Sediment Collapse into Detroit River from Detroit Bulk Storage Site

Frequently Asked Questions (FAQ)

INTRODUCTION

These frequently asked questions have been compiled to answer the community's concerns about the Detroit River shoreline collapse at the Detroit Bulk Storage site.

What happened?

A portion of the Detroit River shoreline collapsed on Nov. 26, 2019, at the property at 5851 W. Jefferson Ave. in Detroit, where Detroit Bulk Storage receives, stores, and ships limestone aggregate. An area of land adjacent to the river appears to have collapsed or subsided, causing a portion of a pile of limestone approximately 40 feet high to spill into the river. The event destroyed about 250 feet of the concrete dock and underlying shoreline. Other sections of the seawall are still intact.

Aerial view of the Detroit Bulk Storage spill area

Why is this of concern?

The shoreline collapse exposed contaminated soils and the sudden deposit of stone from the limestone pile would have disturbed contaminated river sediments. Much of the Detroit River shoreline is contaminated from historic fill materials and legacy industrial operations. The river sediments contain contaminants such as metals, PCBs, and petroleum byproducts. The collapsed site is the former location of the Revere Copper and Brass Co. Revere operated at the site for more than 60 years, most of that time before modern environmental laws were in place, resulting in environmental contamination. After Revere closed, an environmental clean-up was completed in the 1990s to address the worst of the contaminated land, but some contamination remains.

During the 1940s and '50s, Revere manufactured uranium rods on the site under a contract with the Department of Defense. In the 1980s and 1990s, the Atomic Energy Commission (which is now the Department of Energy) and the U.S. Environmental Protection Agency determined there was no radiological contamination on site, but the site's history raised concerns in the community following the collapse for the potential for remaining radiological contamination.

What is this site's current status regarding contaminants?

After Revere closed, the Atomic Energy Commission and the EPA conducted surveys and determined there was no radiological contamination at the site. The property was removed from the list of atomic energy sites that needed to be cleaned up. However, other contamination remained from the historic industrial operations. The EPA in the 1980s removed equipment that contained PCBs. In the 1990s, the state of Michigan conducted a $5 million clean-up, removing oil tanks and contaminated soils, and demolishing buildings.

In April 2019, the Michigan Department of Environment, Great Lakes, and Energy conducted river sediment sampling immediately offshore from the former Revere site as part of a routine monitoring program. The sampling found the sediments were contaminated with metals, PCBs, and petroleum byproducts upstream and downstream. Because of the history of the site, EGLE also tested the sediment for radiation. Those tests showed no radiation above background levels.

When was EGLE notified of the collapse?

EGLE was made fully aware of the shoreline collapse and aggregate spill through a media inquiry in the afternoon of Wednesday, Dec. 4. It is believed the pile collapsed the night of Tuesday, Nov. 26, two days before Thanksgiving. Detroit Bulk Storage notified the U.S. Coast Guard and the U.S. Army Corp of Engineers about the incident when they discovered it. The Coast Guard told the company to call the National Response Center and it did so on Nov. 29. EGLE and the EPA received notification from the NRC by email on Nov. 29. The event was reported as a dock failure and the notification stated that there was no material released into the environment. The incident was not identified as a pollution event when EGLE was notified, so it was not sent to the appropriate staff for response.

We are working with our federal partners – the Coast Guard, EPA, and the U.S. Army Corps of Engineers – to ensure that we readily and seamlessly inform each other about issues as they arise along the Detroit River and across the state. Timely notification is an important step in ensuring that EGLE can quickly determine what actions are necessary to protect public health.

What was EGLE's response to the collapse?

Once aware of the true nature of the event, EGLE staff immediately began to evaluate the information available about the site so it could determine the appropriate response. EGLE quickly determined that past surveys of the site found there was no radiological contamination. On Dec. 5, EGLE notified downstream water plants about the incident and visited the site to assess the shoreline. On Dec. 6, EGLE, the EPA, City of Detroit, Federal Bureau of Investigation's Weapons of Mass Destruction Unit, and Coast Guard conducted a joint site visit. EGLE used a drone to take photos and video from the air, took three water samples from the river (2,540 feet upstream from the collapse, adjacent to the collapse area, and 1,040 feet downstream), and performed a radiation survey of the soil, collecting data from more than 1,000 locations on site and within crevasses in the soil that were opened up by the collapse.

EGLE employees conducting radiological testing in a crevasse near the riverfront

What did the radiological testing find?

The site was surveyed using a sodium iodide scintillator probe to measure gamma radiation rates near contact with the ground. The testing found radiation levels that are typical of natural background (radiological materials occur naturally in soil, rock, and water) and there was no evidence of radioactive contamination at the site. In Michigan, background radiation rates range from 5 to 8 microroentgens per hour. Readings farthest from the river were at 4 microroentgens per hour while testing closer to the water, including inside the crevasses opened by the sediment collapse, ranged from 3 to 5 microroentgens per hour.

EGLE employee taking water samples from the Detroit River

What did the water samples find?

Expedited results returned within three to five days showed the water quality was the same upstream, in the area of the collapse, and downstream. The samples were analyzed for metals, uranium, PCBs, suspended solids, petroleum byproducts, and volatile organic compounds. All results were well below the applicable water quality standards and most were below the level that can be detected by EGLE's laboratory tests.

