



**U.S. Department of Energy  
Office of Legacy Management**

# **Climate Adaptation and Resilience Programs and Activities**

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# DOE Office of Legacy Management

- More than 70 years of nuclear weapons production and energy research by the federal government has generated large amounts of radioactive and hazardous waste, spent nuclear fuel, uranium mill tailings, and contaminated soil and groundwater at hundreds of sites across the country
- Even after active environmental remediation of these sites is completed, many sites require long-term surveillance and maintenance (LTS&M) to ensure the continued protection of human health and the environment for as long as contamination remains
- In 2003, the U.S. Department of Energy (DOE) created the Office of Legacy Management (LM) to manage LTS&M responsibilities at these sites and provide pension and benefits program oversight for former workers
- LM currently oversees LTS&M activities at more than 100 sites across the country



# LM Sites



**Sites in LM Requiring LTS&M (as of November 30, 2020)**

CERCLA/RCRA	D&D	FUSRAP	MED/AEC Legacy Site	Nevada Offsites
NWPA	Plowshare/Vela Uniform Program	State Water Quality Standards	UMTRCA Title I	UMTRCA Title II

**Site Category**

**Category 1** activities typically include records-related activities and stakeholder support

**Category 2** activities typically include routine inspection (any site visit needed to verify the integrity of engineered or institutional barriers) and monitoring/maintenance, records-related activities, and stakeholder support

**Category 3** activities typically include operation and maintenance of active remedial action systems, routine inspection (any site visit needed to verify the integrity of engineered or institutional barriers) and monitoring/maintenance, records-related activities, and stakeholder support

D/P = Disposal/Processing DR = Decommissioned 11/2020



# DOE Climate Change Commitments

- The Department recognizes that climate change and extreme weather events have already affected its sites, mission, and operations
- DOE's mission includes actively increasing resilience to climate change risks
- DOE is updating policies and assessing internal risks and vulnerabilities to climate change
  - DOE has conducted site vulnerability assessments and additional assessments are in progress
- As DOE identifies its vulnerable sites and completes the necessary assessments, information will be shared with local communities and tribes



# Executive Order 14008

- On January 27, 2021, the President issued Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*
- Establishes climate considerations as an essential element of U.S. foreign policy and national security
- Addresses management of federal procurement, real property, public lands and waters, and financial programs
- Integrates climate adaptation and climate resilience across agency programs.
  - *Adaptation* – adjustment in natural or human systems in anticipation of, or response to, a changing environment in a way that effectively uses beneficial opportunities or reduces negative effects. Adaptation is an action.
  - *Resilience* – the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and rapidly recover from disruptions. Resilience is a trait, capacity, or attribute.



# Climate Action Plan

- DOE is currently developing a Climate Action Plan in response to EO 14008. Requirements include:
  - Issue agency policy for climate change adaptation and resilience
    - Update the agency-wide policy statement
  - Identify agency officials responsible for implementation
    - Carry out climate adaptation management activities
    - Provide oversight, authority, and influence across agency top priorities
  - Develop an action plan for climate change adaptation and resilience
    - Update climate vulnerability assessments
    - Identify efforts to enhance climate literacy
    - Describe agency actions to enhance climate resilience



# Executive Order 13990

- On January 20, 2021, the President issued Executive Order 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*
- Directs all agencies to review existing regulations, orders, guidance documents, policies, and other similar actions promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, to determine consistency with the policy set forth in Section 1 of the EO



# GAO Engagement

- Recent LM activities on climate resiliency of its sites started before the EO was issued
- The National Defense Authorization Act for fiscal year 2020 included a provision for the U.S. Government Accountability Office (GAO) to review LM's operations, including the nature of its environmental liability
- The 2020 GAO report provided recommendations for executive action
  - Recommendation 3 addressed LM's environmental liabilities:
    - The Secretary of Energy should direct the Director of LM to — as called for in LM's Strategic Plan — develop plans to assess the effect of climate change on LM's sites and to mitigate any significant impacts





# LM Actions

- LM is taking action to assess the effects of climate change on its sites and mitigate those effects
  - In 2021, LM secured an agreement with Lawrence Berkley National Laboratory to complete an assessment of its sites and their susceptibility to climate change impacts, use these findings to better inform its LTS&M responsibilities, and refine its environmental liability estimates for managing the sites
  - This assessment aims to look at all LM sites initially and then select specific sites, which may be representative of many sites or higher risk sites, for more detailed analysis
  - This activity is scheduled to be completed in September 2022



# Additional LM Actions

- LM routinely participates in a DOE-wide working group to exchange knowledge and experience and attends training and conferences focused on climate resilience to gain insight into how we might adapt LTS&M strategies
- LM has conducted various initiatives internally to determine where LM sites are most vulnerable, ways to mitigate those vulnerabilities, and how to incorporate relevant severe-weather-event factors into program decisions





**Questions/Feedback?**