

OUR RIVERS TODAY

Update on the Tittabawassee River, Saginaw River & Bay Cleanup Project

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Cleanup Starts at Tittabawassee River Floodplain

Earlier this year, the U.S. Environmental Protection Agency, working with Michigan Department of Environmental Quality, selected a cleanup plan for dioxin-contaminated soil in frequently flooded areas along the Tittabawassee River. EPA's plan will ensure that people are safe when they come in contact with floodplain soil. Excavation of contaminated floodplain soil began in late summer. Kick-off of the floodplain cleanup is an important milestone to protect all people who live, work and play along the Tittabawassee River.



Workers remove soil in yard of property in the Tittabawassee River Floodplain.

EPA's plan has a combination of cleanup approaches – dig up contaminated soil and truck it away for disposal, or cover the contaminated soil with clean material. Not every floodplain property will need a cleanup. EPA will look at the overall dioxin levels on each floodplain property and how the land is used to evaluate if it should be cleaned up, then present that decision to the owner. Technical experts will review existing information and take new samples, if needed.

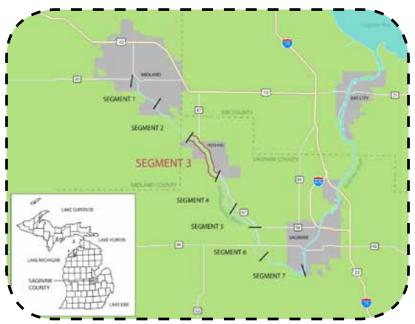
Floodplain cleanup will be a multi-year project. Technicians will assess more than 700 properties to determine if a cleanup is needed. Dow Chemical Co. has agreed to do the cleanups, working with the owner, with oversight by EPA and MDEQ. The floodplain includes about 4,500 acres and extends along 21 miles of the river below Dow's plant in Midland. EPA will continue to work closely with the community, especially affected floodplain property owners.



Work completed and grass reestablished in yard.

Segment 2 Cleanup Complete; Preparing for Segment 3

Cleanup of Segment 2 of the Tittabawassee River started in 2014 and was completed this fall. Segment 2 is a 4-mile stretch of the river downstream from Dow's Midland plant. One of EPA's main goals for the Tittabawassee River cleanup is to reduce the spread of contaminated riverbank soil to keep dioxin



Map of river segments and highlight of 2016 work area.

levels low in the river. This helps keep dioxin from building up in fish.

Priority areas for riverbank cleanup are called Bank Management Areas, or BMAs. This summer, three BMAs in Segment 2 were stabilized. Many different

> stabilization technologies were used on the BMAs to stop erosion of contamination. One of the most important elements is the use of native plants along the riverbanks. These plants have deep roots that hold the soil in place and are tough enough to stand up to Michigan weather conditions and flooding.

Areas of the river bottom where sediment deposits contain higher levels of dioxin are called Sediment Management Areas, or SMAs. EPA finished work at five Segment 2 SMAs and five other BMAs in prior years.

EPA proposed a cleanup plan for Segment 3 of the Tittabawassee River in 2015, and is finalizing the plan. Like Segment 2, there are distinct SMAs and BMAs in Segment 3. Work in Segment 3 will start in spring of 2016 and is expected to take one or two years.

EPA Saginaw Office Changing Hours

EPA is modifying the hours of the Community Information Office at 804 S. Hamilton St., Suite 111, Saginaw. Starting in December, the office will be open on **Tuesdays and Wednesdays from 8:30 a.m. to 4:30 p.m. or by appointment**. Office staff will continue to be available by **telephone at 989-401-5509 Monday through Friday from 8:30 a.m.** to **4:30 p.m**.

This change reflects careful consideration of many factors, including community use over the past five years, staffing and resources changes, and safety. EPA continues to serve the community as cleanup continues and will make changes as they are needed.





City of Midland Soil Cleanup Nears Completion

by Al Taylor, Michigan Department of Environmental Quality

The City of Midland soil cleanup is on track to be complete in early 2016. The Dow Chemical Co., under the supervision of the Michigan Department of Environmental Quality, completed sampling of over 1,600 residential and residential-like properties in the Midland "Resolution Area" for dioxin levels during 2012, 2013 and 2014. Over 130 properties were cleaned up by removing and replacing the top 12 inches of soil and restoring the lawns and landscaping to "as good or better" condition. In addition, 50 properties located close to the Dow plant fence line were changed to "non-residential" use. A greater than 98 percent property owner participation rate was achieved during the implementation of this project.

Extensive pilot and design testing were conducted prior to the development and approval of the 2012 work plan. Key elements of the remedy include state-of-thescience sampling and analytical procedures, voluntary participation in the remedy by the property owners, a presumptive cleanup depth and a site-specific cleanup value for dioxin. The site-specific cleanup value is based on Michigan's generic residential direct contact cleanup criterion for dioxin adjusted for the measured



Midland homes after soil removal and restoration.

bioavailability of dioxin in Midland soils, the levels of dioxin measured in indoor dust and Midland weather.

Dow and the MDEQ are working to finalize institutional controls, long-term monitoring plans and financial assurance for the site. Dow retains the obligation to address residential properties in the Resolution Area that did not allow access for sampling. Dow is also required to monitor non-residential properties in the Resolution Area for potential changes to residential or residential-like use, and to address those properties as necessary. The MDEQ intends to request public comment on the final remedy report in January 2016.

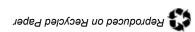
Cleanup is being conducted under Dow's Hazardous Waste Operating License that was reissued by MDEQ in September 2015.

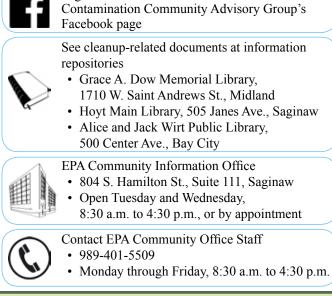
Contact Al Taylor of the MDEQ's Office of Waste Management and Radiological Protection for further information at taylora@michigan.gov or 517-614-7335.

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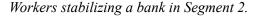
Learn more about the cleanup

Saginaw-Tittabawassee Rivers

www.epa.gov/superfund/tittabawassee-river

This newsletter covers topics related to EPA's cleanup of the Tittabawassee River, Saginaw River and Bay site. We welcome feedback and ideas for future articles. If you would like to receive this semi-annual newsletter, please contact EPA Community Involvement Assistant Mary Breeden at breeden.mary@epa.gov or call 989-401-5509, 8:30 a.m. to 4:30 p.m., weekdays.

ABOUT THIS PUBLICATION ...





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