

SITE BACKGROUND INFORMATION

The Flint East Boulevard Former Manufactured Gas Plant (MGP) site is located near East Boulevard south of East 5th Avenue in Flint, Michigan. The plant started manufacturing gas in 1871 and was acquired by Consumers Energy in 1922. It was put on standby in 1928 and retired in 1951. The plant structures have been demolished and portions of the former MGP property are now located on property owned by Consumers Energy, the U.S. Postal Service, the University of Michigan-Flint and the City of Flint.

MANUFACTURED GAS PLANTS

MGPs operated from the late 1800s through the mid-1900s across the country, prior to the installation of natural gas pipelines. MGPs converted coal and oil to gas for heating, lighting and cooking. By-products of this process included coal tar and purifier waste. Coal tar is a dark, viscous fluid with a distinct odor. Purifier wastes were typically a mixture of wood chips and iron fillings used to remove unwanted chemicals from the gas before it was distributed to the public.

FLINT RIVER WATER QUALITY

Water from the Flint River was used as the primary drinking water source for the City of Flint between April 2014 and October 2015. The city's drinking water intake in the Flint River is approximately three miles upstream of the project site, and any MGP impacts related to the project site did not contribute to the corrosive properties of the river water used as a drinking water source.

SEDIMENT REMEDIATION

In accordance with the Natural Resources and Environmental Protection Act Part 201 of Michigan's environmental regulations, Consumers Energy has proposed a remediation project to address sediment impacted by historical MGP operations in the Flint River and impacts to shallow soil in the riverbank. The sediment remediation work in the river will be completed along an approximately 1,700-foot span between the Hamilton Dam and 5th Avenue Bridge.

Remediation activities will include:

- Removal of impacted sediment and bank soil
- Sediment drying, and disposal of impacted sediment and bank soil in an approved landfill offsite
- Treatment and release of decant water back to the river under permit
- Placement of an impermeable barrier in the river
- Restoration of the river

Pre-construction activities began in March 2017. Dredging is scheduled to start in May 2017 and is expected to be completed in the fall of 2017.

RESTORATION

After the remediation work in the river and along the riverbank is completed, the site and surrounding area will be returned to pre-remediation land uses. Trails, walkways and other elements (e.g., benches and picnic tables) will be restored in their present locations. Native trees, shrubs and other plants will be established to reintroduce native landscape to the area.

ADDITIONAL INFORMATION at www.EastBlvdMGP.org

For questions regarding this project, contact:

Kevin Keane, Consumers Energy Area Manager

by phone (810-760-3447) or email (KEVIN.KEANE@cmsenergy.com)

FREQUENTLY ASKED QUESTIONS AND ANSWERS

FLINT EAST BOULEVARD FORMER MGP SITE



What is happening in the river? Is the river or river sediment contaminated?

- A manufactured gas plant (MGP) operated in the area of the project site from 1871 to 1928. The MGP converted coal and oil to a combustible gas which was piped into the surrounding neighborhoods for cooking, lighting and heating prior to the wide-spread distribution of natural gas. By-products of the MGP process included coal tar and purifier waste.
- Some of the coal tar produced during operation of the MGP has impacted river sediment behind the Hamilton Dam. Coal tar is a dark, viscous fluid that does not readily dissolve in water.

What is happening with the Hamilton Dam?

- The Genesee County Parks and Recreation Commission (County) is coordinating improvements to the Hamilton Dam. Consumers Energy is working closely with the County, City of Flint, Michigan Department of Natural Resources (MDNR), Michigan Department of Environmental Quality (MDEQ), and others to make sure the two projects are sequenced to protect human health and the environment.

Should I be concerned about my health or my child's health?

- The remediation work has been carefully planned to be in compliance with local, state and federal laws to protect people living, working and going to school in the vicinity of the project area.
- Air monitoring is being conducted to measure the air for dust, chemical compounds and odor intensity throughout the work day. The surrounding populations (e.g. children) were taken into consideration during the development of air monitoring locations. Contingency measures will be implemented if action levels are exceeded.
- University buildings and the U.S. Post Office located near the work area will have air filters placed on the air intakes as an additional measure to reduce nuisance odors.
- Fences and sidewalk detours will keep pedestrians a safe distance from the work area.

What measures are being taken to address safety?

- Best management practices are being used to address safety for workers and the public. Some of these measures include:
 - Sidewalk detours and fences to keep pedestrians a safe distance from the work area.
 - A temporary structure to contain emissions and nuisance odors in the dewatering area.
 - Air monitoring in the work area, the perimeter and additional select locations.
 - Absorbent booms and silt curtains to limit sediments from migrating downstream.
 - Noise and vibration monitoring to confirm safe levels and comply with City of Flint ordinances.
- Contingency measures have been prepared and will be implemented if necessary.

Is this work related to the Flint water crisis?

- No. The City of Flint's Water Treatment Plant intake is located approximately three miles upstream of the project site. MGP-related impacts in sediment did not contribute to issues related to the use of Flint River water as a drinking water source between April 2014 and October 2015.

Who is paying for the work? What is Consumers Energy's role in this project?

