

RDPO Disaster Sanitation Task Force

2019 Oregon Public Health Association Conference

Panel Abstract

Title

- Disaster Sanitation: When There's No Place to Go

Author(s)

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Presenter(s)

- Laura Hall, Sue Mohnkern, Scott Johnson, Erin O'Connell

Student Submission

- No

Topic/Target Audience

- Public health workers, public messaging professionals, program developers/evaluators, policy makers

Abstract

The ability to treat water and wastewater is a fundamental part of the modern public health system. When the Cascadia Subduction Zone (CSZ) fault ruptures off our coast, it will produce a M8.0-M9.0 earthquake lasting 2-9 minutes. We'll see significant destruction throughout the region, including catastrophic and unprecedented impacts to our water and wastewater systems. The Pacific Northwest will face a major sanitation crisis. On average, the CSZ fault ruptures every 270 years; the last rupture was 319 years ago.

In 2016, the Disaster Sanitation Task Force was created under the Regional Disaster Preparedness Organization (RDPO) to address this issue. The RDPO is a partnership of government agencies, non-governmental organizations, and private-sector stakeholders in the Portland Metropolitan Region collaborating to increase the region's resilience to disasters. The Task Force included professionals from public health, environmental health, emergency management, public works, wastewater treatment, waste hauling, and the Oregon DEQ.

Objective(s)

Describe the RDPO's three recommended methods for public handling of human waste in the long-term absence of a functional wastewater system. Explain why these three recommendations

were chosen over other alternative methods. Understand the cultural and communication barriers that must be overcome in order to successfully prepare the public to handle their own sanitation needs after a major earthquake. Identify partners needed to develop inclusive planning, public messaging, and emergency response for an extended wastewater event.

Panel Moderator

Laura Hall

Panel Abstract 1

The goals of the RDPO Disaster Sanitation Task Force are a) to provide the public with options for handling human waste in the absence of a functional wastewater system and b) to provide jurisdictions with information so they can start disaster sanitation planning now (pre-disaster). This panel will describe the process used for creating public recommendations, methods considered, and final recommendations reached. It will also address common concerns, messaging hurdles, and a summary of Phase 2 of the project, which focuses on post-event cleanup.

Presenter 1

Sue Mohnkern

Panel Abstract 2

During Phase 1 of their project, the Task Force created recommendations for methods of public handling of human waste and then developed a public messaging campaign to disseminate the recommendations. The multi-jurisdictional, multi-disciplinary Task Force's goal was to find solutions that would not worsen the post-disaster reality by spreading illness and disease. Many methods were considered during a lengthy process of weighing pros and cons. They focused on methods that were simple, cheap, readily available, and effective. Acknowledging that no single sanitation method would fit every situation, they developed three recommendations: checking septic systems, digging latrines, and using the Twin Bucket System.

Presenter 2

Scott Johnson

Panel Abstract 3

Once the Disaster Messaging Task Force finalized its recommendations for public messaging, the Task Force embarked upon public messaging campaign. They engaged stakeholders and field experts, worked with contractors to develop and translate print materials, and launched the campaign.

Presenter 2

Erin O'Connell

Panel Abstract 4

Phase 2 of the project is looking at how to mitigate an environmental emergency caused by the disposition of the proposed bagging waste method. Our team is collecting data from subject matter experts to determine the pros and cons of the most likely disposition options. Since the amount of bagged waste material collected will likely drive the decision as to which disposition option is used, we are first mapping population density and demographics, as well as wastewater system seismic status. By understanding the unique requirements of each method proposed in Phase 1 (septic, latrines, and twin buckets), our team will create a “most likely method” map that can provide extrapolated data for estimating how much waste material will need to be disposed of for a given area. This, combined with our analysis, will provide policy makers the data needed to make decisions that have the least worst impact on public health and the environment post disaster.

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