



CALIFORNIA ASSOCIATION of SANITATION AGENCIES

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MEMORANDUM

November 24, 2014

TO: CASA Members and Partner Associations

FROM: Greg Kester, Director of Renewable Resource Programs

SUBJECT: **Consensus Recommendations for Dialogue Between the Wastewater Sector and Hospitals on the Management of Wastewater Generated by Patients Infected with the Ebola Virus**

The available information regarding the treatment of wastewater generated in hospitals by patients infected with the Ebola Virus has been confusing and conflicting. Interim guidance from the Centers for Disease Control and Prevention (CDC) states that sanitary sewers may be used for the safe disposal of Ebola patient waste, based on the premise that sewage handling processes in the United States are designed to inactivate infectious agents. However, the wastewater community has concerns for the safety of workers handling wastewater prior to its treatment at the wastewater plant. As an additional level of protection, virologists from across the nation recommend the following be used as a basis for dialogue between wastewater agencies and hospitals who may treat Ebola patients as a pragmatic means of pretreatment for Ebola patient wastewater:

If feasible, a zero waste discharge would be preferable, with the wastewater managed in the same manner as all other Ebola contaminated solid waste from the patient(s).

If a zero discharge is not possible, isolate and batch treat all wastewater from toilets, and graywater from showers and sinks by closing their drains, carefully adding bleach (1/2 cup per gallon) or low alcohol quaternary ammonium disinfectant, and holding for at least 10 minutes prior to flushing or draining. The quaternary disinfectant should have documented effectiveness against norovirus and enterovirus.

Pre-treatment of Ebola patient waste should only be done by individuals wearing appropriate personal protective equipment and properly trained in the disinfection process.

Wastewater utility workers, by the nature of their work, are likely aware of the risk that pathogens in sewage pose and already take appropriate care to practice sound personal protection and hygiene when handling sewage at any point in the treatment process. Nonetheless, to ensure worker safety, appropriate personal protective equipment and proper hygiene practices should be used and regularly reviewed as part of worker health and safety preparedness and training. The CDC's [Interim Guidance for Managers and Workers Handling Untreated Sewage from Individuals with Ebola in the United States](#) should be referenced for recommendations on proper equipment and hygiene.

The recommendations contained in this memo are supported by Dr. Charles Haas (Drexel University), Dr. Mark Sobsey (University of North Carolina), Dr. Charles Gerba (University of Arizona) and endorsed by the California Association of Sanitation Agencies and the National Association of Clean Water Agencies.

Research is ongoing to better confirm the recommendations and this memo will be revised as appropriate pending research findings. If you have questions or need additional information, please feel free to contact me at (916) 446-0388 or gkester@casaweb.org.

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