

HANDOUTS

Nevada Site Specific Advisory Board Member Orientation

Frank H. Rogers Auditorium
755 East Flamingo Road, Las Vegas, NV

Wednesday, October 10, 2018

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Environmental Management Site-Specific Advisory Board



Kelly Snyder
Deputy Designated Federal Officer
EM Nevada Program
October 10, 2018



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Environmental Management (EM) Site-Specific Advisory Board (SSAB) Background

- Group of volunteers convened by the U.S. Department of Energy's (DOE's) EM Program to provide citizen review and feedback to DOE on EM activities throughout the country
- Largest Federally-chartered advisory board in the country
- Made up of eight boards - including the Nevada Site Specific Advisory Board (NSSAB)
- 1994 – EM SSAB Charter approved
 - Requires renewal every two years



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Location of Eight EM SSAB



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Oversight vs. Advisory

- Oversight – monitor progress toward completion according to specified milestones that are often reflected in law and/or agreements
- Advisory – independently create recommendations that address work within the EM purview of concern and interest to the board and the public

The NSSAB is an ***advisory*** board



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Scope of the NSSAB

- Groundwater characterization
- Surface soil contamination/remediation
- Facility contamination/remediation
- Low-level waste disposal and transportation
- EM budget prioritization



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SSAB Operating Requirements

- Federal Advisory Committee Act
- EM SSAB National Charter
- DOE Guidance
- NSSAB Standard Operating Procedures
- EM SSAB Code of Conduct

Documents available on the NSSAB website at
www.nnss.gov/NSSAB under *References*



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Environmental Management Complex Overview



Robert Boehlecke
Program Manager
EM Nevada Program
October 10, 2018



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History of Environmental Management (EM)

- The U.S. nuclear weapons complex contaminated waste, water, soil, and structures that will remain radioactive for thousands of years
- U.S. Department of Energy (DOE) created the Office of EM in 1989 to clean-up legacy contamination resulting from this nuclear research and testing



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National EM Program Responsibility

- EM is responsible for:
 - Remediating extensive surface and groundwater contamination
 - Safely disposing large volumes of nuclear waste
 - Decontaminating and decommissioning contaminated facilities no longer needed



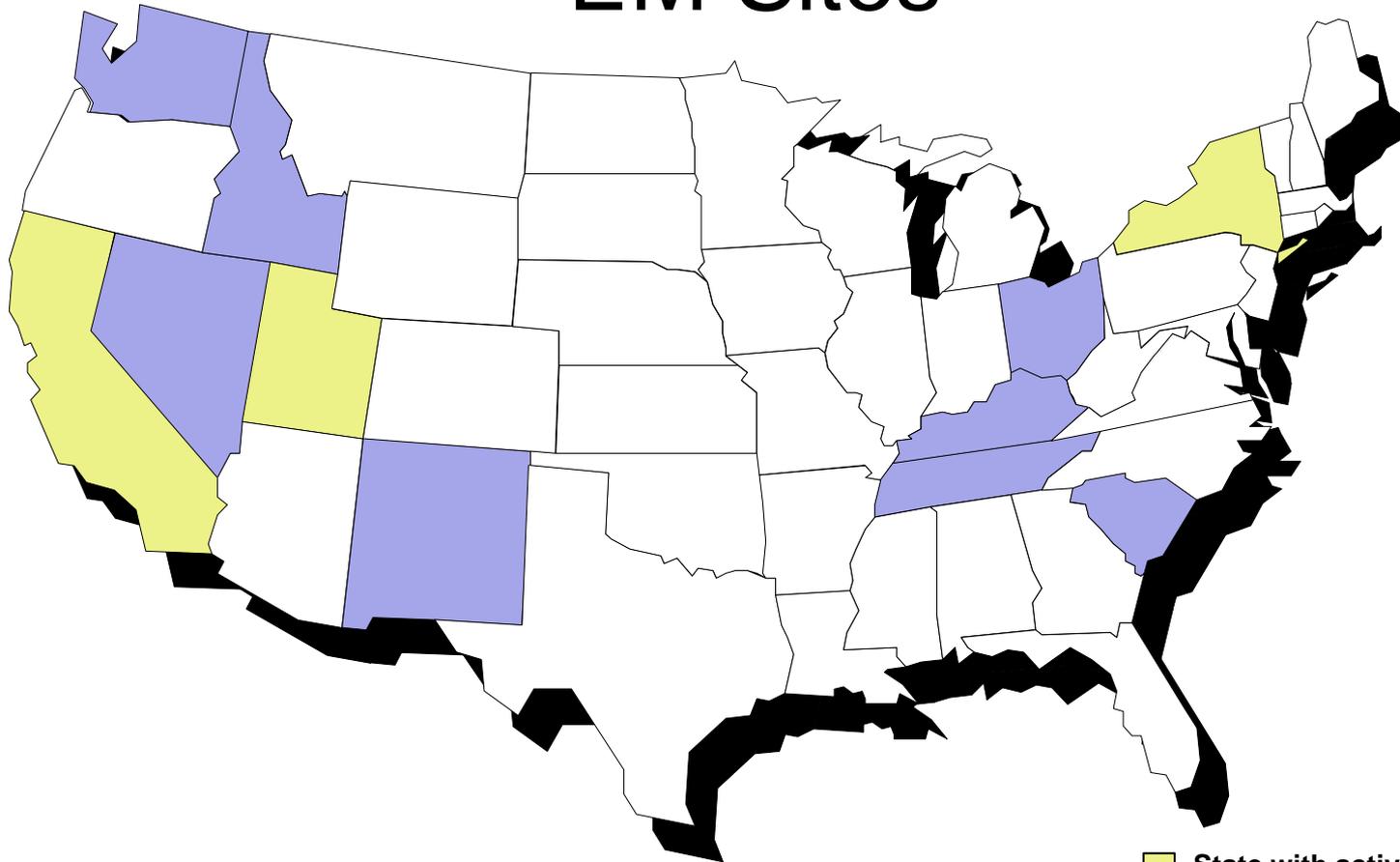
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EM Sites



-  State with active EM site
-  State with active EM site and Site-Specific Advisory Board



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Hanford (Washington)



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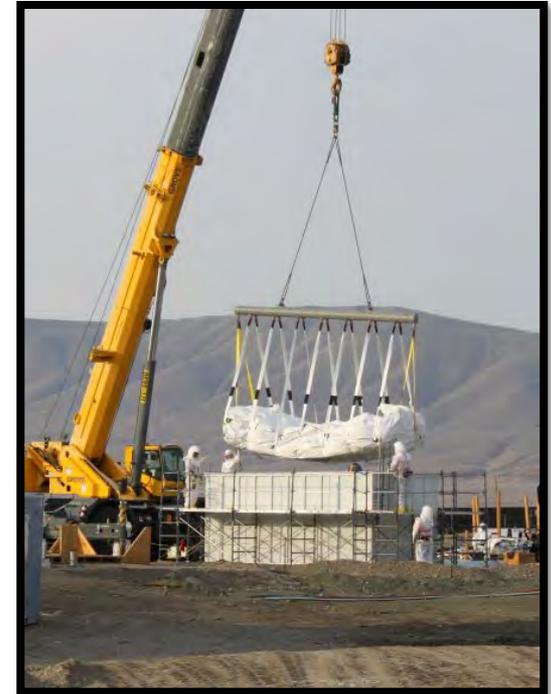
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Hanford (Washington)

(continued)

- Located in southeastern Washington State; Columbia River runs through the northern portion of the site; Richland is located on the southern border of the Site
- Established in 1943 for plutonium production, chemical processing, and research and development of nuclear weapons
- Current mission is to manage facilities and inventories of special materials, remediate contamination, and support national research efforts in environmental and other sciences



Workers prepare to load demolition waste from Hanford's Plutonium Finishing Plant



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Idaho



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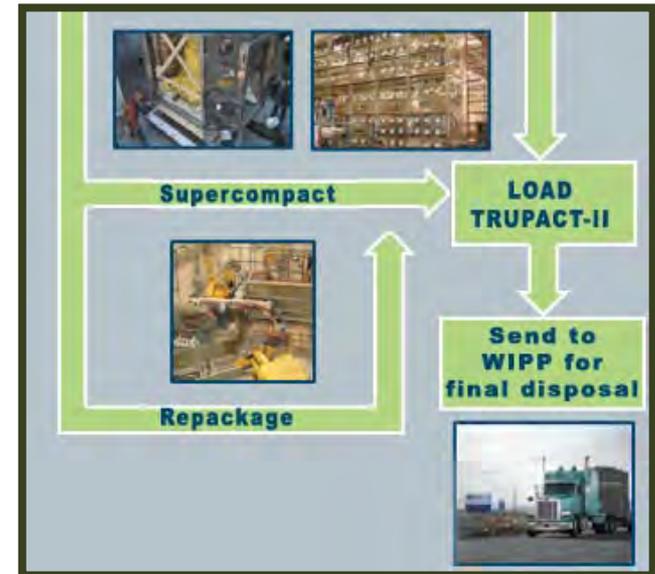
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Idaho

(continued)

- Located in southeastern Idaho desert near northwest end of the Snake River Plain, 25 miles west of Idaho Falls
- Established in 1949 – missions included designing and testing nuclear reactors and reprocessing spent nuclear fuel
- Current missions include nuclear energy research, national security, and EM



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Los Alamos (New Mexico)



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Los Alamos (New Mexico)

(continued)

- Located in north-central New Mexico, approximately 60 miles northeast of Albuquerque and 25 miles northwest of Santa Fe
- Established in 1943 as Site Y of the Manhattan Project for a single purpose: to design and build an atomic bomb
- Current missions includes multi-program national laboratory with research and development programs in broad range of scientific and technical fields; and environmental risk reduction relative to current activity as well as remediation of legacy waste



Large industrial vacuum system being used in the Canyon Floor of the Los Alamos "Acid Canyon" to remove high volumes of contaminated soil



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Nevada National Security Site (NNSS)

- Located in the southern Nevada desert 65 miles northwest of Las Vegas
- Established in 1950 to conduct field testing of nuclear explosives
 - 100 total atmospheric tests (until 1962)
 - 828 total underground tests (until 1992)
- Current missions are National Security and EM



Workers Measure Grids Prior to Collecting Soil Samples at the NNSS



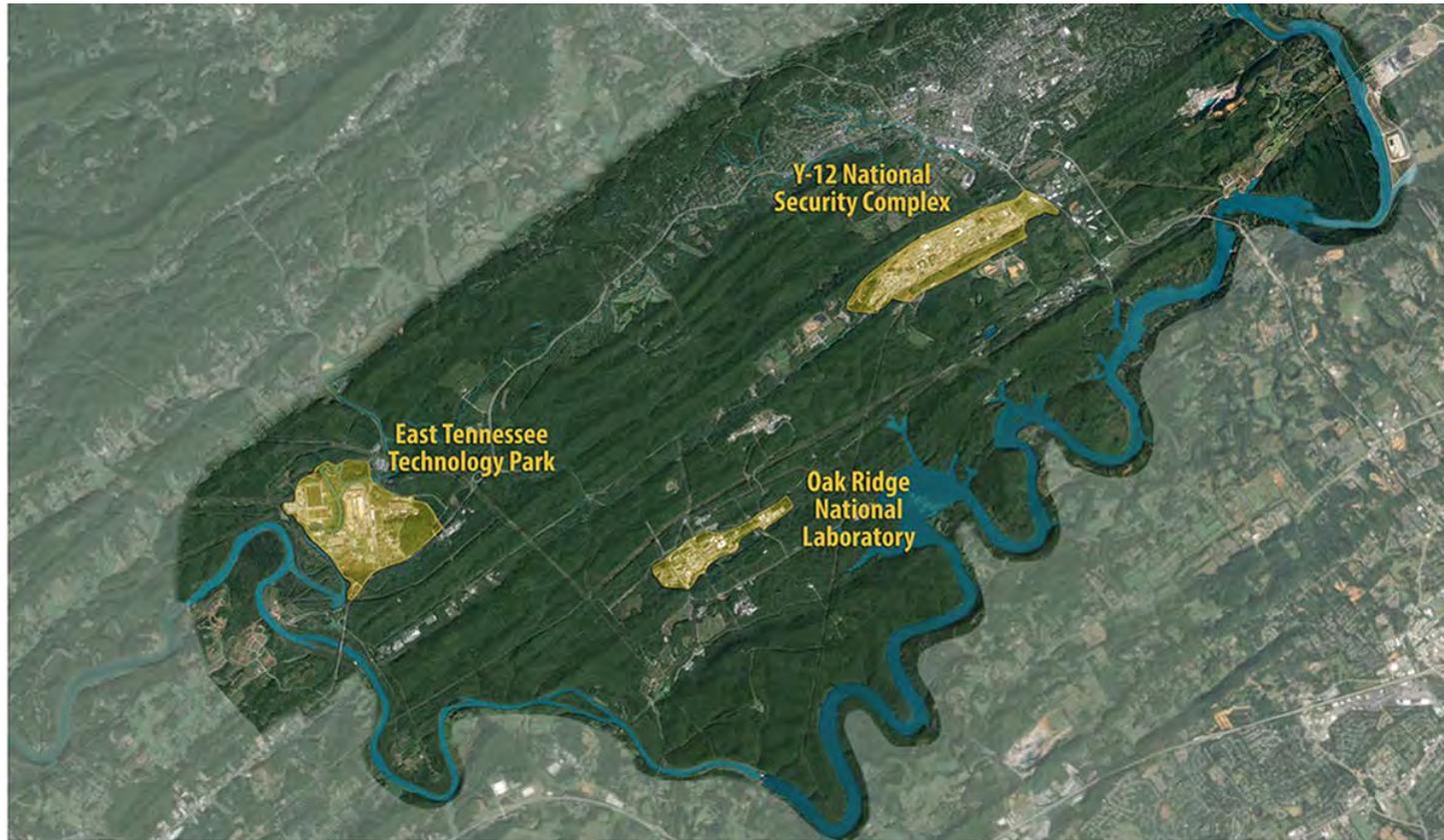
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Oak Ridge Reservation (Tennessee)



More than 30,000 acres located in East Tennessee, entirely within the city limits of Oak Ridge, and bordered by the Clinch River to the south and west.



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Oak Ridge Reservation (Tennessee)

- “Secret City” established in early 1940s as part of the World War II the Manhattan Project to produce enriched uranium.
- Current missions: **Oak Ridge National Laboratory**, a world-class research facility with ongoing science, technology and other research; **Y-12 National Security Complex**, used for disassembly of nuclear weapons and storage of uranium; and **East Tennessee Technology Park**, a former uranium enrichment site being converted to an industrial park through transfers of remediated property to the community.
- Each of these three sites has unique cleanup needs due to contamination from their past operations and EM is reducing a wide range of physical, chemical, and nuclear hazards.



