



COVID-19 Impacts to Sewers

Jill S. Jones

General Manager, Central Davis Sewer District

Overview

- Effects on the Industry
 - Operations and Personnel Impacts
- Tracking COVID-19 Virus in Wastewater
 - Results and Uses
- Unintended Consequences
 - The Dreaded Wet Wipes





According to the biologists, lack of testing “makes it difficult” to predict the scale of the potential spread and the public health implications of the virus arriving at wastewater treatment works. (Sanchit Khanna/HT PHOTO)

The Unknowns

- Ease of Transmission in Wastewater
- Bio-Aerosols
 - Collection Systems
 - Treatment Systems
- Direct Contact of Wastewater
- Rapid Infection Rate



Initial Action

The risk of catching the COVID-19 virus from the faeces of an infected person appears to be low. There is some evidence that the COVID-19 virus may lead to intestinal infection and be present in faeces. (WHO 2020)

In sewage, the time to achieve a 99.9% die-off ranged from 2 to 3 days at 23°C (100 days at 4°C). . . . The fecal-oral hypothesis for COVID-19 may result in far-reaching consequences for public health. (Heller, et al.)

No additional COVID-19-specific protections are recommended for workers involved in wastewater management, including those at wastewater treatment facilities.

(CDC 2020)

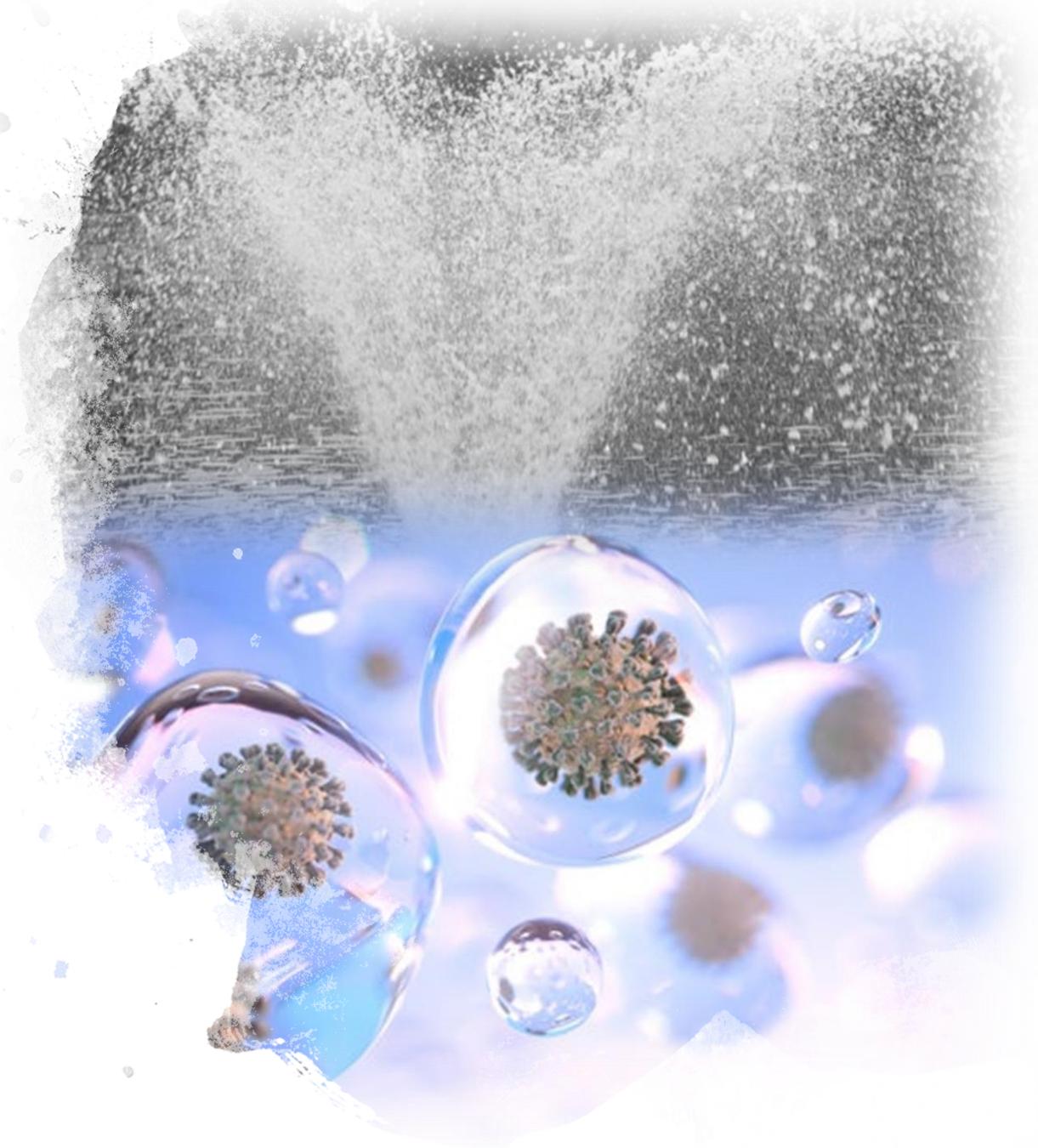
Personal Protective Equipment for Essential Employees to Protect Against Aerosolization

- Types of Personal Protective Equipment Needed
- Split Shift for Crew Redundancy

Confusing Information

One [study led by the NIH](#) confirmed infective COVID-19 virus survival for more than 3 hours in experimentally generated aerosols under laboratory conditions.

