected communities. The purpose for the assessment will be to determine the level of public health hazard posed by dioxins in flood plain soil. The MDA will also be working to assess risk to agricultural interests within the flood plain.

WATER SUPPLY

All homes and businesses located in the Tittabawassee and Saginaw River flood plain areas are within the service areas of either the Saginaw/Midland or the Bay City public water supply systems. Both of these systems acquire their water from the Saginaw Bay of Lake Huron. At the present time, there is no indication that either of these water systems are in any way impacted by the dioxins being investigated as part of this environmental assessment effort.

PHASE II ENVIRONMENTAL ASSESSMENT

Based on the results of the Phase I sampling, the DEQ is expanding its soil sampling efforts within the Tittabawassee River flood plain beginning in Spring 2002, when the ground has thawed. At issue is whether dioxin is present along other areas within the flood plain at concentrations of concern to the public health and the environment. This sampling effort, referred to as Phase II, is designed to achieve the following objectives:

- Identify whether dioxin is present in concentrations of concern to the public health and the environment.
- Identify if dioxin varies in concentration between upstream and downstream locations.
- Identify distribution of dioxin with respect to soil depth.
- Compare the distribution of dioxin concentrations in flood plain and non-flood plain soil.
- Gather information about the source or sources of the observed dioxin.
- Identify the need for, and the scope of, future investigation/assessment efforts.

Phase II will include additional soil sampling at various locations in the flood plain of the Tittabawassee River downstream of the City of Midland and samples from the flood plains of the Tittabawasse, Chippewa, and Pine rivers upstream from Midland.

The DEQ/ERD is coordinating Phase II implementation with the DEQ Waste Management Division, DCH, MDA, and the ATSDR. Representatives from the State agencies will be involved in Phase II planning and future risk assessment activities.

PUBLIC ACCESS

It may be necessary for the DEQ to gain access to private property to properly implement Phase II, and post-Phase II, investigation activities. The DEQ will contact landowners beforehand to obtain permission to access the property to collect soil samples or other needed information as necessary.

UPCOMING ACTIVITIES

As Phase II implementation proceeds, the DEQ, DCH, and MDA will jointly establish a public meeting process to keep interested parties informed of work progress, and to discuss investigation findings and recommendations as they become available. The agencies will also be conducting risk assessment activities as part of post-Phase II data evaluation efforts. Public meetings, mailings, or other appropriate forums, will be held to present the results of the risk assessment. Public information bulletins will also be prepared as new information becomes available.

FOR MORE INFORMATION

Environmental sampling/analysis issues:
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ATSDR and public health issues:
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Residential/commercial agriculture/gardening issues:
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