

Waste Site Resiliency: Planning for Rising Coastal and Inland Water

Live Webinar via Zoom on October 30, 2024, 8:30 AM – 11:30 AM

Webinar Agenda

Michele Paul: The 2024 MCP Amendments require consideration of climate change in waste site cleanup assessment and remediation. The LSPA's Climate Change Toolkit offers a methodology and resources for LSPs; Ms. Paul will provide an overview of the toolkit. She will briefly discuss the site planning and adaptations already taking place in New Bedford.

Joseph Famely: LSP clients are facing increasing risks from climate-related hazards. Planning to adapt to these changing conditions and build resilience for infrastructure and society requires prioritization and informed decision-making. Mr. Famely's presentation will draw parallels to the LSPA's Climate Change MCP Toolkit and make connections to incorporating climate change into Brownfields redevelopment. More specifically, he will provide an overview of a hydrodynamic probabilistic coastal flood risk model used in MA (and in development for NH and ME) to prioritize, phase and layer adaptation projects over time. Next, he will discuss a framework which leverages this model and other climate projections to develop project-specific resilient design criteria informed by projected exposure to these hazards over the design life of the project. Then he will present a few case studies where coastal vulnerability assessments have informed resilience plans and initiated adaptation projects using structural and nature-based approaches.

Dr. David Boutt: This talk will introduce the problems associated with groundwater shoaling (i.e. flooding), defined as a short to medium term rise in the water table. To understand the spatial distribution and probability of groundwater rise in Massachusetts, Dr. Boutt's UMass team developed a 3D groundwater flow model for the entire contiguous state. He will detail the new state-wide datasets needed to populate the model including calibration and validation information. This information is aggregated into metrics of water table coupling to the land surface and incorporated into a physically-based groundwater model. Simulation results will be presented and discussed in the context of changes in water storage and water availability. New findings from recent modeling will highlight the impact of combined increases in precipitation and water table rise associated with sea-level rise.

Tracy Roth: This presentation will provide an overview of the regulatory requirements and guidance for conducting sea level rise vulnerability assessments (SLRVAs) at coastal landfills and contaminated sites in California, a description of the data sets available in California for screening the potential combined flood risk from surface water inundation and groundwater rise, and best practices for how site-specific, phased adaptation plans are necessary to ensure remedy resilience to sea level rise.