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Paducah Gaseous Diffusion Plant (Kentucky)



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Paducah Gaseous Diffusion Plant (Kentucky) (continued)

- Located in rural western Kentucky, 15 miles from the city of Paducah near the Ohio and Mississippi rivers; sister-site to the Portsmouth plant in Piketon, Ohio
- Established in 1952 to produce enriched uranium for the Federal Government and commercial nuclear power and later for low-enriched uranium production
- Current missions include environmental cleanup, waste management, depleted uranium conversion, and deactivation and decommissioning



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Portsmouth Gaseous Diffusion Plant (Ohio)



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Portsmouth Gaseous Diffusion Plant (Ohio)

(continued)

- Located in Piketon, Ohio along the Scioto River
- Established in 1954 to support expansion of highly-enriched uranium production for military reactors and nuclear weapons and later for low-enriched uranium production for nuclear power plants
- Current missions include decontamination and decommissioning of the former gaseous diffusion plant, conversion of the site's depleted uranium hexafluoride inventory, and other soil and groundwater remediation efforts



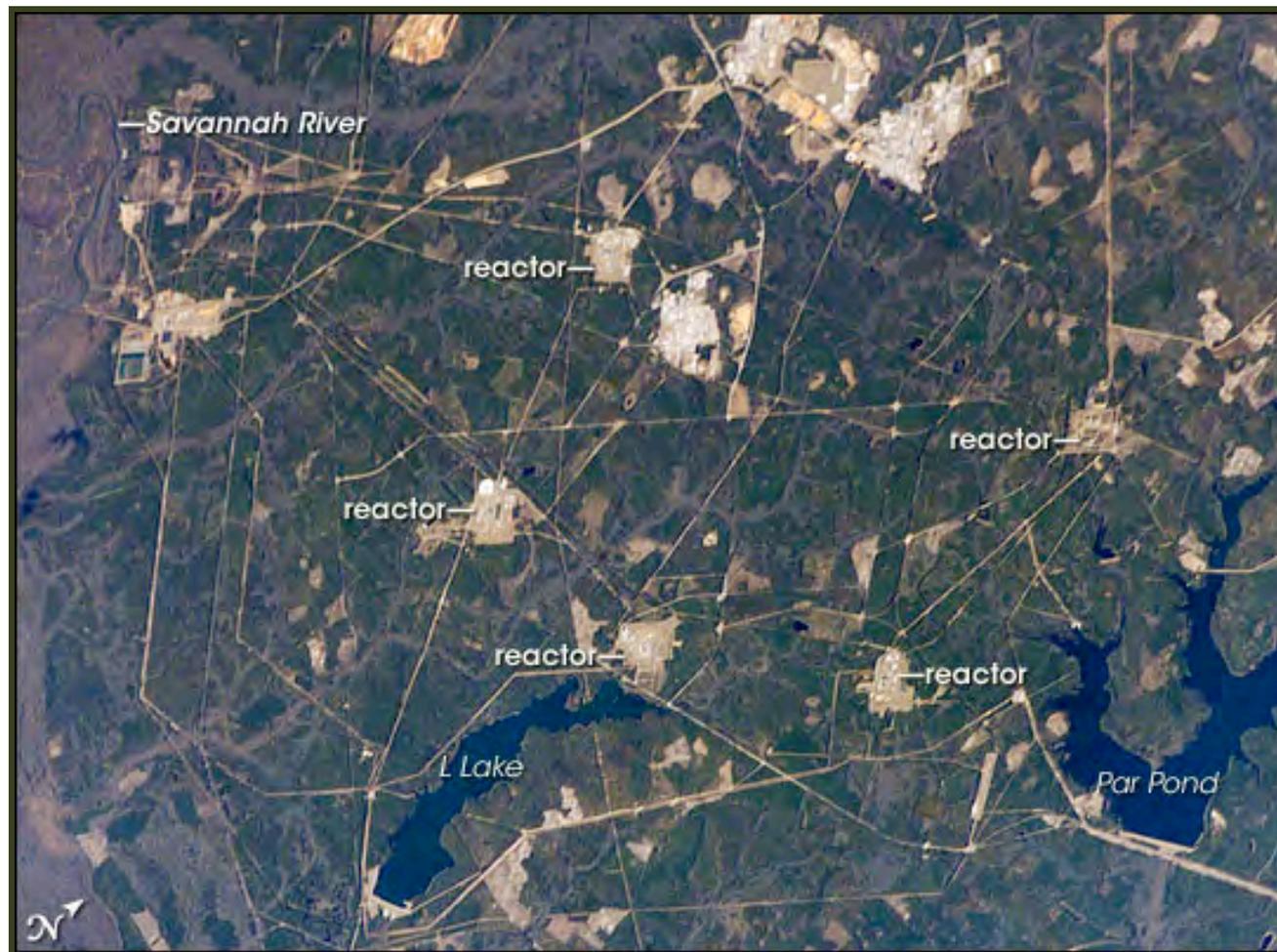
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Savannah River Site (South Carolina)



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Savannah River Site (South Carolina)

(continued)

- Located in South Carolina on the Savannah River which borders Georgia; close to Augusta, Georgia, and Aiken, South Carolina
- Established in the early 1950s to produce basic materials used to fabricate nuclear weapons, primarily tritium and plutonium-239
- Savannah River Site missions remain vital to the Nation
 - Support the Environmental Management priority to safely and efficiently clean up the environmental legacy, reduce risk and protect public health and the environment (Defense Waste Processing Facility)
 - Support National Nuclear Security Administration missions with key role in meeting nonproliferation objectives (MOX, H Canyon)
 - Support Office of Nuclear Energy goals to provide clean, reliable energy sources, reduce greenhouse gases and enhance national security (Biomass Cogeneration Facility)
 - Savannah River National Laboratory (Putting Science to Work – Underpinning of Site missions)



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EM Sites Working Together

- Sites offering essential complex-wide cleanup resources
 - NNSS – low-level and mixed low-level waste disposal
 - Savannah River – transuranic waste consolidation in preparation for disposal at the Waste Isolation Pilot Plant
 - Waste Isolation Pilot Plant – legacy defense-generated transuranic waste disposal



**Fernald Before Cleanup
Began in 1991**



**Fernald After Cleanup
Completed in 2006**



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Environmental Management in Nevada



Robert Boehlecke
Program Manager
EM Nevada Program
October 10, 2018



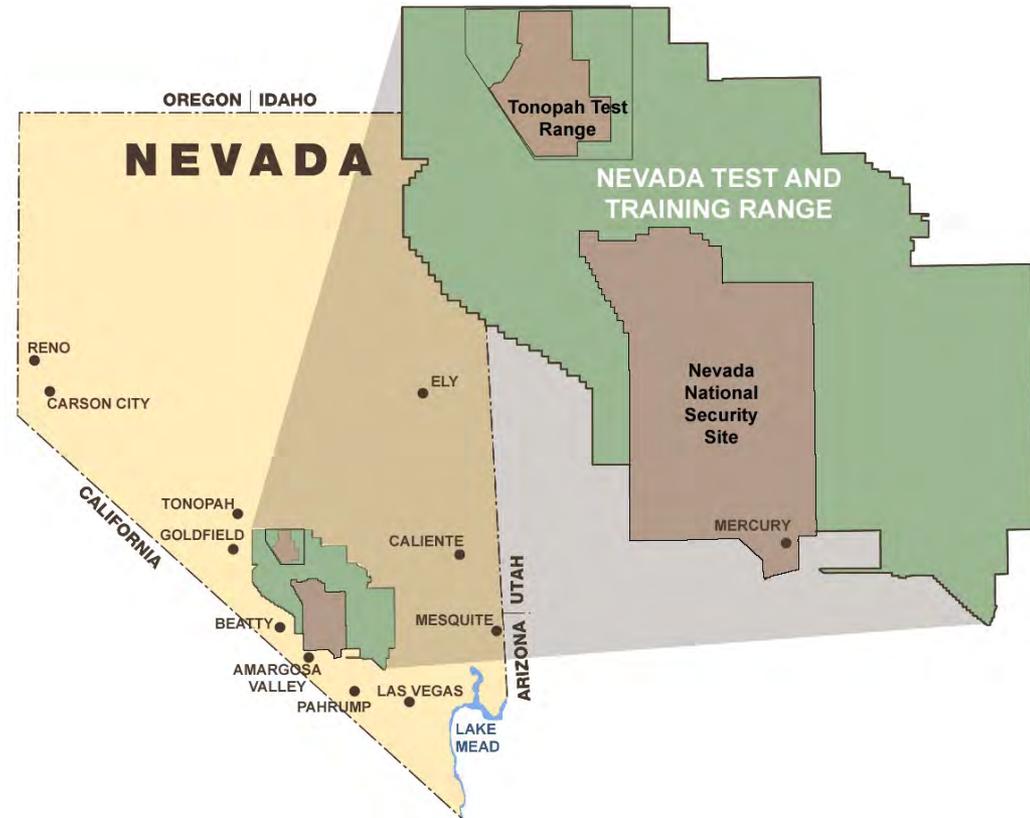
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The Nevada National Security Site (NNSS) and NTTR

- Approximately 1,360 square miles of federally owned and controlled land – surrounded by approximately 4,500 square miles of federally owned and controlled land
 - Tonopah Test Range is approximately 275 square miles on the Nevada Test and Training Range (NTTR)
- Located 65 miles northwest of Las Vegas



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Federal Responsibilities

- Two federal entities responsible for activities
 - National Nuclear Security Administration (NNSA) Nevada Field Office (NFO) is responsible for national security mission and overarching management of the NNSS (not within the NSSAB's purview)
 - The Department of Energy's (DOE's), Environmental Management (EM) Nevada Program is responsible for remediating historic locations on the NNSS and portions of the NTTR and the safe and compliant disposal of waste at the low-level radioactive waste disposal facility at the NNSS (within the NSSAB's purview)



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Federal Responsibilities

(continued)

- NNSA/NFO has primary responsibility to ensure all work conducted at the NNSSS is conducted in a safe, secure, and compliant manner
- EM Nevada Program follows policy and protocols established by NNSA/NFO related to ensuring risks to the public, worker, environment, and the site are identified, addressed, and mitigated
- EM Nevada Program provides Federal oversight for multiple EM contractors



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Contractor Responsibilities

- Navarro Research and Engineering, Inc. (Navarro)
 - Hydrogeology, modeling, database management, site investigation/remediation, Federal Facilities Agreement and Consent Order documents, Radioactive Waste Acceptance Program, long-term monitoring, U.S. DOE Consolidated Audit Program, and Low-level Waste Federal Review Group support, re-vegetation
- Mission Support and Test Services, LLC (MSTS)
 - NNSS Management & Operating (M&O), NNSS facility maintenance, construction, drilling, thermoluminescent dosimeter (TLD) analyses, calibration and respiratory protection support, operation of the Area 3 Radioactive Waste Management Site (RWMS) and Area 5 Radioactive Waste Management Complex (RWMC)



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Contractor Responsibilities

(continued)

- Desert Research Institute (DRI)
 - Modeling, geophysics, cultural and ecological surveys, laboratory studies, Community Environmental Monitoring Program, re-vegetation
- Lawrence Livermore (LLNL) and Los Alamos National Laboratories (LANL)
 - Source-term analysis, modeling, radiochemistry, laboratory studies
- U.S. Geological Survey (USGS)
 - Water level measurement, hydrogeology, geologic core library, regional model



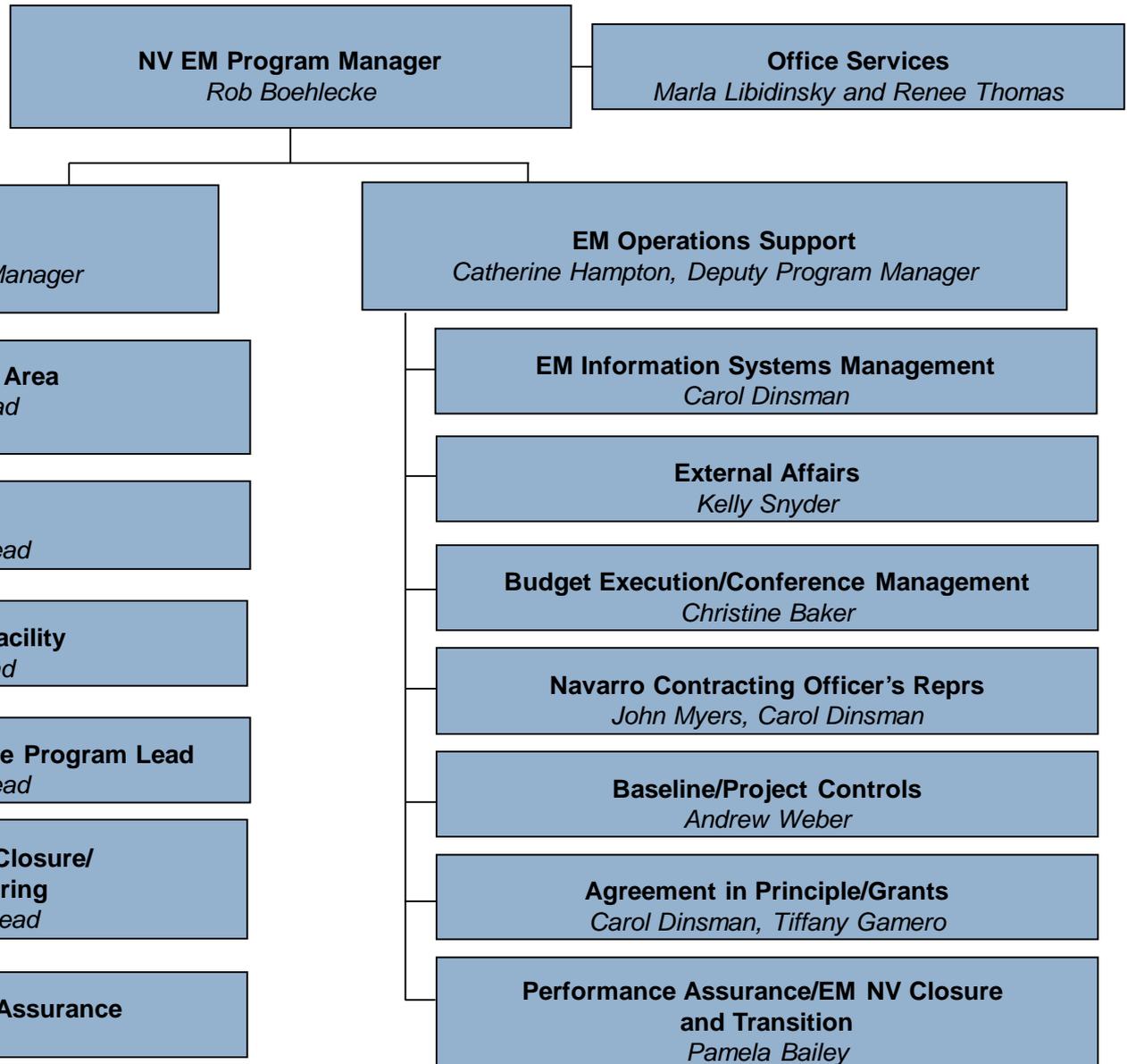
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EM Nevada Program Organization

EM Nevada Program reports
to the EM Consolidated
Business Center



EM Consolidated Business Center (EMCBC)

- Mission of the EMCBC is to provide an integrated services center with a valued, dedicated and well-trained staff to execute exemplary core business and technical services that are focused on the safe, compliant and efficient execution of EM activities at supported sites.