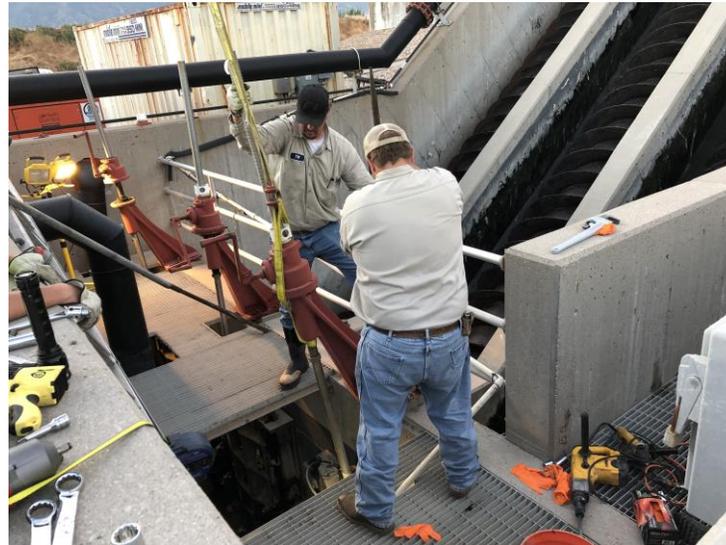
There is no evidence to suggest that additional, COVID-19-specific protections are needed for employees involved in wastewater management operations, including those at wastewater treatment facilities. (OSHA 2020)





EPA Administrator Andrew Wheeler. "Having fully operational drinking water and wastewater services is critical to containing COVID-19 and protecting Americans from other public health risks. Our nation's water and wastewater employees are everyday heroes who are on the frontline of protecting human health and the environment every single day."

.....is an essential critical infrastructure worker in the Water and Wastewater Sector and is providing a vital public health and safety service.



A magnifying glass with a black frame is positioned over an open book. The book's pages are yellowed with age and are slightly blurred, suggesting a shallow depth of field. The magnifying glass's lens is centered on the right side of the book, showing a clear view of the text on the page it covers. In the top left corner of the image, there is a solid green horizontal bar. The background is a dark, neutral color.

Research and Articles

How your poop is being used in the fight against COVID-19

By Lyndsay Winkley The San Diego Union-Tribune (TNS) Jun 8, 2020 Updated 2 hrs ago 0

Environment + Health

Published: May 11, 2020

WASTEWATER MAY HELP PREDICT THE NEXT COVID-19 OUTBREAK

Contact(s): [Caroline Brooks](#), [Irene Xagorarakis](#)

HEALTH

Testing Sewage for Coronavirus Could Help Predict Future COVID-19 Outbreaks, Scientists Believe

BY [KASHMIRA GANDER](#) ON 4/23/20 AT 8:30 AM EDT



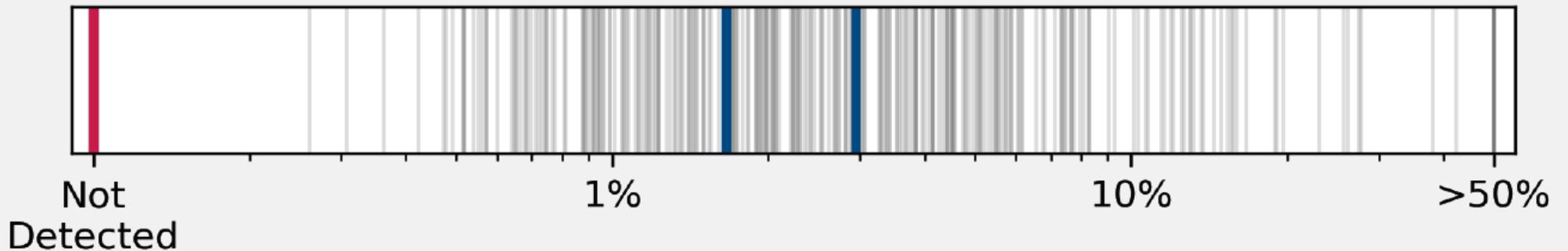
What we know so far:

General Use Cases	Can Inform	Current Feasibility
Trends/Changes in Occurrence	Early detection of Occurrence. Tracking the impact of medical and social interventions: A) curve increasing; B) curves decreasing	A) ++ B) +

Utah Testing

Biobot prevalence rate estimates in context

This sample in red, your past samples in blue. Other facilities in gray.



