

11th Annual Water and Sanitation Innovations for the Arctic Workshop

Tracing the Pandemic Through Wastewater: Using Sewage Monitoring to Investigate Infectious Disease

February 2-3, 2021

**A Virtual Workshop Cosponsored by the
U.S. Arctic Research Commission, Alaska Department of Environmental Conservation,
and Centers for Disease Control and Prevention**

Workshop Objectives

- **Provide an overview of the current state of the science of Wastewater Epidemiology, both globally and nationally**
- **Determine the need for and current/potential uses of Wastewater Epidemiology in Alaska, with special focus on rural, cold climate communities**
- **Discuss testing goals and potential sampling approaches for Alaska's unique and varied remote communities**
- **Examine the ethics and public engagement sensitivities related to these activities**

Tuesday, February 2 (all times are Alaska Standard Time)

8:30 A.M.	Meeting commences
8:30 - 10:00 A.M.	Session 1: Setting the Stage (Moderator: <i>C. Rosa, USARC</i>)
8:30-8:45	Introductions/introductory remarks/workshop goals (<i>C. Rosa, USARC</i>)
8:45-9:00	Rural Alaska wastewater overview (<i>J. Nichols, ANTHC</i>)
9:00-9:15	Impact of past pandemics on rural Alaskan communities (<i>K. Erickson, Ukpeaġvik Iñupiat Corporation Science</i>)
9:15-9:30	Current COVID-19 status update for the State of Alaska (<i>A. Zink, AK DHSS</i>)
9:30-10:00	Group Discussion
10:00 - 10:30 A.M.	Break
10:30 A.M. - 12:00 P.M.	Session 2: Global State of the Art for infectious disease monitoring in sewage Moderator: <i>C. Bohan, ADEC</i>)
10:30-10:45	Introduction to Sewage Epidemiology (<i>C. Gerba, University of Arizona</i>)
10:45-11:00	International focus: how this technology has been used in the past (<i>F. Been, KWR</i>)
11:00-11:15	Wastewater Epidemiology in Southern Nevada: Lessons Learned for Collaboration and Long-Term Implementation (<i>D. Gerrity, Southern Nevada Water Authority</i>)
11:15-11:30	Temporal Detection and Phylogenetic Assessment of SARS-CoV-2 in Municipal Wastewater (<i>B. Wiedenheft, Montana State University</i>)
11:30-12:00	Group discussion
Noon Adjourn for day	

Wednesday, February 3

8:30 A.M. Meeting commences

8:30 - 10:00 A.M. Session 3: Wastewater testing potential in Alaska/the Arctic
(Moderator: *S. Yoder, AK DHSS*)

8:30-8:45 Short welcome and Day 1 recap (*C. Rosa, USARC*)

8:45-9:00 National Wastewater Surveillance System: Implementation Update
(*A. Kirby, Centers for Disease Control and Prevention*)

9:00-9:15 Critical Analysis of Wastewater Epidemiology for a Variety of Analytes
(*R. Halden, Arizona State University*)

9:15-9:30 SARS-CoV-2: Wastewater Surveillance in Alaska (*B. Briggs, UAA*)

9:30-9:45 “Small” Community Sampling: Tracking SARS-CoV-2 in Municipal Wastewater
in Juneau, Alaska (*L. Sowa, Juneau Engineering*)

9:45-10:00 Hoonah example (*D. Gray, City of Hoonah*)

10:00 - 10:15 A.M. Break

10:15 A.M. - 12:00 P.M. Session 4: Discussion Panels

10:15 A.M. - 11:00A.M. Panel 1: Forecasting the virus

Moderator: *C. Rosa, USARC*

Panelists: *C. Gerba (U. of Arizona), A. Kirby (CDC), B. Briggs (UAA),*

D. Gray (City of Hoonah), R. Halden (Arizona State U.), S. Yoder (AK DHSS)

11:00 A.M. - 11:15A.M. Break

11:15 A.M. - 12:00 P.M. Panel 2: Sampling approach/community goals in Alaska

Moderator: *A. Dotson (UAA)*

Panelists: *R. White (YKHC), D. Thompson (City of Togiak), K. Holtermann (City of Unalaska),*

J. Schaeffer (ANTHC), L. Sowa (Juneau Engineering)

Noon Adjourn