Consolidated Functions:

- Asset Management (Real & Personal Property)
- Contracting
- Cost Estimating
- Financial Management
- Information Resource Management
- Legal Services
- Project Management
- Technical Support (ESH&QA, Emergency, Security, Transportation, Classification Office)
- Records Management Services & Resources
- HC Business Partner Support to multiple locations

Project Management Responsibility:

- Energy Technology Engineering Center (ETEC)
- Lawrence Berkeley National Laboratory (LBNL)
- Moab Uranium Mill Tailing Remedial Action (UMTRA)
- EM Nevada Program
- Separations Process Research Unit (SPRU)
- West Valley Demonstration Project (WVDP)



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EMCBC Supported Sites



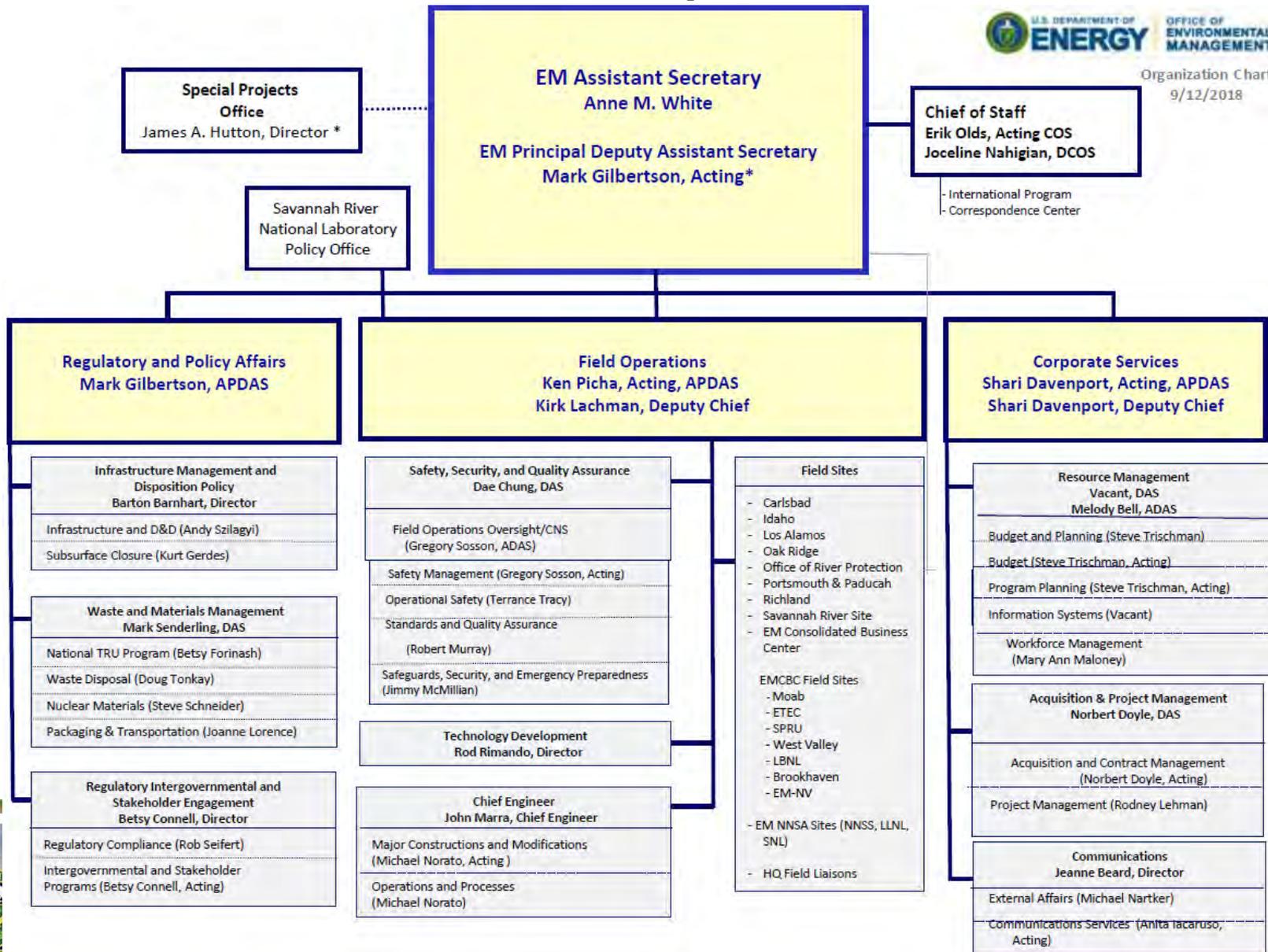
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EM Headquarters



Organization Chart
9/12/2018



EM Nevada Program Activities

- Underground Test Area (Groundwater)
- Industrial Sites
- Soils



- Waste Transportation and Disposal



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EM Nevada Program Baseline for Fiscal Year (FY) 2019

Scope	Baseline (\$K)
Soils Remediation	\$3,421
Groundwater Remediation	\$16,496
Industrial Sites Facilities Deactivation and Decommissioning	\$0
Post-Closure Sampling, Monitoring and Maintenance	\$1,275
Operate Low-Level Waste Disposal Facility	\$33,659
Program Management	\$8,977
Agreements in Principle and Grants	\$4,740
EM Nevada Program Total	\$68,568

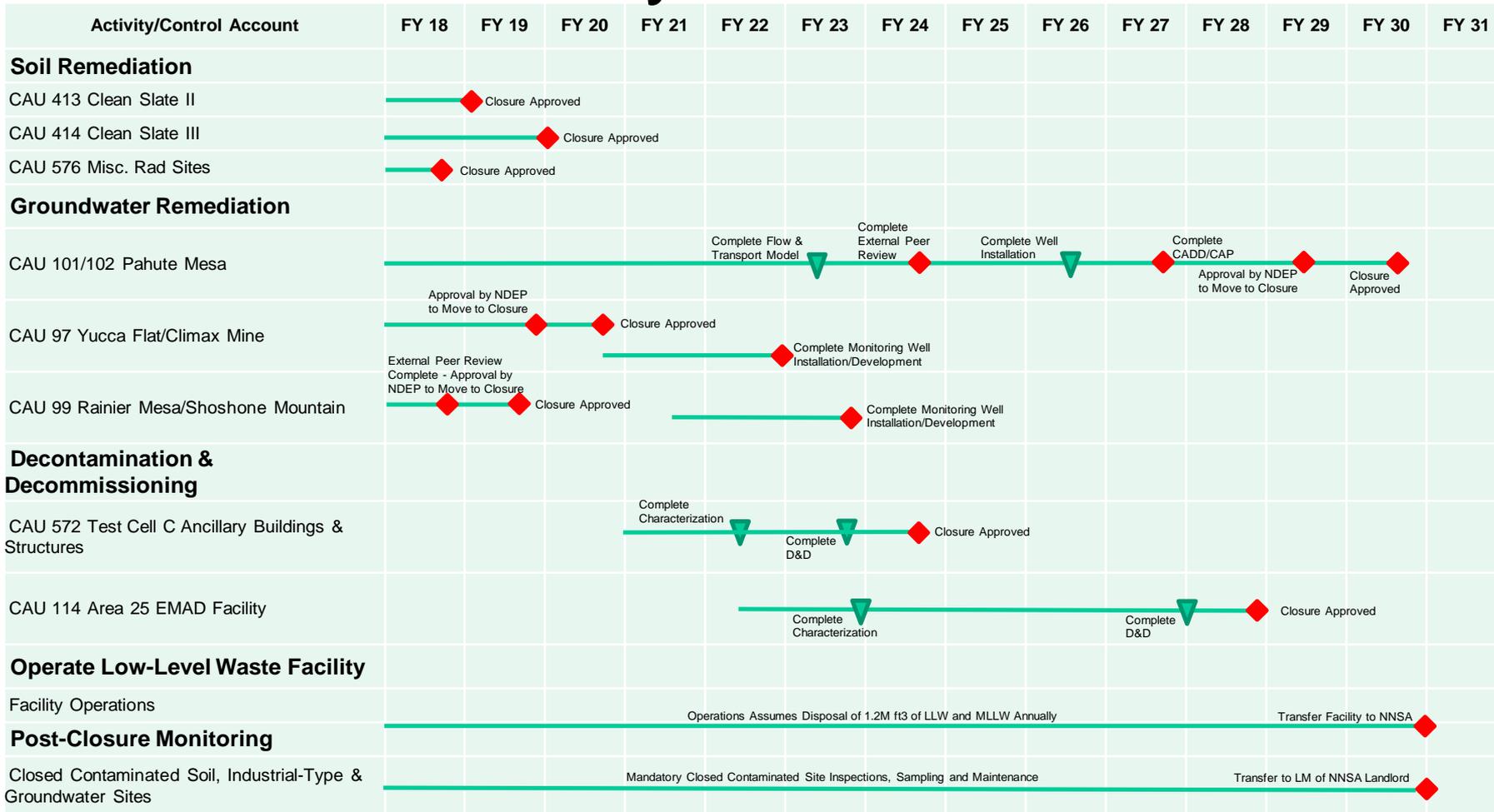


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EM Nevada Life-cycle Baseline Schedule



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State of Nevada Role

- The State of Nevada's Division of Environmental Protection (NDEP) provides programmatic and regulatory oversight of Environmental Restoration and Waste Management activities conducted by the DOE's EM in the State of Nevada
- Participates as NSSAB liaison
- Member of the Waste Acceptance Review Panel
- Issues Resource Conservation and Recovery Act (RCRA) Part B permit



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Federal Facilities Agreement and Consent Order (FFACO)

- Outlines a schedule of cleanup and monitoring commitments for sites contaminated by historic nuclear testing activities on the NNSS and portions of the NTTR
- Formalizes relationships among the State of Nevada, DOE, and the U.S. Department of Defense
- Identifies sites of potential historic contamination and prioritizes them for cleanup
- Defines the regulations the State of Nevada will use to direct and enforce corrective action activities
- Establishes a corrective action strategy for cleanup activities
- Provides public involvement opportunities



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Agreements in Principle (AIP)

- EM Nevada Program provides funding to NDEP for:
 - Activities in support of monitoring air, groundwater, surface water, and waste management activities to provide an independent evaluation of environmental conditions for use in determining compliance with applicable state and federal requirements
 - Definition of roles and responsibilities; understandings and commitments of NNSA/NFO and NDEP with regard to waste acceptance at the NNSS



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AIP

(continued)

- EM Nevada Program provides funding to the State of Nevada Division of Emergency Management (NDEM) for:
 - Activities in support of Emergency Preparedness Working Group to include managing the distribution of DOE-provided funding for Nevada counties along waste transportation routes (\$.50 per cubic foot of waste disposed at NNSS)
 - Activities in coordination of emergency management capabilities and participation in emergency response and preparedness activities performed under the terms of the Agreement consistent with specific priorities agreed upon between NDEM and NNSA/NFO



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Soils Activity Overview



Tiffany Gamero
Long-Term Monitoring Lead
Environmental Management (EM) Nevada Program
October 10, 2018



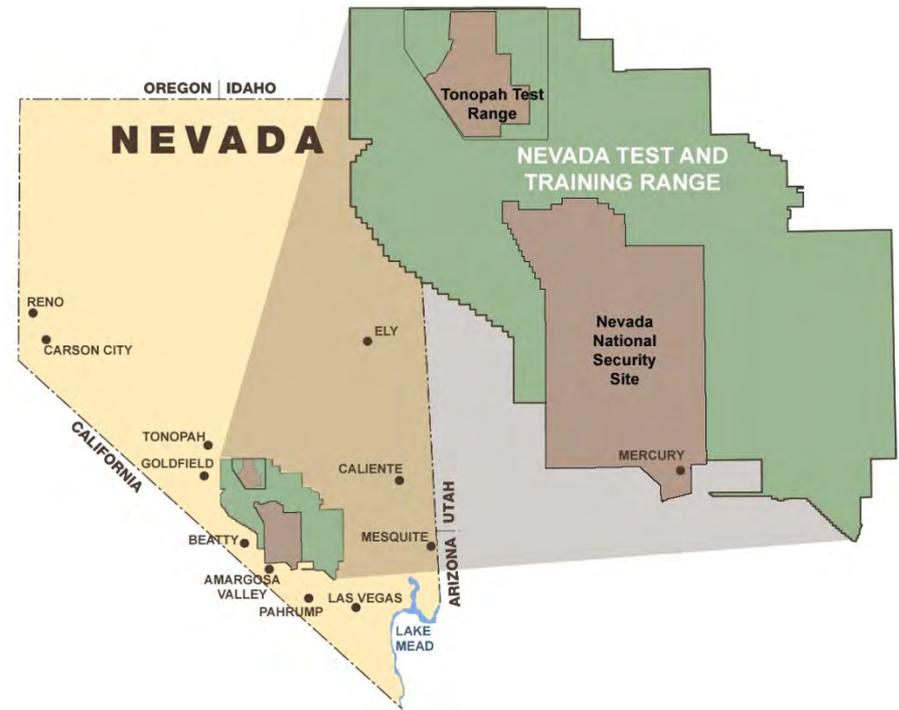
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Background

Atmospheric nuclear weapons tests, nuclear safety experiments, and evaluation tests for peaceful uses of nuclear explosives conducted at the Nevada National Security Site and Nevada Test and Training Range (operated by the U.S. Air Force) resulted in the radioactive contamination of surface and near surface soils



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Background

(continued)

- The Soils activity is responsible for:
 - Characterizing and/or remediating surface soil contamination
 - Characterize means to identify the nature and extent of the contamination present
 - Remediating means to select a closure option (clean close, closure in place, etc)



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Background

(continued)

- Ensuring appropriate controls (i.e. postings, barriers, etc.) are in place at the sites with remaining contamination
- Conducting long-term monitoring of sites
- State of Nevada Division of Environmental Protection (NDEP) provides oversight under the Federal Facility Agreement and Consent Order



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Terminology

- Corrective Action Site (CAS) - A site that has been identified as needing remediation
- Corrective Action Unit (CAU) - A grouping of Corrective Action Sites that are similar in remediation technique, type of contaminants or proximity to each other

There are 32 Soils CAUs
which consist of 148 Corrective Action Sites*

* As of 9/30/18



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Remediation Processes

- Corrective Action Investigation Plan (CAIP) – Details the investigation plan and provides information for planning investigation activities
- Site Investigation – Act of conducting field characterization activities
- Corrective Action Decision Document (CADD) – Describes the results of the characterization, multiple corrective action alternatives, and the recommended corrective action alternative and the rationale for its selection
- Corrective Action Plan (CAP) – Plan for implementing the selected corrective action



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Remediation Processes

(continued)

- Closure Field Work - Implementation of the selected corrective action at the site
- Closure Report (CR) – Documented overview and results of corrective actions implemented, closure verification information, and use restriction and monitoring requirements (when applicable)

