



**Metropolitan Water
Reclamation District
of Greater Chicago**

Fact Sheet

March 13, 2020

Coronavirus (COVID-19)

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) is continuing to monitor the information it receives about the Coronavirus (COVID-19). The MWRD is following the guidelines of the U.S. Centers for Disease Control and Prevention (CDC) and Illinois Department of Public Health (IDPH) and consulting with local agencies like the Chicago Department of Public Health and international water professionals and utility and technology partners in the water sector. The MWRD continues to provide critically important water reclamation operations and stormwater management services around the clock to ensure the region's wastewater is cleaned and that public health and the environment are protected.

Managing wastewater

The MWRD transforms an average of 1.47 billion gallons of water each day and returns it to the environment as clean water. At any given time, the MWRD encounters unpredictable and unique situations. The risk of transmission of COVID-19 through sewerage systems is low and data from previous outbreaks shows low transmission risk in human waste, according to the Water Environment Federation (WEF)^{i,ii,iii}.

Previous studies have shown that the virus can survive in wastewater for hours and even days without disinfection, and there have been reports^{iv} that indicated sewage was a cause for the spread of SARS in Hong Kong in 2003. However, chlorine dosing, similar to that employed at the MWRD's Calumet, Egan, Hanover Park and Kirie Water Reclamation Plants (WRPs), has been said to be "sufficient to control the virus," according to WEF.

The American Water Works Association (AWWA), likewise, states that disinfection treatment will control waste generated from COVID-19 patients. "Current disinfection conditions in wastewater treatment facilities are expected to be sufficient. This includes conditions for practices such as oxidation with hypochlorite (i.e., chlorine bleach) and peracetic acid, as well as inactivation using UV irradiation."^v

According to Water Research Australia, the standard water and wastewater treatment and disinfection processes used to control pathogen transmission via water routes are expected to be effective on SARS-CoV-2^{vi}. The current MWRD monitoring plant performances also demonstrate efficacy and safety. *[continued]*

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The MWRD currently utilizes various disinfection technologies at five of its seven WRPs. Disinfection occurs after wastewater passes through a series of treatment processes, including screening, filtering, settling and with aeration to encourage bacteria and other organisms to clean the water. Disinfection then adds another layer of treatment by deactivating the DNA of microbes, preventing them from reproducing or growing. The MWRD's disinfection processes operate during the recreation season from the spring through fall.

In the 2003 SARS outbreak, there was documented transmission associated with sewage aerosols, and reports that SARS was detected in sewage for up to two to 14 days, according to the CDC. But studies have also shown that the virus is transmitted via cell receptors in the lungs, so unless the virus in the water is made airborne and inhaled, it is not transmitted. It should be stated that there is still insufficient information about COVID-19, and transmissions via touching contaminated water or wastewater cannot be ruled out.

Handling regional wastewater

The Occupational Safety and Health Administration (OSHA) has expressed many of the same guidelines about handling of solid waste and wastewater that the MWRD already implements to providing critical oversight managing the region's wastewater during these precarious times. The MWRD operations follow the OSHA guidelines by following routine practices to prevent exposure to wastewater, including using the engineering and administrative controls, safe work practices, and using the personal protective equipment (PPE) normally required for work tasks when handling untreated wastewater.

"There is no evidence to suggest that additional, COVID-19-specific protections are needed for employees involved in wastewater management operations, including those at wastewater treatment facilities," according to OSHA^{vii}. MWRD workers, who handle solid waste with the potential for COVID-19 contamination, are continuing to follow OSHA protocols in the same way they would handle other regulated medical waste.

Sewage and Waste Control

Under the MWRD's Sewage and Waste Control Ordinance^{viii} and the Illinois Pollution Control Board's Title 35 Procedural and Environmental Rules^{ix}, the MWRD strives to protect public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of sewage, industrial wastes, and other wastes admitted to or discharged into the sewerage systems, sewage treatment facilities, and waters under the jurisdiction of the MWRD. Industrial waste ordinances governing industrial discharge limits will continue to remain in place. *[continued]*

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Discharges of potentially infectious medical wastes to the District's sanitary sewerage system are expressly prohibited unless they comply with 35 Illinois Administrative Code, Subtitle C.

Water does not stop flowing

As COVID-19 fears disrupt daily lives, impact the economy, and cause unforeseen closures and cancelations at public meeting places, offices, schools, universities, businesses, and major events, it is important to note that essential work at the MWRD will continue despite all these obstacles. The MWRD systems are still operating. Although there are many unknowns as officials deal with an officially recognized pandemic and the potential for additional outbreak, the MWRD is committed to continue its critical work to protect the public health with its essential services. The MWRD at the same time will continue following protocols from the CDC and IDPH and rely on the strong partnerships it has built through 131 years of service and connection to the local communities it serves, the stakeholders it works with, and the international community that bears a similar responsibility. Despite the uncertainties, the MWRD's work continues, and the MWRD remains steadfast in that commitment to protect public health and the environment.

ⁱ <https://www.wef.org/news-hub/current-priorities/coronavirus/>

ⁱⁱ <https://www.cdc.gov/coronavirus/2019-ncov/php/water.html>

ⁱⁱⁱ <https://www.waterrf.org/event/coronavirus-research-update>

^{iv} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC539564/>

^v <https://www.awwa.org/AWWA-Articles/coronavirus-and-water>

^{vi} <https://www.waterrf.org/event/coronavirus-research-update>

^{vii} <https://www.osha.gov/SLTC/covid-19/controlprevention.html#solidwaste>

^{viii} https://mwrdd.org/sites/default/files/documents/Sewage_and_Waste_Control_Ordinance.pdf

^{ix} <https://pcb.illinois.gov/SLR/IPCBandIEPAEnvironmentalRegulationsTitle35>

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