January 20, 2015

Dear Hospital and Healthcare Providers,

Please find attached a document detailing a consensus recommendation on the handling of wastes to be discharged into the sanitary sewer from Ebola virus disease (EVD) patients. This was prepared by the California Association of Sanitation Agencies (CASA) in consultation with the California Department of Public Health (CDPH), and supersedes an earlier version released by CASA. Please use this information as needed to inform any discussions on this topic with wastewater treatment facilities.

Existing CDC and WHO guidance documents suggest that patient discharges/waste can be safely disposed of in sanitary sewers. Nevertheless, wastewater treatment plants have concern for workers who may come into contact with raw sewage prior to treatment at the plant. As a result, hospitals have reported differing requirements from wastewater treatment facilities in different localities, and some hospitals expressed concerns regarding plumbers and other staff that might need to address a blockage or other problem before the waste reached the sewer. This CASA revision should be offered as a point of discussion with your local sanitation district.

Recognizing that a single statewide approach, as much as possible, would be helpful not only to hospitals but also to the local wastewater agencies grappling with this issue, CDPH coordinated with CASA, the State Water Board, and the California Water Environment Association (CWEA) regarding a recommended approach for use by local sanitation districts and hospitals as they plan for the potential discharge of waste from a hospitalized EVD patient into the sanitary sewer. The new CASA recommendation adds an additional layer of precaution by including pre-treatment of the waste before it is discharged into the sewer via toilets, drains, and showers in order to address the need for an approach that might be workable for both hospitals and local sanitation agencies. Existing practices at national Ebola treatment hospitals, in the Army, and other recommendations were considered. Note that the products suggested for pre-treatment are routinely used in hospitals, but are not labelled for this particular purpose – there is no assurance that pre-treatment will disinfect the waste so all PPE practices should be continued. Updates will be provided in the future as indicated.
Two CDC guidances may also be useful, the one referenced on the second page of the document (http://www.cdc.gov/vhf/ebola/prevention/handling-sewage.html) and its companion FAQ (http://www.cdc.gov/vhf/ebola/prevention/faq-untreated-sewage.html).

CASA and CWEA have shared this guidance with their local agencies/members, and the State Water Board has shared it with the Regional Water Boards (which have oversight over wastewater discharge).

CDPH and CASA are both available to assist hospitals and/or sanitation agencies if needed as they coordinate on this.

Regards,

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Memorandum

January 13, 2015

TO: CASA Members and Partner Associations

FROM: Greg Kester, Director of Renewable Resource Programs

SUBJECT: Revised 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 need for treatment of wastewater generated in hospitals by patients infected with the Ebola Virus may lead to some confusion. Interim guidance from the Centers for Disease Control and Prevention (CDC), consistent with guidance from the World Health Organization (WHO), states that sanitary sewers may be used for the safe disposal of Ebola patient waste, and notes 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, three leading microbiologists recommend the guidance below, which is also consistent with the Standard Operating Procedures (SOP) released by the US Army Institute of Public Health at the Aberdeen Proving Ground on October 22, 2014, and available at this link http://www.casaweb.org/documents/evdwastemanagementonmtfsop.pdf. The SOP may be consulted as an additional resource, especially Section 3 for the safe pretreatment of patient generated wastewater. The information provided in this memo should be used as a basis for dialogue between wastewater agencies and hospitals that may treat Ebola patients as a pragmatic means of pretreatment for Ebola patient wastewater. This represents a revision to the November 24, 2014 guidance based on updated information:

While a zero waste discharge would be a desirable approach for the wastewater community, wastewater managed in the same manner as Ebola contaminated solid waste from the patient(s) presents significant challenges for hospitals, such as safety concerns and cost effectiveness.

If a zero discharge is not feasible, pre-treatment of all wastewater, including toilets and graywater from showers and sinks, is recommended as follows: For toilet waste, first disable the auto-flush feature if available and instruct the patient not to manually flush the toilet. Carefully add bleach (1 cup per bowl of 5% or greater sodium hypochlorite) or low alcohol quaternary ammonium disinfectant and hold for 15 minutes prior to flushing. The quaternary disinfectant should have documented effectiveness against norovirus and enterovirus. Sinks should be plugged prior to any waste discharge into them and the waste treated with ½ cup of 5% bleach and held for 15 minutes before draining. If a patient will shower, then add 3 tablespoons of granular calcium hypochlorite (65-70% available chlorine) to the shower floor drain prior to the patient entering the shower. Immediately after the shower, apply 1 cup of 5% bleach to the drain and rinse it down.
Note that some hospitals have expressed concern that chlorine bleach added to ammonia based waste may create hazardous fumes that could subject the patient and hospital workers to undue risk. However, decades of experience by the microbiologists supporting this guidance have not witnessed such situations when using the bleach in the manner recommended here. The bleach formulations are used every day in households and laboratories without incident.

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.

In addition to the current planning and coordination by hospitals and wastewater agencies, hospitals that actually do receive patients suspected or known to be infected with the Ebola virus are urged to notify their local wastewater agency immediately.

The notification should include:
1. The facility name
2. The facility address
3. The status of the patient (suspected/known to be infected)
4. The date and time of the patient’s arrival at the facility
5. The name, title, and contact information of the person from whom the wastewater plant may obtain additional information on the suspected Ebola case and its handling by the facility.

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

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 916.844.5262 or gkester@casaweb.org.