Note: All documents must be approved by NDEP



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Alternative Remediation Processes

- CADD/CR can be used when only “minor” corrective actions are needed, as agreed to by NDEP
- CADD/CAP can be used when site knowledge gained through characterization and similar historical corrective actions is sufficient, as agreed to by NDEP, for planning corrective actions
- Streamlined Approach for Environmental Restoration (SAFER) process may be used only when extensive process knowledge or sampling data exists – this process combines the CAIP, CADD and CAP into one plan

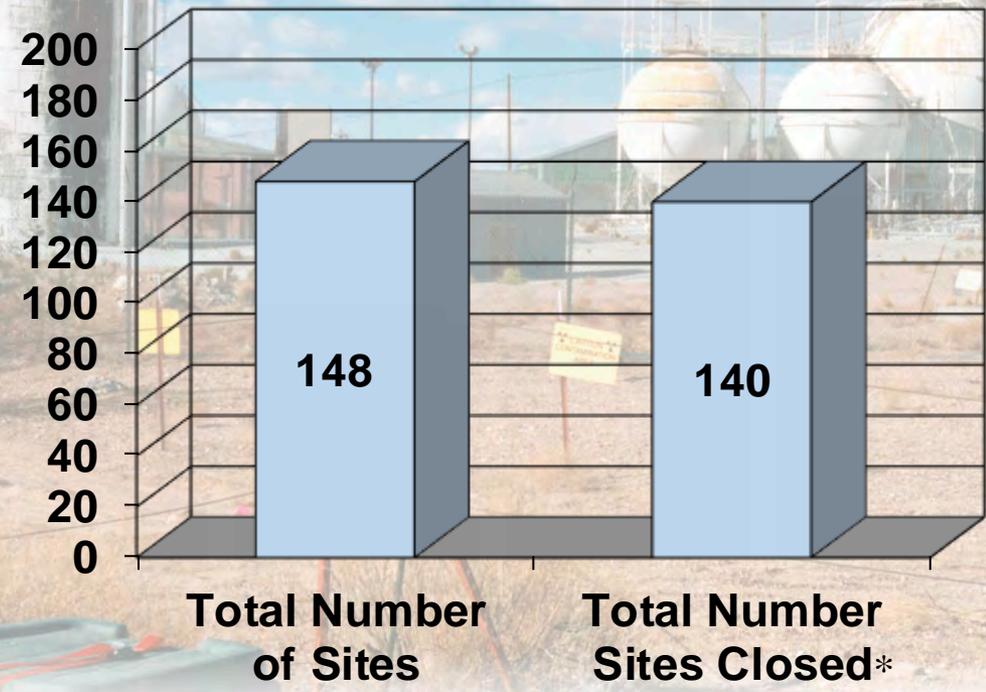


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Soils Sites Cleanup



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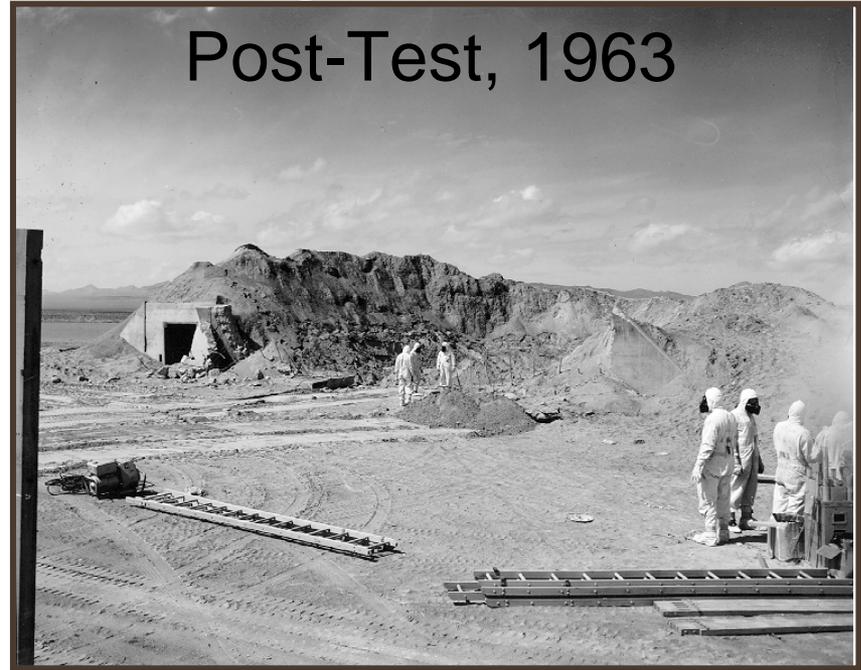
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Clean Slate III Background

Pre-Test, 1963



Post-Test, 1963



- Plutonium (Pu) and depleted uranium devices, inside a concrete bunker covered with eight feet of soil, were detonated using conventional explosives
- Test objective was to evaluate the dispersal of Pu from a simulated, accidental, non-nuclear (no yield) detonation of a weapon inside a structure

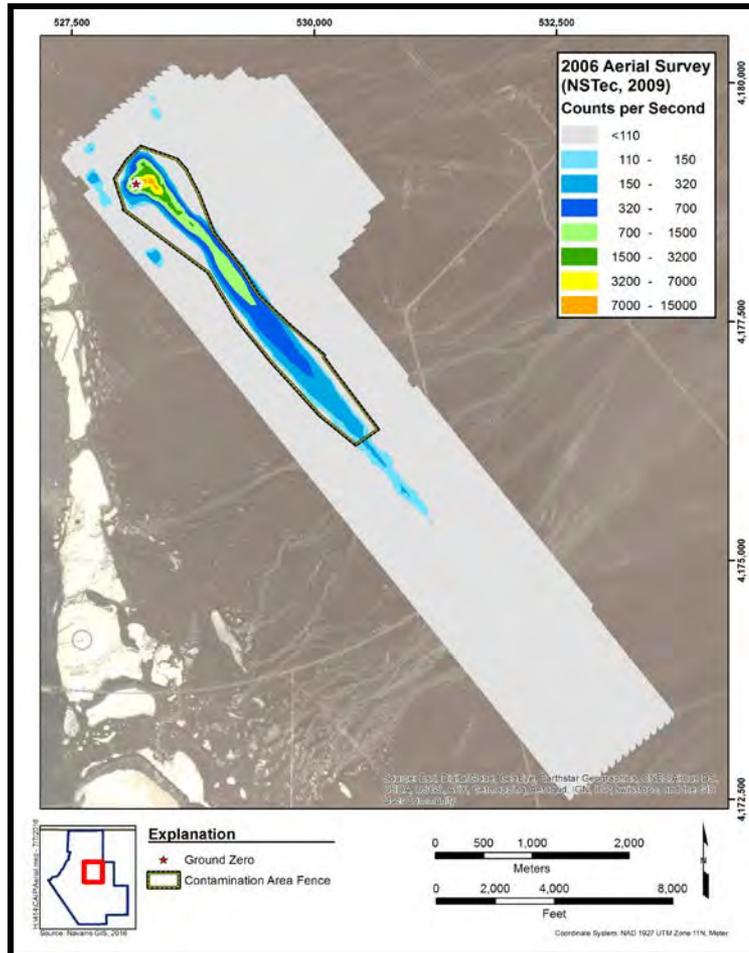


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Clean Slate III Overview



- June 1963 non-nuclear yield safety test
 - Dispersed Pu to surface soils
- 1964-2016 – multiple radiation surveys, scientific investigations and sampling performed
 - Some concrete/metal debris removed and disposed; no soil remediation conducted
- Geophysical surveys confirmed buried debris at ground zero
- Outer fence presently posted as “Contamination Area” (~410 acres)

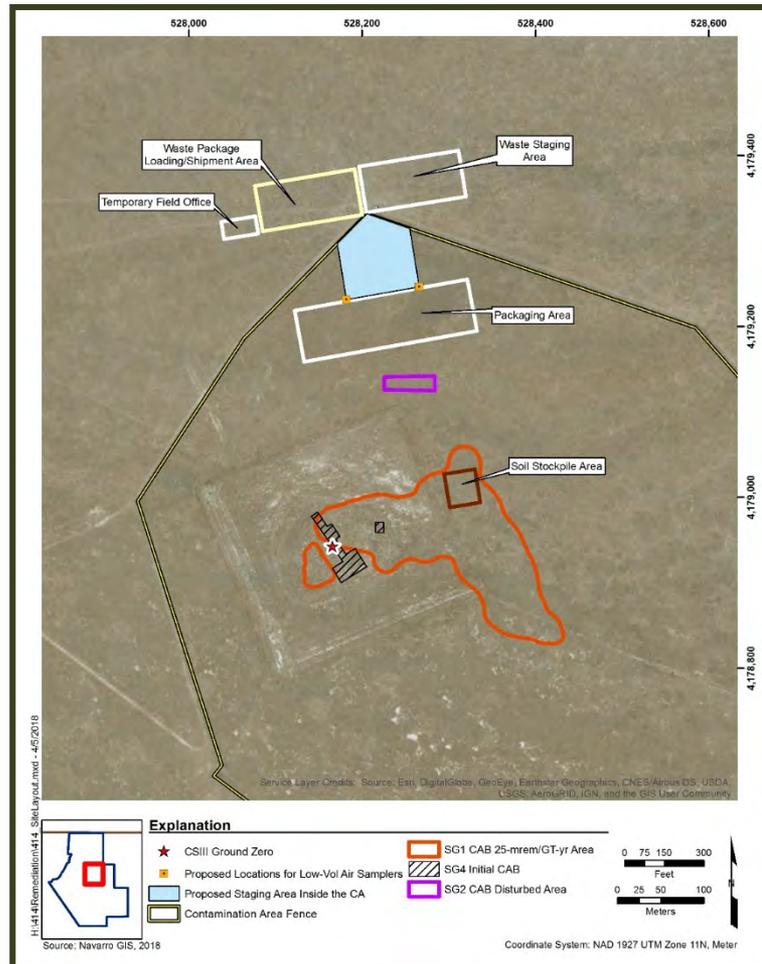


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Remediation Strategy



- Based upon field sampling and radiological surveys
 - Approximately 7.5 acres exceed the final action level for dose (25 millirem/year) and require corrective action (remediation)
- Excavate and package ~ 202,500 cubic feet of contaminated soil and debris



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Remediation Strategy

(continued)

- Equipment used outside contaminated areas (e.g., water truck, forklift) are leased or shared equipment
- Waste packaging will be soft-sided Industrial Package Type II (243 cubic feet each)
- Approximately 450 low-level waste shipments to the NNSS Area 3 Radioactive Waste Management Site
 - Two soft-sided packages per truck
- Waste shipments to occur over a five to six-month period in a campaign style
 - Five trucks per day, four days per week, Monday through Thursday



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Waste Packaging and Shipment

- Waste will be sealed in DOT-compliant containers and loaded onto trucks for DOT-compliant shipment to Area 3 RWMS
- Waste containers will be surveyed to ensure compliance with DOT safety limits for drivers, passers-by, and service attendants
- Remediation began in August 2018 and shipment campaign to begin in October 2018



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Industrial Sites Overview



Tiffany Gamero
Long-Term Monitoring Lead
Environmental Management (EM) Nevada Program
October 10, 2018



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Background

- Portions of the facilities and land at the Nevada National Security Site and Nevada Test and Training Range were used in direct support of nuclear testing
 - Facilities included such things as gas stations, motor pools, worker housing, and research buildings
- Activities resulted in hazardous and radioactive waste generation and subsequent environmental contamination



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Background

(continued)

- EM Nevada Program established the Industrial Sites activity to remediate the contaminated sites
- Industrial Sites have included leach fields, sumps, disposal wells, tanks, contaminated waste piles, ordnance sites, etc.
- Contaminants of Concern may include hazardous chemicals, unexploded ordnance, and radionuclides
- Potential risks are to workers and the environment

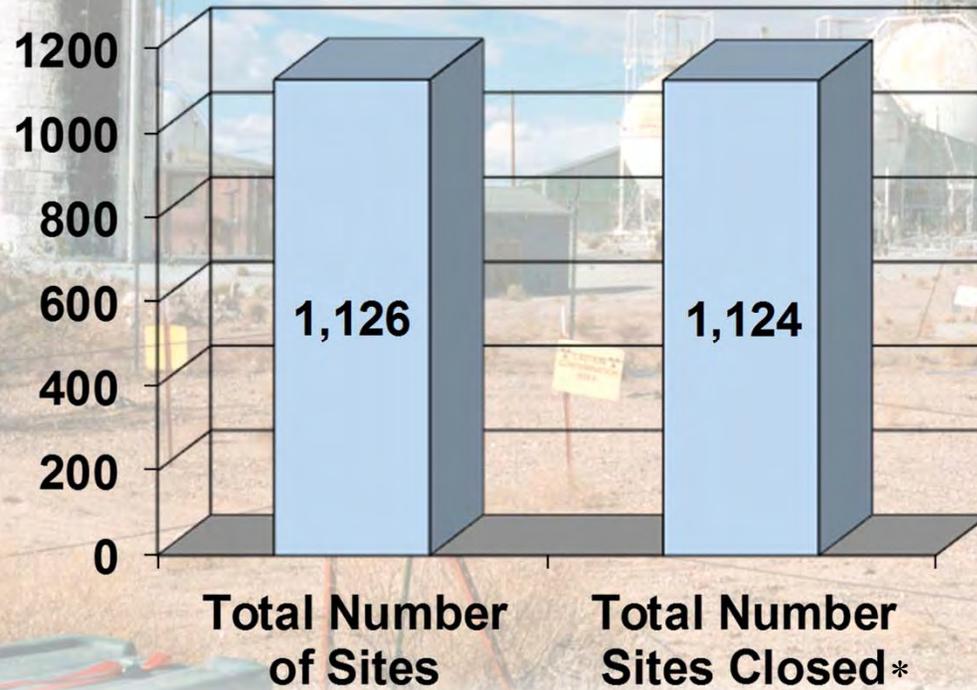


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Industrial Sites Cleanup



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Industrial Sites Wrap-up

- Almost all Industrial Sites activity is complete
- Remaining Corrective Action Sites at Engine Maintenance, Assembly and Disassembly are not currently planned to be addressed for a few years
- Continue to conduct *Resource Conservation and Recovery Act* (RCRA), Non-RCRA, and Tonopah Test Range post-closure inspections and submit monitoring reports to the State of Nevada Division of Environmental Protection



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Groundwater Overview



Bill Wilborn

Deputy Program Manager, Operations

EM Nevada Program

October 10, 2018



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Historic Nuclear Testing Impacts on the Groundwater

- 828 underground nuclear tests conducted at the Nevada National Security Site (NNSS) from 1951 to 1992
- Underground tests conducted at depths ranging from approximately 90 to 4,800 feet below the ground surface
- One-third of these tests occurred near, below, or in the water table
- Some radioactive contamination detected in groundwater on the NNSS and the Nevada Test and Training Range



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NNSS Groundwater Program Objectives