Biobot prevalence rate estimates in context

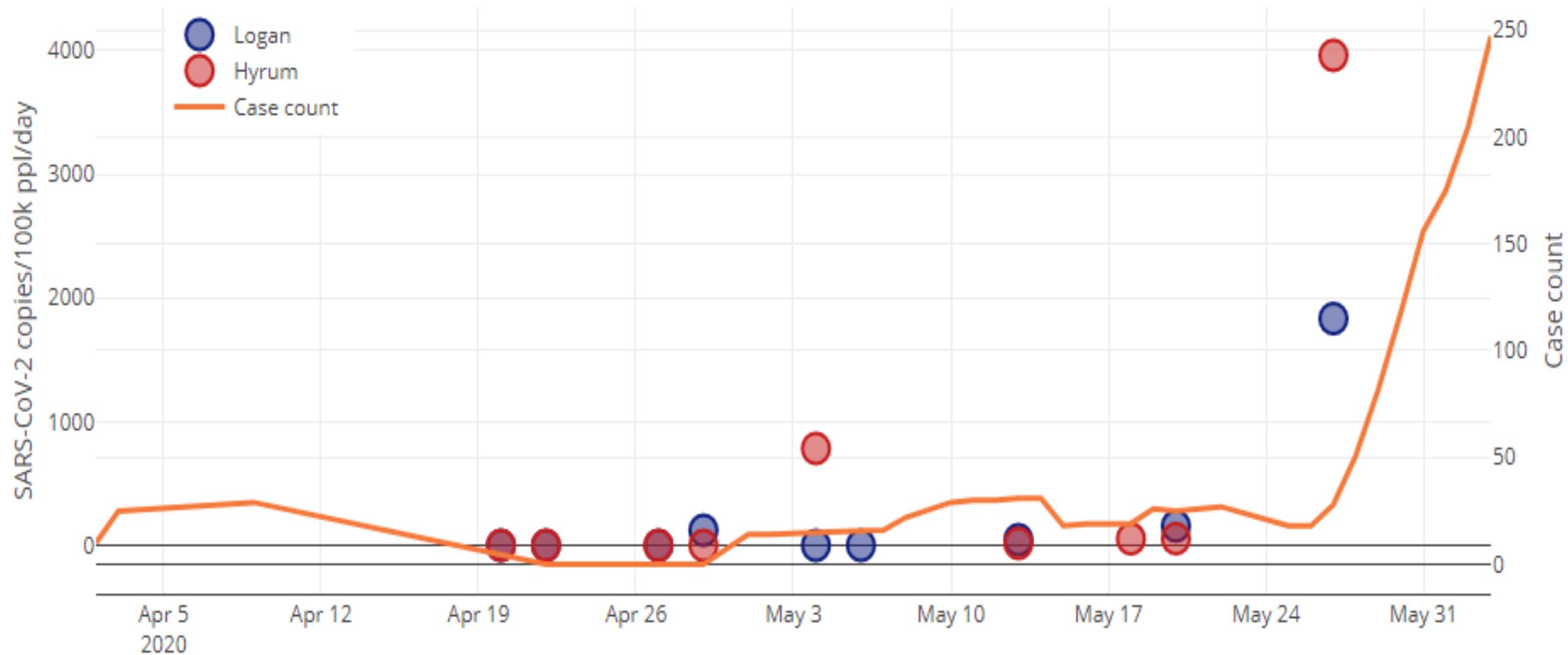
This sample in red, your past samples in blue. Other facilities in gray.



Virus concentrations in Logan City and Hyrum City WWTPs and Cache County COVID-19 active case counts.

Note: non-detections plotted at 1.

Cache County



DEEP DIVE

No wipes in the pipes: Coronavirus cleaning leads to spike in sewer clogs

The use of disinfectant wipes is spiking as residents try to protect themselves from COVID-19. The result: clogged municipal wastewater systems and costly repairs.



Permission granted by KC Water



801.295.3469

To Our Customers
We would like to take this opportunity to inform you that the sewer system and treatment plants that serve you are functioning as they should during this COVID-19 pandemic



THINK BEFORE YOU FLUSH!

(Only flush the three p's)

Please discard other items into the trash



Pee



Poo



Toilet Paper

Clogs from wipes, rags, and other items trap grease and cause sanitary sewer overflows.

[Learn More](#)

MISSION STATEMENT

Covid-19 Wastewater Update

Here is some important information from our Cedar City Treatment Facility Pre-treatment Program regarding personal & disinfectant wipes being used in lieu of toilet paper.

*****Personal & Disinfectant Wipes Clog Pipes*****

People Are Using More Wipes Because Of Coronavirus, Clogging Sewers

March 27, 2020

JACOB FENSTON

FROM **WAMU 88.5**
AMERICAN UNIVERSITY RADIO



Wipes removed from a DC Water pumping station March 26, 2020.

Courtesy of DC Water

