

## California's Recycled Water and Treated Wastewater Is Safe from the COVID-19 Virus

### ***Existing stringent state standards protect public from COVID-19***

- Wastewater treatment plants treat municipal wastewater to standards that protect the beneficial uses of the waters into which the treated wastewater is discharged. Some plants treat wastewater to more stringent standards so that the highly treated water can be reused for landscape irrigation, dust control at construction sites, and groundwater recharge for future use as a drinking water source. The level of treatment required depends on the beneficial uses of the receiving waters and ultimate use of the treated wastewater.
- Sanitation experts have determined that existing treatment plant disinfection processes successfully disinfect wastewater containing the COVID-19 virus.
- Municipal wastewater treatment plants in California go beyond minimum requirements and provide additional tertiary filtration treatment to meet stringent State Water Board public health standards for water disposal or water recycling whenever there is a risk to the public.
- The State and Regional Water Boards establish and enforce stringent municipal wastewater treatment and water recycling standards in order to protect drinking water sources including surface and ground water bodies. Wastewater treatment is an essential function, and this work continues during the COVID-19 emergency.
- Recycled water treatment facilities predominately utilize a multi-barrier approach to remove contaminants, including viruses. Having multiple layers of treatment provides extra layers of safety and helps ensure that viruses are continuously removed or destroyed so that essentially none remain.
- Wastewater treatment plants are engineered to disinfect treated wastewater through chlorination and/or ultraviolet light disinfection processes as a final step that successfully eliminate viruses not destroyed in the other layers of treatment. This provides further assurance that the water is safe to be recycled or discharged back to land or surface water.

- The State Water Board requires all wastewater treatment plant operators to be state-certified and specially trained to continuously optimize treatment performance and comply with stringent discharge requirements.
- All discharges from public wastewater treatment plants in California are routinely monitored for bacteria and other indicator organisms.
- Viruses, including COVID-19, are inactivated during the wastewater treatment process and do not end up in left-over biosolids or sludge. Viruses are inactivated throughout the different stages of the wastewater treatment processes and again in the biosolids treatment process itself from heat exposure during anaerobic digestion.

## **Contact Your Municipal Sanitation or Water Recycling Agency**

The State and Regional Water Quality Control Boards work closely with municipalities to provide sanitary sewer and wastewater treatment services to residential, commercial and industrial customers. Your local sanitation agency or water recycling agency can answer questions about your local wastewater or recycled water operations. Their website, phone number and email contacts should be located on the front or back of your water or sewer bill.

## **What Others Are Saying**

**United States Environmental Protection Agency:** “Standard treatment and disinfectant processes at wastewater treatment plants are expected to be effective.”

**Federal Centers for Disease Control:** “At this time, the risk of transmission of the virus that causes COVID-19 through sewerage systems is thought to be low. Although transmission of the virus that causes COVID-19 through sewage may be possible, there is no evidence to date that this has occurred. The available information suggests that standard municipal wastewater system chlorination practices may be sufficient to inactivate coronaviruses, as long as utilities monitor free available chlorine during treatment to ensure it has not been depleted.”

**Water Environment Federation:** “Current efforts to elucidate numbers of infections in the community and support public health surveillance have relied on detecting the virus in wastewater using molecular techniques that identify genetic material (RNA), but this method does not assess virus viability or infectivity. Further, there is currently no epidemiological evidence that wastewater is a route of transmission.”

**World Health Organization:** “There is no evidence that the COVID-19 virus has been transmitted via sewerage systems with or without wastewater treatment.”

## **Additional Resources**

For more information and frequent updates about what [California is doing](#) to respond to the emergency and prepare for the ongoing impacts of COVID-19, please visit the [California Department of Public Health](#) and [Governor's Office of Emergency Services](#) website.

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