- Because of the significant worker safety concerns and cost associated with any type of active remediation, the Department of Energy in consultation with the State of Nevada Division of Environmental Protection has selected an end state that requires a modeling and monitoring strategy that is documented in the Federal Facilities Agreement and Consent Order



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NNSS Groundwater Program Objectives (continued)

- This strategy is supported with the activities described below:
 - Tackle challenges using investigative methods, such as drilling wells to investigate the hydrology, geology, and extent of contamination (Underground Test Area [UGTA])
 - Sample wells, analyze samples, and build computer models from gathered data (UGTA)
 - Implement controls to prevent access to contaminated groundwater (UGTA and National Nuclear Security Administration [NNSA])
 - Ongoing monitoring of wells on and off the NNSS (NNSA)
 - Establish a comprehensive long-term monitoring network to ensure public protection (UGTA)

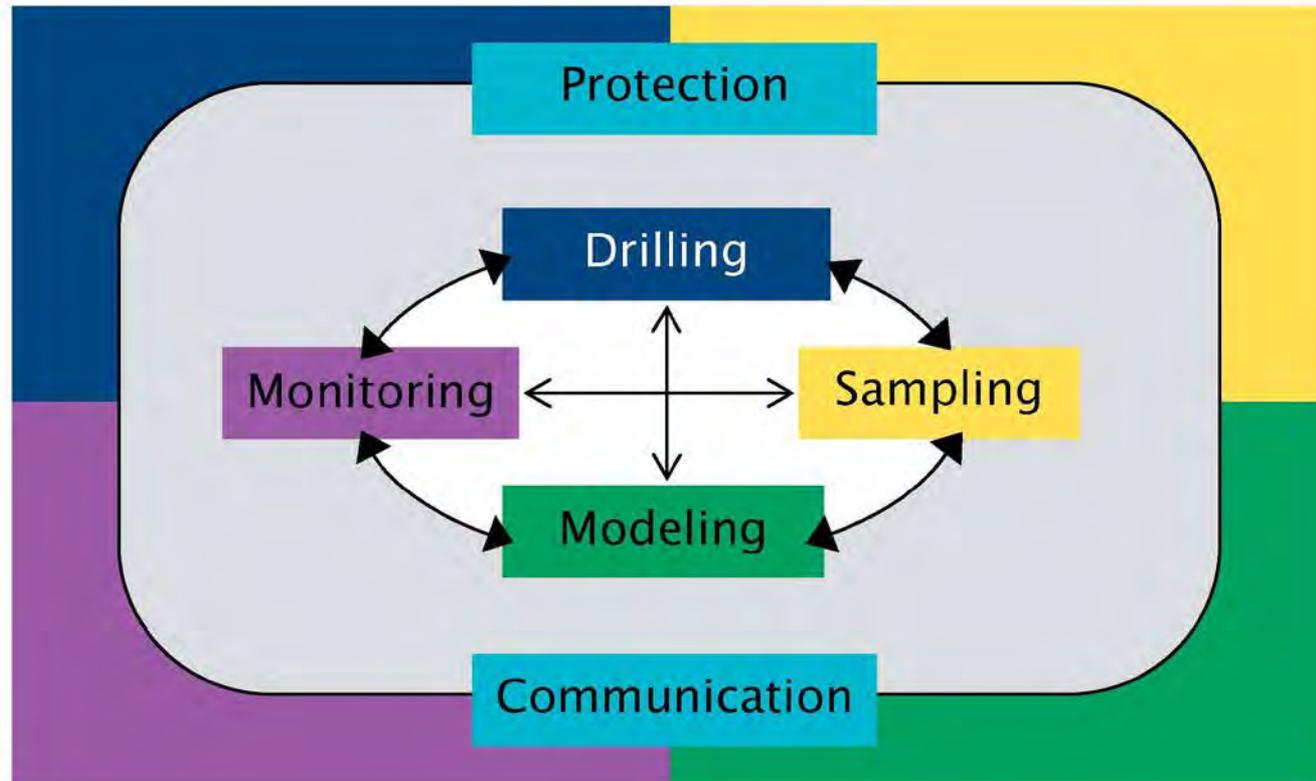


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Understanding Groundwater... an Integrated Approach



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Technical Working Group

- Federal staff continually work with outside organizations to ensure a collaborative approach to understand the nature and extent of groundwater contamination
 - Lawrence Livermore National Laboratory (LLNL)
 - Los Alamos National Laboratory (LANL)
 - Desert Research Institute (DRI)
 - United States Geological Survey (USGS)
 - State of Nevada Division of Environmental Protection (NDEP)
 - Mission Support and Test Services, LLC (MSTS)
 - Navarro Research and Engineering, Inc. (Navarro)



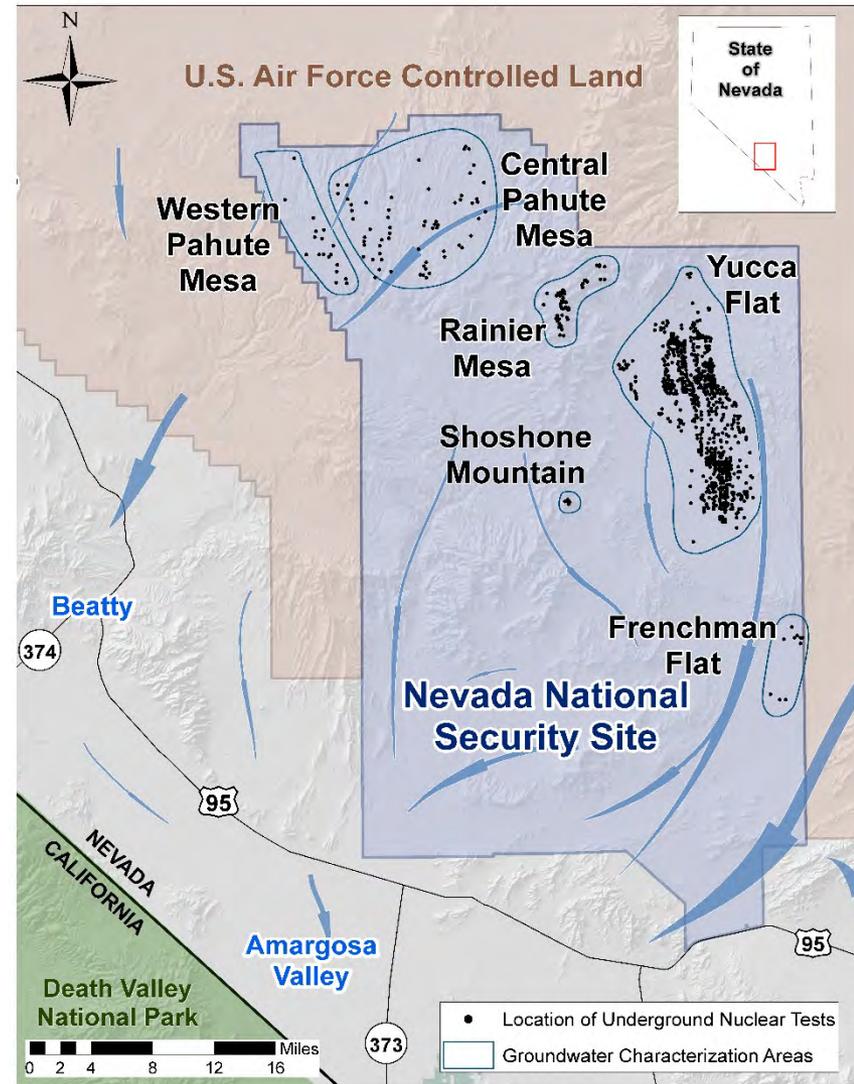
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Corrective Action Units

- There are five Corrective Action Units that make up the UGTA activity
 - Corrective Action Units are determined by location and geologic conditions



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UGTA Closure Strategy

(see figure of strategy in the back of the binder)

- Outlined within the Federal Facility and Consent Order
- Corrective Action Investigation (some Corrective Action Units may require a Phase I and II)
 - Corrective Action Investigation Plan (CAIP)
 - Data collection
 - Modeling
 - Contaminant boundary
 - Peer review



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UGTA Closure Strategy

(continued)

- Corrective Action Decision Document/Corrective Action Plan (CADD/CAP)
 - Model evaluation
 - Use restriction boundary
 - Regulatory boundary negotiations with NDEP



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UGTA Closure Strategy

(continued)

- Closure
 - Closure Report
 - Address regulatory boundary changes if necessary
 - Closure in place with long-term monitoring
 - Institutional controls



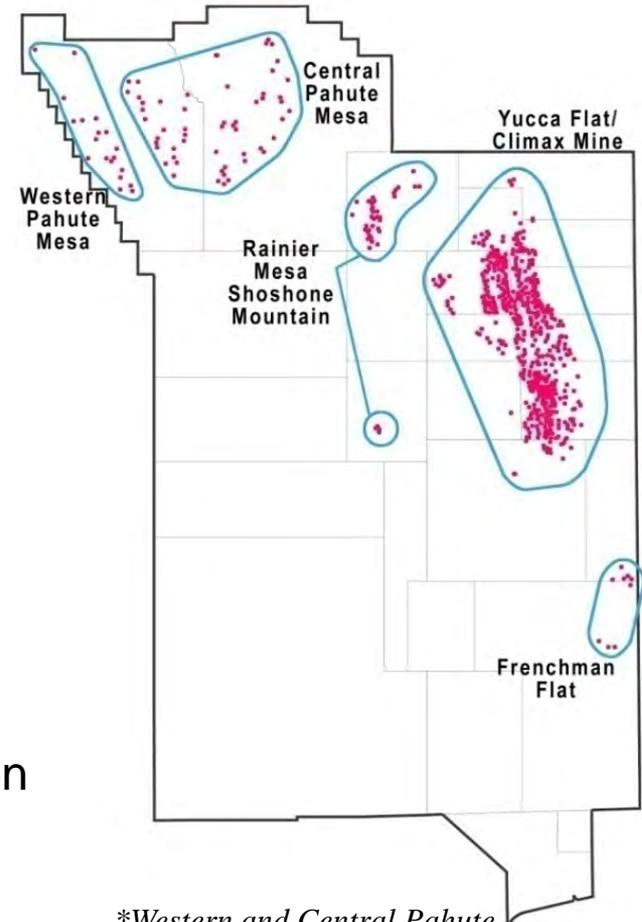
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Corrective Action Units (CAUs) Standing

- Frenchman Flat (CAU 98)
In closure, performing annual groundwater monitoring
- Yucca Flat/Climax Mine (CAU 97)
In Model Evaluation stage with planned closure in fiscal year 2020
- Rainier Mesa/Shoshone Mountain (CAU 99)
Completing External Peer Review process to determine whether CAU is ready to move to the next phase of the closure process
- Central Pahute Mesa (CAU 101) and Western Pahute Mesa* (CAU 102)
Conducting Phase II data analysis and evaluation and streamlining the modeling effort based on previous modeling already conducted and real field data observations



*Western and Central Pahute Mesa are managed as one entity



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Why Do We Drill?

- Provides access to the complex subsurface for sampling
 - More than 300 different geologic units (types of rock) representing more than 500 million years of geologic history
- Gives access to groundwater and surrounding geology
- Provides multiple/ongoing opportunities to sample and monitor
- In addition to recent groundwater studies, the UGTA team is tapping into, and expanding upon, approximately 50 years of groundwater research



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Geology/Hydrology 101

(see cross section handout at end of briefing)

- Rocks are categorized according to their hydrologic properties (e.g., aquifer or aquitard [confining unit])
 - An aquifer is a *permeable* unit of rock through which water moves (could be single or dual porosity)
 - An aquitard is a unit of rock which is confining in its nature and generally *impermeable* to water movement (no porosity or a single porosity)



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Geology/Hydrology 101

(continued)

- Units are then grouped into larger hydrostratigraphic units (colored layers on the cross sections)
 - Hydrostratigraphic units, together with faults, form the three dimensional Hydrostratigraphic Framework Models
 - Faults are structural breaks in the rock units with significant continuity and typically displacing the units



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Why Do We Sample?



- Identify the natural conditions of groundwater and geology in the subsurface, and constituents introduced by nuclear testing
- Acquire data used as building blocks for computer models
- Obtain laboratory results for regulatory compliance, stakeholder communications, and additional subsurface investigations



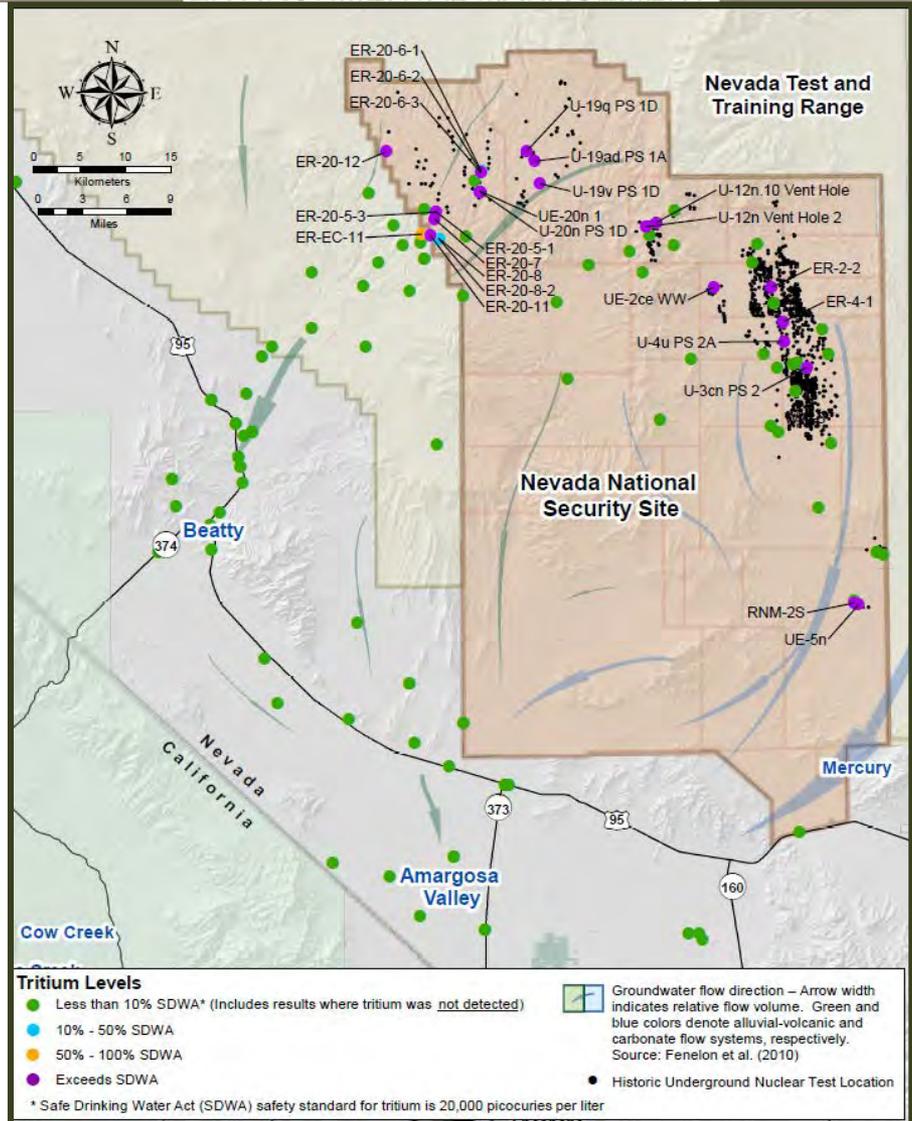
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Why Do We Monitor?

