



# THE IMPACT OF CORONAVIRUS ON WATER AND WASTEWATER

In response to the current pandemic, specialists at AECOM are studying what is currently known about coronavirus to anticipate the impact on potable water and wastewater.

**W**e have compiled our findings in a technical brief that addresses questions regarding the potential exposure of water practitioners and the general public to the coronavirus disease through drinking-water and wastewater.

The report – which will be regularly updated as new information and insights emerge – references research regarding the virus’s survival under environmentally controlled

conditions, while also considering the optimal means to remove the virus from potable water and wastewater, as well as the measures that can be taken to mitigate risks to water practitioners.

Coronavirus is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and is transmitted via respiration or through contact with infected surfaces. There is no current evidence that SARS-CoV-2 is transmitted through contaminated water with or without treatment.

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**THERE IS NO CURRENT EVIDENCE THAT SARS-COV-2 IS TRANSMITTED THROUGH CONTAMINATED WATER WITH OR WITHOUT TREATMENT.**

Although speculation varies, one hypothesis says that the coronavirus outbreak originated from bat feces or saliva – therefore, infection through contaminated waste or surface water, although unlikely, cannot be ruled out and should be treated as a potential health hazard.

While there is currently no certainty about the occurrence and survival of SARS-CoV-2 in drinking-water or wastewater, our report looks at available studies that examine similar human coronaviruses, their

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CORONAVIRUS SURVIVAL INDICATE THAT THE VIRUS CAN SURVIVE IN FECAL CONTAMINATED WATER FOR DAYS OR EVEN WEEKS.

survival in water and wastewater as well as effective inactivation measures. Although recent studies on surrogate coronavirus survival indicate that the virus can survive in fecal contaminated water for days or even weeks depending on water temperature and quality – and that the virus survives longer in primary rather than secondary effluent wastewater – the risk of exposure to the general public is thought to be minimal.

According to the U.S. Centers for Disease Control and Prevention (CDC) standard water and wastewater treatment and disinfectant processes are expected to be effective in inactivating SARS-CoV-2.

For drinking water customers and recreational users of water bodies fed with recycled water, a well-operated plant achieving free chlorine and maintaining residual should address any virus, including SARS-CoV-2.

Furthermore, risks associated with SARS-CoV-2 exposure for workers at drinking water facilities is thought to be low. The main concern is for workers at wastewater plants. To mitigate risks the CDC recommends workers wear appropriate PPE when handling untreated wastewaters and by preventing exposure to wastewater by using engineering and administrative controls and safe work practices. **NW**