The water samples were collected near the surface of the river. Because of the size of the Detroit River, the water is well mixed throughout the water column. The samples taken represent the water quality in the area of the collapse at the time they were collected. The results do not reflect the water quality immediately after the collapse.

Is there a risk to drinking water?

More than five miles downstream of the collapse, there are two drinking water intakes in the Detroit River operated by the Great Lakes Water Authority and the City of Wyandotte. Ontario, Canada, also has an intake farther downstream in Amherstburg. GLWA has stated that it does not believe there is any danger of the collapse affecting water quality. Given the flow patterns of the river, the location of the intakes, and the nature of the event, EGLE agrees there is not likely to be an impact on drinking water.

Drinking water treatment plants monitor for a range of water quality parameters every day to detect changes in the river and to adjust water treatment, as needed. EGLE staff has reviewed the daily data for the time period before and after the collapse and did not find any concerns. GLWA and Wyandotte conducted additional testing, including for radionuclides, as a precaution. On Dec. 23, GLWA announced the first round of water quality test results and levels were "non-detect" for some metals, including uranium, thorium, mercury, and lead. Results for radionuclides are pending, GLWA said. Results from Wyandotte did not detect PCBs and all metals were well below drinking water criteria.

What happened to the buildings after Revere closed?

According to historical reports, some of the equipment and furnaces used to make the uranium rods were stolen from the site after Revere closed in the 1980s. EGLE does not know what happened to these materials. The state-funded cleanup of the site in the 1990s included demolition of buildings and these materials were properly disposed of off-site. Some building foundations remain on the site, however there is no evidence of uranium contamination. The Department of Energy has a website maintained by its Office of Legacy Management with details about the Revere location. Visit the USDE webpage on Revere Copper and Brass Company.

Who is responsible for any contamination or problems?

Revere Dock LLC of North Muskegon, Mich., is the property owner and Detroit Bulk Storage is the tenant and site operator. Neither company is liable for the historic contamination, but both have "due care" obligations to safely manage the site to prevent exposure to contamination as well as the responsibility to prevent stored materials from entering the water.

Is there a violation of that responsibility?

On Dec. 11, EGLE issued a violation notice to the property's owner for allowing unauthorized fill material (stone, soil, and debris) to enter the river, in violation of Michigan's water quality laws, Parts 31 and 301 of the Natural Resources and Environmental Protection Act of 1994. Revere Dock and Detroit Bulk Storage were also sent separate letters advising them of their due care obligations.

Was Detroit Bulk Storage obligated to notify state and federal agencies of the collapse?

There are many laws and rules that require spills, releases, pollution events, and environmental emergencies to be reported to state and federal authorities. These rules do not, however, address every possible scenario that may have an environmental impact and this specific event was not required to be reported. Detroit Bulk Storage officials said they did notify the Coast Guard and the Army Corps of Engineers of the dock failure, but the event was not recognized as a possible environmental problem.

Does EGLE regulate what material was stored at the site?

EGLE enforces laws and rules that regulate the storage of oil, salt, chemicals, liquid waste, and hazardous waste, but not the storage of limestone, coal, petroleum coke, or similar commodities that are frequently shipped, unloaded, and stored along waterways. The City of Detroit has zoning authority over the West Jefferson site leased by Detroit Bulk Storage and also regulates the bulk storage of materials.

What happens next?

The responsible companies are required to correct this problem. They are required to remove their material from the river and prevent the shoreline from eroding any further. This work must be done under a plan EGLE has to approve. EGLE staff will visit the site while remediation work is being performed to ensure it is being done without releasing unnecessary contaminants or disturbing contaminated river sediments. EGLE will continue to work with local, state, and federal agencies to address other concerns raised by this event, including notification protocols.

What is the status of the Detroit River water quality?

EGLE works with community members, numerous government agencies, and stakeholders to ensure the Detroit River quality continues to improve. The river today looks dramatically different than it did decades ago when it was heavily polluted. Many years of painstaking, hard work have turned this vital waterway into an important resource, relied on by millions for clean drinking water. It is also increasingly being used for fishing, boating and recreation. EGLE is committed to ensuring that our progress continues.

Did high waters contribute to the collapse?

The exact cause of the shoreline collapse is not entirely known at this time. It is likely that a combination of factors contributed to the event, including the weight of the stored material, the shoreline construction, and high water. High water levels across the state are having serious impacts on infrastructure, shorelines, buildings, and the environment. EGLE is undertaking a number of actions in response to these conditions, including working with local, state, and federal agencies and private entities to identify critical environmental infrastructure that may be impacted by high water and develop plans to address these vulnerabilities.

Michigan's Environmental Justice Policy promotes the fair, non-discriminatory treatment and meaningful involvement of Michigan's residents regarding the development, implementation, and enforcement of environmental laws, regulations, and policies by this state. Fair, non-discriminatory treatment intends that no group of people, including racial, ethnic, or low-income populations, will bear a disproportionately greater burden resulting from environmental laws, regulations, policies, and decision-making.

Meaningful involvement of residents ensures an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health.