- Helps protect the public by providing a system of continuous detection
- Provides baseline to establish existing conditions
- Identifies trends and verifies compliance with regulatory standards



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Why Do We Model?

- Creates three-dimensional representations of otherwise inaccessible subsurface
- Helps forecast where contamination is moving and how far over a period of time
- Provides flexibility for integrating available data
- Provides basis for regulatory compliance and risk-informed decisions



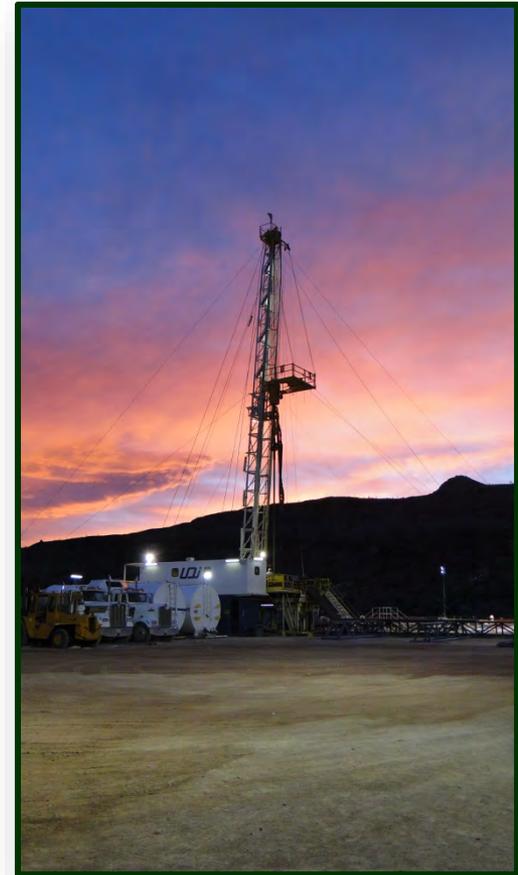
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What Do We Know Today?

- No forecasted threat to public
- Groundwater affected by historic Nevada National Security Site activities has not reached public water sources
- Groundwater models are providing output that is key to enhancing current and developing future monitoring strategies



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Long-Term Monitoring Overview



Tiffany Gamero

Long-Term Monitoring Lead
Environmental Management (EM) Nevada Program
October 10, 2018



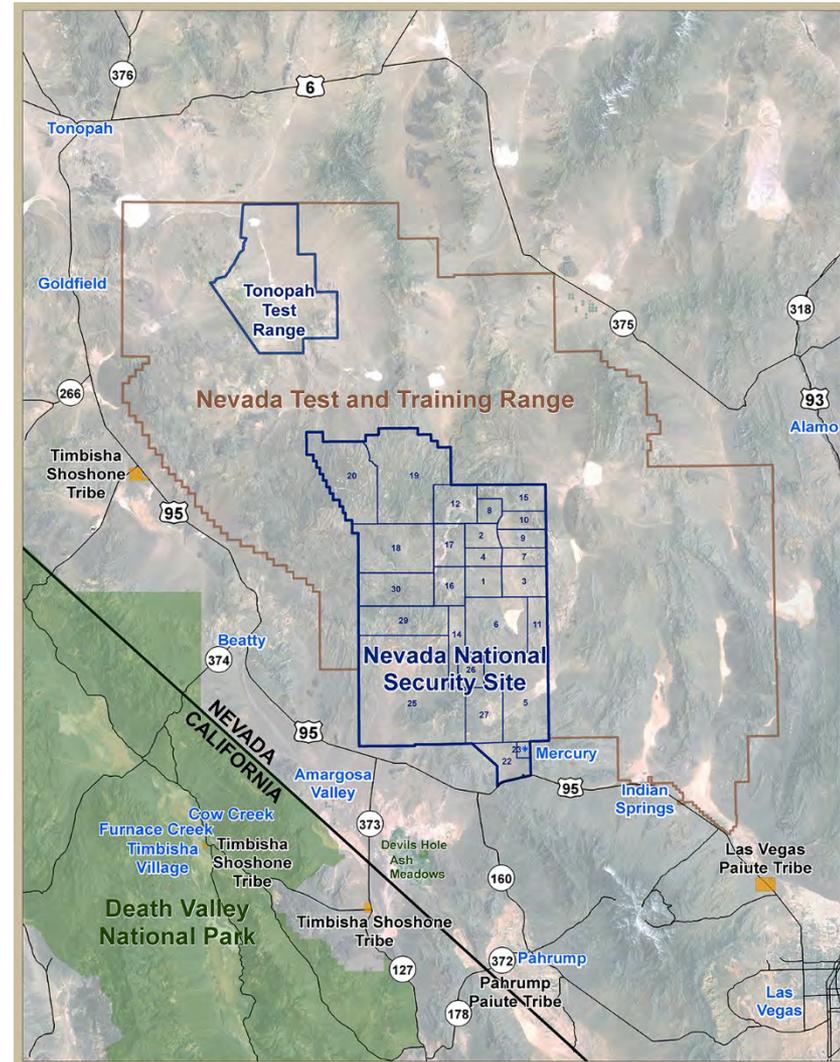
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Background

- Long-Term Monitoring sites include Corrective Action Sites that are now closed under the Federal Facility Agreement and Consent Order (FFACO) and require some form of reporting, maintenance, or inspections
 - Closed Soils Sites
 - Closed Industrial Sites
 - Closed Underground Test Area Sites (Frenchman Flat)



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ID 2019 - 10/10/2018 - Page 2
2018-026-EMRP

Background

(continued)

- Corrective Action Sites (CASs) closed under the FFACO are closed in one of three ways:
 - No further action
 - Sites that are found to have no contamination above action levels present; nothing further is required
 - Clean closed
 - Any contamination above action levels has been removed and disposed; nothing further is required
 - Closed in place
 - Contamination above action levels is left behind and managed through controls such as use restrictions and monitoring



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Background

(continued)

- Potential controls:
 - Physical controls, such as signs, fencing, and constructed covers
 - Administrative controls, such as land use restrictions
 - Monitoring that can include visual inspection, surveys, review of records, etc.



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Post-Closure Surveillance and Maintenance

- 160 closed sites on the Nevada National Security Site and Nevada Test and Training Range require post-closure surveillance and maintenance to ensure that controls for closed-in-place CASs remain active
- Monitoring reports documenting post-closure activities are submitted to State of Nevada Division of Environmental Protection



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Post-Closure Surveillance and Maintenance

(continued)

- Examples of post-closure activities include:
 - Quarterly, semiannual, or annual inspections of closed sites
 - Annual sampling
 - Repair and maintenance of site postings and controls
 - Reporting



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2018-026-EMRP

Low-Level Waste Disposal Overview



Jhon Carilli

Low-Level Waste Activity Lead
Environmental Management (EM) Nevada Program
October 10, 2018



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Federal Oversight of Waste Disposal at the Nevada National Security Site (NNSS)

- U.S. Department of Energy (DOE), under the authority of the Atomic Energy Act of 1954, as amended, self-regulates all material (including waste) under DOE control (management)
 - DOE Orders provide requirements that must be followed such as DOE Order 435.1
 - Nuclear Regulatory Commission does not regulate DOE's radioactive materials and/or waste



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Types of Waste Disposed at the NNSS

- Low-Level Waste is radioactive waste not classified as high-level waste, transuranic waste, spent fuel, or by-product material
 - Typical waste includes contaminated metal, debris, soils, clothing, tools, etc.
- Mixed Low-Level Waste contains Low-Level Waste and a hazardous component (i.e. toxic, corrosive, reactive, ignitable or is listed by U.S. Environmental Protection Agency as a hazardous waste)



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Types of Waste Disposed at the NNSS (continued)

- Classified waste requires protection for national security reasons and cannot be declassified
 - May contain a hazardous component
 - May be radioactive



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Background

- Cold War-related activities and nuclear research generated Low-Level Waste at sites across the country
- DOE is responsible for consolidating and disposing Low-Level Waste generated by DOE clean-up activities
 - Ensures the safety of the public
 - Allows for the permanent closure of these sites



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Background

(continued)

- The NNSS was chosen due to its isolated location and arid climate
 - No groundwater pathways
 - Deep groundwater (~700 feet – 1,600 feet)
 - Low precipitation (5-7 inches per year)



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NNSS Waste Disposal Facilities

- National asset supporting cleanup (at NNSS and other sites across U.S.), nonproliferation, national security and nuclear technology/research programs
- Currently, the NNSS is the only federal site disposing off-site generated Low-Level Waste
- Provides for the safe disposal of classified waste requiring additional security



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NNSS Waste Disposal Facilities

(continued)

- Low-Level Waste can be disposed at two disposal sites at the NNSS
 - Area 3 uses subsidence craters created by past underground nuclear tests to dispose of bulk and containerized waste
 - Area 5 uses engineered shallow-land burial to dispose of containerized waste



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NNSS Waste Disposal Facilities

(continued)

- Area 3 Radioactive Waste Management Site
 - 128-acre disposal area with seven craters configured into five disposal cells
 - Total disposed volume is over 19 million cubic feet
 - Maintained in “cold standby” mode from 2006 – Sept 2018
 - Beginning in October 2018, Area 3 will be used for Clean Slate III waste disposal from the Tonopah Test Range
 - ~ 9.1 million cubic feet of disposal capacity remains



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NNSS Waste Disposal Facilities

(continued)

- Area 5 Radioactive Waste Management Complex
 - 43 disposal cells
 - 34 total closed cells
 - ✓ Eight operationally closed
 - ✓ 26 permanently closed in 92-acre area
 - Seven active Low-Level Waste cells
 - Two active Mixed Low-Level Waste cells
 - Total current disposed volume is more than 29 million cubic feet



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Area 5 Monitoring Activities

- Monitoring activities
 - Verifies the continued safety of workers and the public
 - Provides a measure of performance
- Continuous and ongoing

Monitor (Type)	Number of Locations
Air	2
Groundwater	3
Meteorology	1
Radon	1
Evapotranspiration	2
Soil Moisture	7
Soil Temperature	8
TLD*	11

* Thermoluminescent Dosimeters

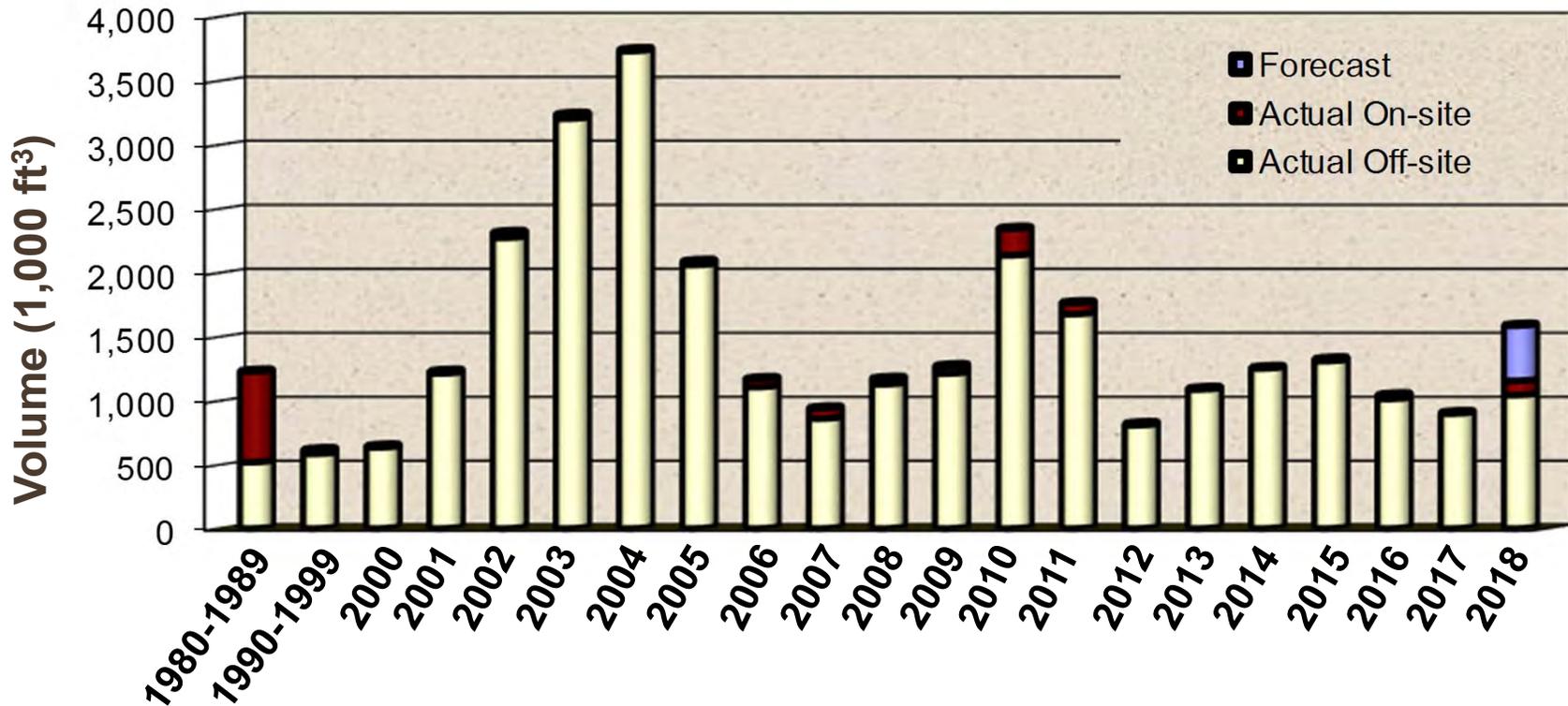


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NNSS LLW, MLLW and Classified Waste Disposal Volumes



Fiscal Year

Volumes through September 30, 2018



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Emergency Preparedness Working Group (EPWG) Grant

- Since 2000, DOE provides \$0.50 per cubic foot disposed for all waste disposed at the NNSS to fund a rural county emergency preparedness grant
- More than \$15.5M has been distributed through the State of Nevada Division of Emergency Management to Clark, Elko, Esmeralda, Lincoln, Nye, and White Pine counties
 - Funding provided in accordance with approved grant application and oversight of funding use
- Priorities for grant funding include consideration for the needs of a county and the resource base available in that county



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EPWG Grant (continued)

- Examples of EPWG-funded items: emergency management resources, such as, ambulances, fire trucks, communication equipment, construction of training facilities and emergency services buildings, etc.