- Consumers Energy acquired the MGP in 1922 and operated the plant until it was put on standby in 1928. The plant was ultimately retired in the 1950s. Consumers Energy is responsible for addressing the environmental impacts associated with the historical MGP operations and is paying for the associated investigation, monitoring, design and remediation work.
- The work is being completed in consultation with the MDEQ, in accordance with Natural Resources and Environmental Protection Act (NREPA) Part 201 of Michigan's environmental regulations.

Why is work being completed in the river now?

- An evaluation of the Flint River sediment in the vicinity of the site indicated that impacted sediment is present in the river. Investigation activities were completed between 2012 and 2016. The time between the initial identification of the sediment impacts and the start of the remediation work was used to collect data on the extent of impacts, design the remediation, model the results of the proposed work, obtain approvals and permits and contract and schedule the work.

What work is being done? When is work being done?

- Planned work includes: excavating sediment and riverbank soil; removing water from the sediment; disposing of sediment and riverbank soil in an approved landfill offsite; treating and discharging water from the dewatered sediment; installing a multi-layer protective barrier (engineered cap) in the river; and restoring the remediation area.
- Pre-construction activities began in March 2017 when trees along the riverbank were removed. Staging of materials and preparation for the dredging is expected in April and May 2017. The dredging is scheduled to start near the end of May 2017 and capping activities are expected to be completed in November 2017. Restoration activities will be completed in the fall of 2017.

Will air quality be affected?

- Coal tar, a by-product of the MGP operation, has a strong odor, similar to roofing tar or mothballs. It is easily detectable at concentrations below those considered harmful to human health. Chemicals are being monitored to protect workers at the site and pedestrians at the perimeter of the project area.
- A temporary structure is being used in the dewatering area to help contain emissions and nuisance odors.
- Consumers Energy is committed to protecting the health and safety of people who live, work and go to school near the site. Although we do not anticipate an impact on air quality, we will routinely sample air quality during the site remediation activities and will implement additional mitigation measures, if necessary.
- If you have a complaint or concern about an odor near the work area, please contact Consumers Energy at the number included at the end of this document.

How will the river and surrounding area be restored?

- After the remediation work is completed, an engineered cap of clean clay, sand and rock will be placed in the bottom of the river, and the upland areas will be returned to pre-construction land uses. Trails, walkways, benches and picnic tables will be replaced and trees, shrubs and other plantings will be established.
- Consumers Energy is working closely with the MDEQ and MDNR, the University of Michigan - Flint, the City of Flint and the Genesee County Parks and Recreation Commission on restoration planning and an effort is being made to incorporate many native species.
- Restoration monitoring will include inspecting erosion mitigation measures, evaluating vegetation reestablishment, assessing water quality and determining cap integrity.

Can we eat fish caught from the river?

- The “Eat Safe Fish” guide produced by the MDNR lists the chemicals of concern in fish from the Flint River as polychlorinated biphenyls (PCBs) and perfluorooctane sulfonate (PFOs). These were not chemicals generated by the MGP operation. Please refer to the www.Michigan.gov/eatsafefish website for guidelines (https://www.michigan.gov/documents/mdch/MDCH_EAT_SAFE_FISH_GUIDE_-_SOUTHEAST_MI_WEB_455358_7.pdf).

Will there be a loss of fish and wildlife habitat as the result of this project?

- A Threatened and Endangered species review was conducted prior to the remediation. Tree removal was completed in consultation with the U.S. Fish and Wildlife Service. Consumers Energy will work closely with the MDNR and the MDEQ to ensure that aquatic and riparian habitat are restored after the remediation work is completed.

Will contaminants move downstream of the Hamilton Dam?

- Engineered controls, including absorbent booms and silt curtains, will be used to limit sediment from moving downstream of the dredged area. The water turbidity is being monitored and additional measures will be implemented if needed.

Where is the dredged material going? Where is the water going?

- After impacted sediment is removed, the sediment will be placed on a dewatering pad where drained water is collected, treated and discharged to either the river or sanitary sewer. Analytical samples will be collected on a regular basis to ensure water quality meets the discharge requirements. The dried sediment will be transported to an approved landfill for disposal.

Are there other impacts on site?

- Yes. There are other impacts associated with the former MGP site present below the ground surface in the project area. However, these impacts do not currently pose an exposure risk to the general public. Other impacts will be addressed as needed to protect human health and the environment.

Will there be an impact to traffic?

- Yes. East Boulevard, south of the post office, will be closed for the remediation work (expected May through November); however, access to the University of Michigan – Flint buildings and parking lots will be maintained via Chavez Drive. Pedestrian and bike traffic will be diverted to the west side of the river between Harrison Street and Fifth Avenue. The pedestrian bridge across the Flint River will be closed.

How can I learn more about the project or stay informed about the latest developments?

- Consumers Energy has established a project website (www.EastBlvdMGP.org) to help inform the public, address questions and provide project updates.
- Public meetings will be held in the months leading up to the project and routinely during the project. The dates and times for these meetings will be advertised on the project website and through other outlets.

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