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Waste Acceptance/Disposal Requirements

- Waste must be generated at a DOE facility or defense-affiliated site
- NNSS and its stakeholders expect absolute compliance with the Waste Acceptance Criteria
- Waste disposed at the NNSS must meet a rigorous disposal acceptance criteria
 - Waste may not contain free liquids
 - All waste must be containerized (examples of containers include 55-gallon steel drums, cargo containers, burrito wraps, soft-sided containers, and carbon steel boxes)

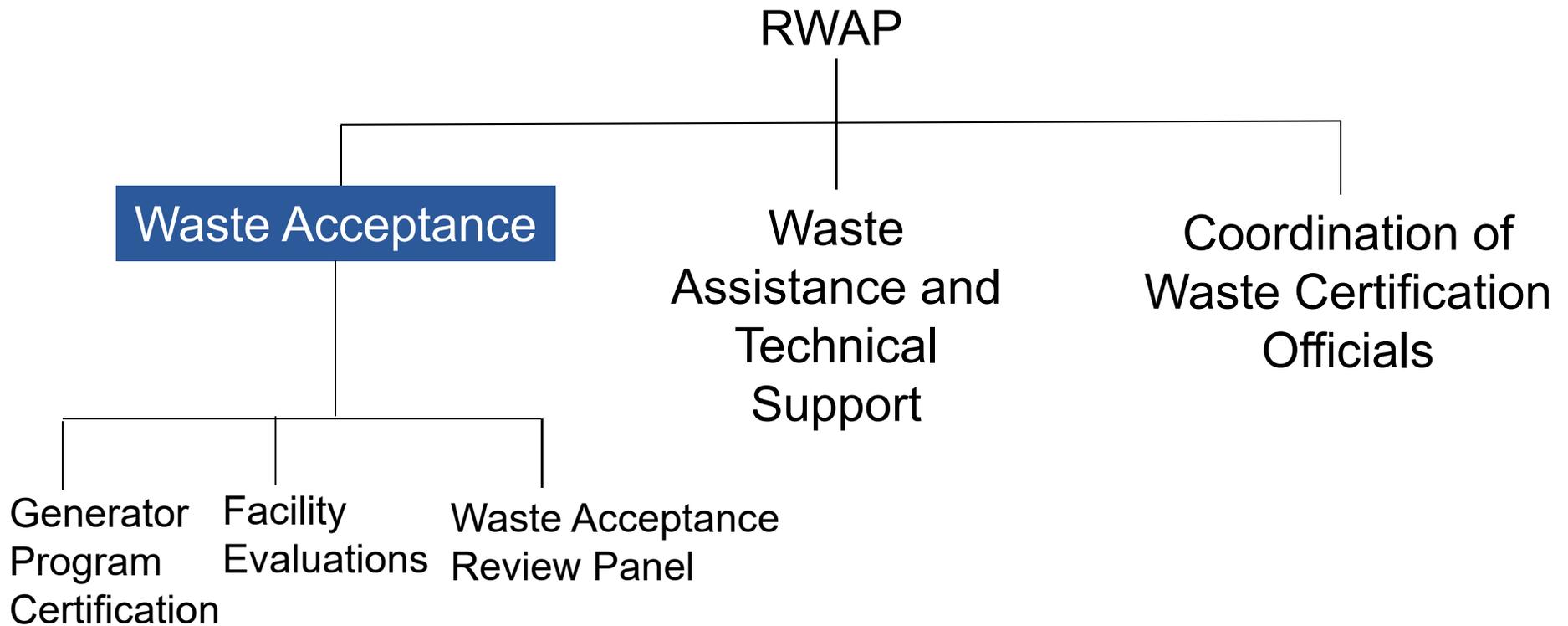


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Radioactive Waste Acceptance Program (RWAP) Activities



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Waste Acceptance – Facility Evaluations

- RWAP team reviews the program of every active generator on an annual basis (generally with an on-site visit)



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Waste Acceptance – Facility Evaluations (continued)

- Mixed waste permit, issued by State of Nevada Division of Environmental Protection, requires verification
- Verification Types
 - Physical
 - Visual inspection
 - Real-time-radiography
 - Chemical
 - Field chemical screen
 - Split sample



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Waste Acceptance – Waste Acceptance Review Panel (WARP)

- Reviews waste streams to ensure it meets waste acceptance criteria
- Panel consists of following:
 - RWAP team
 - State of Nevada Division of Environmental Protection (Resource Conservation and Recovery Act and Joint Oversight)
 - Operations
 - Performance
 - Safety Basis Team
 - Nuclear Criticality Team
 - Eligibility Team



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Waste Assistance and Technical Support

- Performs:
 - Site visits to generators
 - Assist generators to be compliant with NNSS Waste Acceptance Criteria



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Transportation

- Shipping is regulated by the U.S. Department of Transportation – not by DOE



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Quarterly Reports

Quarterly Waste Volume and
Transportation Reports accessible at:

nss.gov/pages/programs/RWM/Reports.html

The screenshot displays the NNSS website interface. At the top left is the NNSS Security Site logo. A navigation menu includes Home, About, Programs, Facilities, Nevada Field Office, Public Affairs/Outreach, Resources, News, and Careers. A search bar is located on the right. The main content area features a large photograph of a waste disposal site with a caption: "Mixed low-level waste disposed in an engineered and permitted cell at Area 5". Below this is a "Reports" section with two columns:

Transportation Reports	Waste Volume Reports
FY 2018 FY 2018-2nd Qtr FY 2018-1st Qtr	FY 2018 FY 2018-2nd Qtr FY 2018-1st Qtr
FY 2017 FY 2017-4th Qtr FY 2017-3rd Qtr	FY 2017 FY 2017-4th Qtr FY 2017-3rd Qtr



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Environmental Management Outreach Initiatives



Kelly Snyder
Deputy Designated Federal Officer
EM Nevada Program
October 10, 2018



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Environmental Management Outreach Initiatives

- Variety of methods and tools used to engage stakeholders in Environmental Management (EM) activities:
 - Operation Clean Desert
 - Social Media (Facebook, Twitter, Flickr, YouTube)
 - Articles
 - Open Houses/Events
 - Fact Sheets
 - Community Conversations
 - Educational Demonstrations
 - Displays
 - Kiosks
 - Nevada National Security Site (NNSS) Remediation Sites Map
 - Other Website Links/Contact Information
 - Nevada Site Specific Advisory Board



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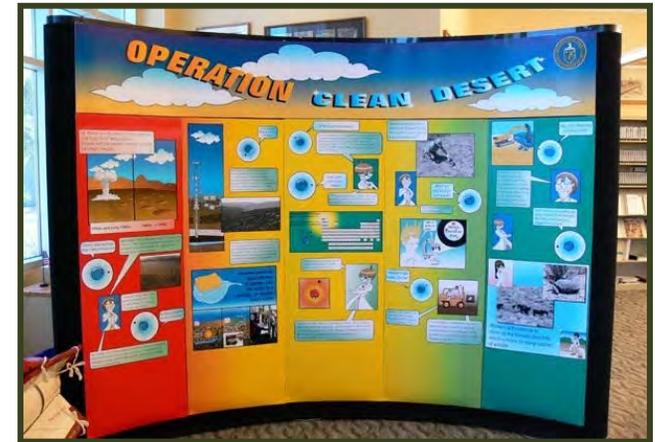
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Operation Clean Desert



- Geared toward educating 6th to 8th grade students (based on science curriculum objectives) on EM activities
- Offers teachers free materials:
 - Student Activity Book
 - Teacher's Guide
 - Display
 - Interactive Computer Game (on-line only)
- Distributed over 44,000 activity books, computer games, and teacher guides



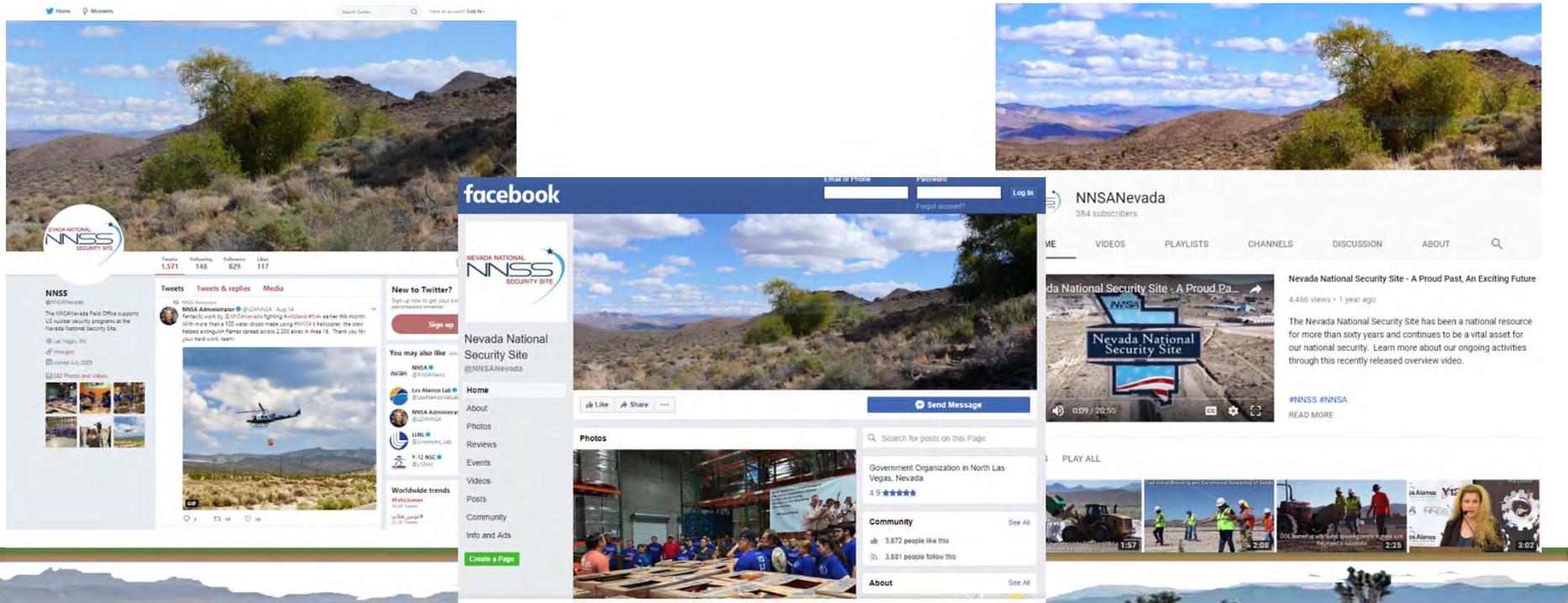
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Social Media

- Facebook: facebook.com/NNSANevada
- Twitter: twitter.com/NNSANevada
- YouTube: youtube.com/user/NNSANevada
- Flickr: flickr.com/photos/nnsanevadasiteoffice



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Articles



Advisory Board Moves Forward with Plan to Gauge Community Perspectives

The Nevada Site Specific Advisory Board (NSSAB) recently approved a plan for its members to gather information from fellow community residents regarding their level of interest and/or any concerns about U.S. Department of Energy (DOE) Environmental Management (EM) Nevada Program activities.

Six NSSAB members, a student intern with the University of Nevada Las Vegas, and the liaison representing the Consolidated Group of Tribes and Organizations formed the Community Analysis Committee to develop the plan for pulsing more than a dozen communities located near the Nevada National Security Site (NNSS). The approach involves meeting one-on-one with individuals, discussing questions, requesting completion of a survey, and compiling the results of their efforts.

Both the NSSAB and the EM Nevada Program hope the results of the work plan will identify new ideas that the EM Nevada Program can implement to enhance its outreach program. "We're excited that the NSSAB chose this work plan and believe their efforts will help us better understand the level of interest communities have in our program," said Kelly Snyder, Strategic Communications Manager for DOE's EM Nevada Program. "For more than 20 years, our outreach has evolved to expand the availability of information through the use of technology, and now we are looking to the NSSAB to help us focus our efforts based on feedback from multiple communities."

Steve Rosenbaum, chair of the advisory board, commended Community Analysis Committee members at the January 2018 meeting for their extensive efforts to assemble the very detailed plan, "the product put together is quite impressive!" Following an overview briefing on [the plan](#) by Committee Chair, Richard Stephens, the NSSAB discussed implementation of the plan and voted unanimously to move forward upon DOE EM Nevada Program approval.



Community Analysis Committee members (left to right) Anthony Graham, Edward Rosemark, Amina Anderson, Frank Bonesteel, and Steve Rosenbaum at the January 2018 meeting in Beatty, Nevada. (Committee members not pictured: Richard Arnold, Richard Stephens and Richard Twiddy)

In February, the EM Nevada Program approved the plan and Community Analysis Committee members are now working to schedule one-on-one interviews with key community leaders and residents in Beatty, Patrum, Goldfield, Boulder City, Mesquite, Las Vegas, Henderson, and North Las Vegas. In addition, committee members will be reaching out to students and staff at UNLV, and tribal members from the 18 American Indian tribes that form the Consolidated Group of Tribes and Organizations.

The NSSAB anticipates that the information gathering process and survey will continue into May. Completion of their analysis and a recommendation to the EM Nevada Program is planned for submittal in July.

- Publish articles locally and/or in HQ's EM Update newsletter
- Distribute via e-mail to over 10,000 NNSS news subscribers (public, employees and media) and published to NNSS website (www.nnss.gov)
- NSSAB members are automatically subscribed to receive via e-mail



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Open Houses/Events

To encourage an open dialogue with stakeholders, EM:

- Hosts periodic Open House events with posters, discussions, demonstrations, status and handouts
- Hosts formal public meetings to gain community perspectives on specific issues or the release of documents/information
- Provides presentations at community events to ensure communities are aware of EM Nevada Program activities
- Hosts quarterly Low-Level Waste Stakeholder Forum meetings



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Fact Sheets

Stakeholders can learn about EM activities from a wide selection of fact sheets and brochures, available in:

- Electronic version:
 - NNSS website
 - EM Kiosks
- Hard copy:
 - Public Reading Room (across lobby from Atomic Testing Museum)
 - Upon request in single or group quantities



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Community Conversations

- Provide information and gain community perspectives on specific issues, in a casual, one-on-one setting
- Next planned Community Conversation:
 - Tuesday, October 16, 2018
 - Amargosa Senior Center (11am – 1pm) and Beatty Library (4 – 6pm)
 - Topic: NNSS Groundwater



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Educational Demonstrations

- Geared for:
 - Classrooms
 - Science fairs
 - Community Events



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Displays

- Operation Clean Desert, Groundwater, Waste Disposal, and Transportation displays have been located at:
 - Public Reading Room
 - Pahrump Library
 - Caliente Library
 - Beatty Library
 - Amargosa Library
 - Esmeralda County Repository Oversight Office (Goldfield)
 - Central Nevada Museum (Tonopah)
 - White Pine County Library (Ely)



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Kiosks

- Interactive, touch-screen system that connects to:
 - NNSS Internet and social media websites
 - Related government websites
- Two EM kiosks rotate on three-four month cycles at community facilities throughout Southern Nevada



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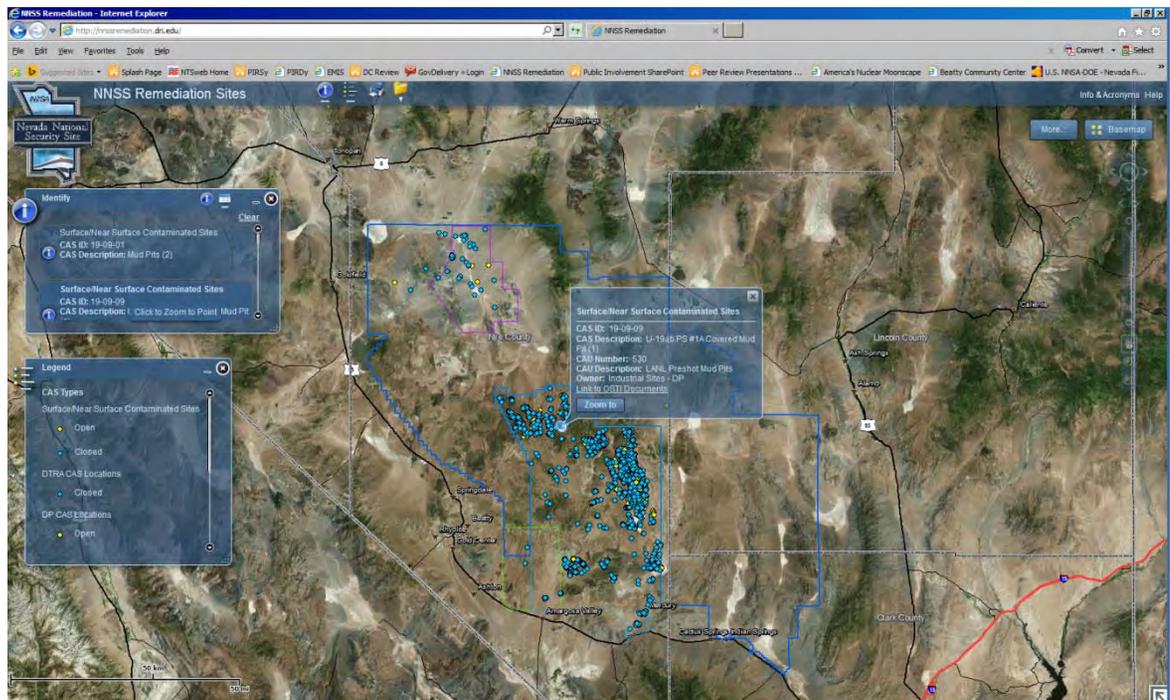
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NNSS Remediation Sites Map

(<http://nns Remediation.dri.edu/>)

- Interactive, on-line map that provides a cleanup status for every NNSS Corrective Action Site (CAS)
- Features direct links to NNSS cleanup site documents



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Nevada Site Specific Advisory Board (NSSAB)



Kelly Snyder, Deputy Designated Federal Officer,
EM Nevada Program
and **Barbara Ulmer**, NSSAB Administrator, Navarro
October 10, 2018



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Make Up of the NSSAB

- Members – represent their community
- Liaisons – represent organizations
- Staff



Did you know the NSSAB used to be known as the Community Advisory Board for Nevada Test Site Programs?



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Board Members

- Represent their community
- Appointed by Department of Energy's (DOE) Assistant Secretary for Environmental Management (EM)
- Serve two-year term which can be renewed by DOE two times (six year limit)
- Strive for 15-20 members with appointments staggered so at least one-third of Board retained for continuity
- Include a diversity of viewpoints from citizens whose communities are near DOE site clean-up activities



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Board Members

(continued)

- Responsibilities
 - Attend and participate in regular Full Board meetings and training
 - Review EM work plan items within NSSAB's purview
 - Submit timely recommendations to DOE
 - Respond to NSSAB office communication in a timely manner



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Chair and Vice Chair

- Chair and Vice Chair
 - Elected for one-year terms beginning October 1
 - Support Board in balanced and unbiased manner
 - Ensure all viewpoints are considered in Board discussions
 - Attend EM SSAB biannual meetings and participate in bimonthly EM SSAB conference calls



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Chair and Vice Chair

(continued)

- Chair Responsibilities
 - Preside over Full Board meetings
 - Certify Full Board minutes within 45 days
 - Represent the NSSAB during media opportunities*
- Vice Chair Responsibilities
 - Serve as Chair in his/her absence
 - Represent the NSSAB during media opportunities*

* Only the Chair, Vice Chair, or Chair appointee may represent the Board with the press/media



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Liaisons

- Represent their parent organization
- Non-voting positions
 - Organizations are appointed by the DOE
 - Organizations are responsible for determining who will represent them on the Board



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Liaisons

(continued)

- Responsibilities
 - Provide timely access to information pertinent to EM and associated environmental issues and related decision-making
 - Inform the NSSAB in a timely and proactive manner of entity processes, programs, projects, and activities pertinent to the Board's mission and purpose
 - Provide a short, verbal report on parent organizations involvement in EM activities at each Full Board meeting
 - If liaison is unable to attend, a written report will be submitted to the NSSAB Office via email two days prior to the Full Board meeting



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Liaisons

(continued)

- Two ways for organizations to stay apprised of NSSAB activities
 - Full Liaison – allows for liaison organizations to have a voice in Board discussions and input into recommendations; heavily relies on liaisons attending NSSAB meetings
 - Limited Liaison – allows for liaison organizations to observe NSSAB activities by receiving meeting minutes, NSSAB recommendations, and DOE responses; does not allow for a formal seat on the Board



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Liaisons

(continued)

- Current representation:
 - Clark County (Phil Klevorick)
 - Consolidated Group of Tribes and Organizations (Richard Arnold)
 - Esmeralda County Commission (Delon Winsor)
 - Lincoln County Commission (Nathan Katschke)
 - Nye County Commission (Dan Schinhofen)
 - Nye County Emergency Management (Scott Lewis)
 - Nye County Nuclear Waste Repository Project Office (John Klenke)
 - State of Nevada Division of Environmental Protection (Chris Andres)
 - U.S. National Park Service (Richard Friese)
 - White Pine County Commission (Richard Howe)



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Deputy Designated Federal Officer (DDFO)*

Kelly Snyder

- Ensures the Board has opportunities for providing input to DOE
- Provides timely information to the Board relative to DOE and EM initiatives, decisions, and processes
- Provides suggestions to the Board regarding EM activities on which its input would be useful

*Rob Boehlecke is alternate DDFO



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DDFO

(continued)

- Reviews Board input and ensures timely response
- Ensures that community and Board concerns related to EM are addressed
- Attends all NSSAB meetings
- Approves meeting agenda and minutes
- Can adjourn meetings if it is in the public interest



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Administrator

Barbara Ulmer

- Arranges/facilitates meetings; prepares written summaries
- Provides day-to-day communications
- Coordinates travel activities
- Maintains complete files of NSSAB activities
- Works with NSSAB to finalize/format written recommendations



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Member Attendance

- May not miss two consecutive Full Board meetings without an excused absence
- Attendance is required at a minimum of 50% of regular meetings in any one-year period
- To be considered “present,” must attend two-thirds of a meeting



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Conflict of Interest

- Board members are prohibited from participating as an NSSAB member in any matter in which they have financial interest
- If aware of a conflict, Board members must refrain from discussions and recommendations
- Members must report actual/potential Conflict of Interest to the DDFO in a timely manner
- Members must report any changes in employment



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Recommendations

- Meetings are held to discuss information and perspectives and develop draft recommendations
- Draft recommendation must be thoroughly reviewed and approved by majority vote of the Full Board
 - Minority Report can be included if majority of Board agrees it should be contained in the recommendation
- Approved recommendation signed by the Chair and submitted to DOE within 15 days



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Gifts, Gratuities, Loans, or Favors

- May not knowingly receive gifts, gratuities, loans, or favors from persons having business with DOE EM, except if
 - Less than \$20 (\$50 total per year)
 - Motivated by personal friendship
 - Result of outside activities and not enhanced by Board membership



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NSSAB Meetings

- The Board will meet as needed with length of meeting determined by agenda
- The DDFO, or appointed DOE representative, must be present at all NSSAB meetings
- Meetings follow agenda and conducted by the Chair with facilitation by the Administrator
- Voting is conducted according to Robert's Rules of Order
- Meeting requires a quorum (at least 51% of voting members) for decision making



NSSAB Meetings

(continued)

- Time and Location
 - Full Board typically meets the third Wednesday of selected months at 4 p.m. for three to four hours
 - Time and location must be accessible to the general public
 - While typically held in the Las Vegas area, meetings are also held in other communities near the NNSS



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NSSAB Meetings

(continued)

- Notices
 - 72-Hour Congressional and Federal Register Notices are required for all meetings where a quorum will potentially be present
 - Members and liaisons are sent notice of meeting with request for attendance response and draft agenda approximately a week prior to meeting
 - Newspaper advertising – Las Vegas Review Journal, Pahrump Valley Times, and Tonopah Times
 - News release (distributed to ~30 media outlets)
 - EM News Brief (distributed to over 10,000 subscribers)
 - Social media (i.e., Facebook, Twitter, etc.)



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NSSAB Meetings

(continued)

- Agendas
 - Prepared by Chair, Vice Chair, DDFO, and Administrator
 - Provided to members the week prior to the meeting
 - Posted to the website
 - If available, work plan briefings and items for vote are sent to the Board for review prior to the meeting



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NSSAB Meetings

(continued)

- Minutes
 - Prepared by Administrator
 - Provided to members and DDFO for review
 - Full Board minutes certified by Chair and DDFO and submitted to EM Headquarters within 45 days
 - Posted to the NSSAB website



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NSSAB Meetings

(continued)

- Public Participation
 - Meetings are open to the public
 - A section of the meeting space is available for public seating
 - Public comment is included in the agenda for oral comments
 - Written comments are always accepted
 - NSSAB/DOE does not respond to public comments (may choose to address comments during applicable agenda item)



NSSAB Meetings

(continued)

- Alternative meetings
 - On-line meetings have been pursued and are not currently being implemented
- Refreshments
 - Any refreshments are self-funded by members/
liaisons
- Meetings at the DOE's Offices require:
 - Badging at the DOE Badge Office
 - Vehicle inspection at facility entry gate
 - No prohibited articles



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Work Plan

- Work Plan developed at September Full Board meeting
- Outlines all activities the Board will participate in during the fiscal year
- Ensures Board members and DOE understand each others' expectations
- Items suggested by DOE and NSSAB members in accordance with guidance from EM Assistant Secretary
- NSSAB selects work plan items and requests approval from DOE prior to October 1
- Modifications may be requested during the fiscal year with DOE approval



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Committees

- Membership is only standing committee
- Ad hoc committees are formed as needed in accordance with Work Plan requirements
- Committee chairs for the fiscal year are elected by the committee members
- Discussions held during committee meetings that result in a draft recommendation must be discussed during a Full Board meeting to ensure all members have had the opportunity to fully understand all aspects of the recommendation



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Administrative



- NSSAB office hours are Monday through Thursday, 7:30 a.m. to 4:30 p.m.
- Majority of NSSAB communication conducted via e-mail NSSAB@emcbc.doe.gov or phone 702-523-0894
- Report changes regarding contact information and work status to the NSSAB office



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Travel Overview

- Authorized Travel
 - NSSAB meeting notices sent via e-mail
 - NSSAB members *must* send a “**reply e-mail**” which will serve as your “Travel Request”
 - Members cannot receive reimbursement unless a Travel Request is submitted and DOE approval is given in advance of travel



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Travel Overview

(continued)

DIRECT DEPOSIT

- Reimbursement is paid through direct deposit
- No checks are generated or mailed
- Emergency contact information is required



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Travel Overview

(continued)

- NSSAB members must follow Federal Travel Guidelines
- NSSAB members responsible for payment of travel expenses with DOE reimbursement after travel completion
- Lodging and per diem reimbursement are dependent upon location and time of meeting



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Travel Overview

(continued)

- Travel reimbursement is based on approved federal per diem rates for hotel and meals and incidental expenses (M&IE)
 - Rates vary from city to city
 - Per diem is daily allowance for food and incidentals
 - Rates generally change each fiscal year

Las Vegas	Hotel	Full-Day M&IE	Partial-Day M&IE
Oct 1, 2018 – Sep 30, 2019	Oct – Dec \$108 Jan – Mar \$130 Apr – Aug \$102 Sep \$108	\$ 61	\$ 45.75



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Travel Overview

(continued)

- Mileage
 - Roundtrip mileage is always calculated from your *residence* to the *meeting location* and *back*
 - Mileage reimbursement is offered if meeting location is more than 30 miles one-way from residence
 - Reimbursed at \$0.545 per mile (*current rate*)



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Travel Overview

(continued)

- Receipts
 - E-mail or fax (702-295-2025) all receipts to the NSSAB office
 - Do not submit receipts for food (this is covered by your per diem (M&IE), if applicable)
 - Vouchers cannot be processed without receipts and traveler's approval
- Payment
 - Made via direct deposit
 - Usually within one week of voucher submittal



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Travel Overview

(continued)

- Nevada Travel
 - NSSAB members are responsible for own hotel reservations
 - Government room rate must be requested (per guidelines)



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Travel Overview

(continued)



- Out-of-State Travel
 - All arrangements (air, hotel, transportation) for out-of-state NSSAB meetings are made by the NSSAB Office
 - Most cities have a government contracted airline and NSSAB members must travel via these carriers



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NSSAB Website

www.nnss.gov/NSSAB



Nevada Site Specific Advisory Board

...citizens working together on environmental issues

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The next NSSAB Full Board meeting is November 7, 2018.

About the NSSAB

The Nevada Site Specific Advisory Board is a part of the Environmental Management Site-Specific Advisory Board, a stakeholder board that provides the Assistant Secretary for Environmental Management and designees with independent advice, information, and recommendations on issues affecting the EM program at various sites. Among those issues are clean-up standards and environmental restoration; waste management and disposition; stabilization and disposition of non-stockpile nuclear materials; excess facilities; future land use and long-term stewardship; risk assessment and management; and clean-up science and technology activities.

The board's membership is carefully considered to reflect a full diversity of viewpoints in the affected community and region.

Meetings are open to the public and participation is encouraged.



NSSAB participates in EM SSAB National Chairs' Meetings

Who We Are

The NSSAB is comprised of volunteer members who represent Nevada stakeholders by reviewing and commenting on environmental restoration (i.e. groundwater contamination, historic nuclear test area clean-up, etc.) and waste management (i.e. radioactive waste transportation and disposal) activities at the Nevada National Security Site, formerly known as the Nevada Test Site. The members bring a variety of perspectives to the Board on issues of significant concern to the region. Rural interests, environmental concerns, and local government viewpoints are discussed and considered by the Board before making recommendations to the Department of Energy.

Liaisons, who are not voting members, participate in NSSAB deliberations and contribute their institutional views. Liaisons represent: Clark County, Consolidated Group of Tribes and Organizations, Esmeralda County Commission, Lincoln County Commission, Nye County Commission, Nye County Emergency Management, Nye County Nuclear Waste Repository Project Office, State of Nevada, U.S. National Park Service, and White Pine County Commission.



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