



## ***Nevada Site Specific Advisory Board Table of Contents***

### ***Full Board Meeting Handouts for Wednesday, November 7, 2018***

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has a link to the first page of each handout.***

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NSSAB minutes, agendas, recommendations, meeting dates and locations, handouts, and member application may be accessed at the NSSAB website at: [www.nnss.gov/NSSAB/](http://www.nnss.gov/NSSAB/)

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## NSSAB FULL BOARD MEETING ATTENDANCE

October 2018 through September 2019 (FY 2019)

Name	11/7/18	1/16/19	3/20/19	4/24/19	7/17/19	9/18/19	Max Terms
<b>MEMBERS</b>							
Amina Anderson	√						2020
Francis Bonesteel	√						2022
William DeWitt	√						2024
Pennie Edmond	√						2020
Karen Eastman	√						2022
Raymond Elgin	E						2022
Charles Fullen	√						2022
Richard Gardner	√						2022
Anthony Graham	√						2024
Tanya Henderson	√						2024
Hepburn Klemm	√						2024
Donald Neill	√						2020
Steve Rosenbaum	√						2020
Janice Six	√						2024
Richard Stephans	√						2022
Richard Twiddy	√						2022
Dina Williamson-Erdag	√						2022
C.J. Wissmiller	√						2024
<b>LIAISONS</b>							
Clark County	√						
Consolidated Group of Tribes & Organizations	E						
Esmeralda County Commission	√						
Lincoln County Commission	E						
Nye County Commission	U						
Nye County Emergency Management	√						
Nye Co. Nuclear Waste Repository Project Office	√						
State of NV Division of Env Protection	√						
U.S. Natl Park Service	√						
White Pine County Commission (limited)							
KEY: √ - Present    E - Excused    V - Vacant    U - Unexcused							

# EMERGENCY PREPAREDNESS WORKING GROUP



**Kelli Anderson, Emergency Management Programs Manager  
Grants, Recovery and Mitigation**



## VISION, MISSION, CORE VALUES

**DPS Vision:** To be a unified multi-discipline and total force organization that will provide excellent public safety services and will be known for our abilities and resource capabilities to “to take care of business” anywhere and anytime in the State of Nevada.

**DPS Mission:** In partnership with the people of Nevada, the Department of Public Safety provides services in support of protecting our citizens and visitors by promoting safer communities through prevention, preparedness, response, recovery, education, and enforcement.

**DPS Core Values:** Integrity, Excellence, Courage, Accountability, Leadership, and Teamwork



# AGENCY OVERVIEW

DEM serves as the State of Nevada's coordinator of resources before, during, and after declared and non-declared emergencies and disasters within the state.

Nevada's emergencies and disasters can be man-made (acts of terrorism, for example) or natural (fires, floods, and earthquakes, for example), and DEM's role is to ensure communities across the state have the capacity to prepare for, respond to, and recover from each.



# EPWG PURPOSE

The purpose of the EPWG is to provide a forum for coordination of the low level waste program between Nevada National Security Site (“NNS”), the Nevada Division of Emergency Management, and the counties of Clark, Elko, Esmeralda, Lincoln, Nye and White Pine.

The purpose of the grant program is to provide assistance to the counties located along the low level waste transportation routes in Nevada in developing an operational level emergency response capability.



# EPWG MISSION

Working Group objectives include:

- Grant administration coordination, including development of grant guidelines, standardization of grant applications and reporting requirements, and coordination on other crosscutting grant administrative issues.
- Coordination of multi-county initiatives such as equipment standardization, enhancement of communication systems, and training development and conduct.
- Concurrence on the NNSG grant funding distribution.
- Coordination of NNSG equipment grants to the six counties.
- As a committee, the EPWG promotes activities that contribute in a meaningful way toward building disaster resistant communities in the State Of Nevada.



# EPWG MEMBERSHIP

- Clark County
- Elko County
- Esmeralda County
- Lincoln County
- Nye County
- White Pine County



## FFY EPWG 2013 – Current

<b>TOTAL GRANT AWARDS FFY13-FFY18</b>	<b>\$ 3,430,797.38</b>
<b>TOTAL SPENT TO DATE FFY13-FFY18</b>	<b>\$ 2,552,384.53</b>
<b>BALANCE REMAINING FFY13-FFY18</b>	<b>\$ 878,412.85</b>
<b>TOTAL % SPENT</b>	<b>71%</b>



# FFY 2013

FY13	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 50,500.07	\$ 50,500.07	\$ -	100%
Elko County	\$ 71,636.00	\$ 71,320.49	\$ 315.51	100%
Esmeralda County	\$ 116,470.17	\$ 99,739.98	\$ 16,730.19	86%
Esmeralda County	\$ 6,000.00	\$ 6,000.00	\$ -	100%
Lincoln County	\$ 111,150.17	\$ 111,150.17	\$ -	100%
Nye County	\$ 127,969.67	\$ 127,969.67	\$ -	100%
White Pine County	\$ 84,779.99	\$ 84,779.99	\$ -	100%
<b>Total</b>	<b>\$ 568,506.07</b>	<b>\$ 551,460.37</b>	<b>\$ 17,045.70</b>	<b>97%</b>



# FFY 2014

FY14	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 29,986.62	\$ 29,986.62	\$ -	100%
Elko County	\$ 33,000.00	\$ 33,000.00	\$ -	100%
Esmeralda County	\$ 106,840.00	\$ 100,650.49	\$ 6,189.51	94%
Lincoln County	\$ 121,620.00	\$ 121,620.00	\$ -	100%
Nye County	\$ 87,840.00	\$ 87,840.00	\$ -	100%
White Pine County	\$ 120,700.00	\$ 110,959.87	\$ 9,740.13	92%
NDEM EPWG	\$ 28,600.00	\$ 20,525.92	\$ 8,074.08	72%
<b>Total</b>	<b>\$ 528,586.62</b>	<b>\$ 504,582.90</b>	<b>\$ 24,003.72</b>	<b>95%</b>



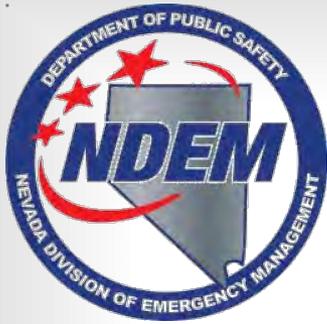
# FFY 2015

FY15	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 104,093.30	\$ 103,894.03	\$ 199.27	100%
Elko County	\$ 69,000.00	\$ 66,557.69	\$ 2,442.31	96%
Esmeralda County	\$ 91,000.00	\$ 79,583.50	\$ 11,416.50	87%
Lincoln County	\$ 149,376.75	\$ 149,376.75	\$ -	100%
Nye County	\$ 105,328.84	\$ 105,328.84	\$ -	100%
White Pine County	\$ 115,861.61	\$ 113,298.61	\$ 2,563.00	98%
<b>Total</b>	<b>\$ 634,660.50</b>	<b>\$ 618,039.42</b>	<b>\$ 16,621.08</b>	<b>97%</b>



# FFY 2016

FY16	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 132,000.00	\$ 57,025.34	\$ 74,974.66	43%
Elko County	\$ 91,870.00	\$ 88,895.15	\$ 2,974.85	97%
Esmeralda County	\$ 98,000.00	\$ 59,557.30	\$ 38,442.70	61%
Lincoln County	\$ 141,114.42	\$ 97,401.78	\$ 43,712.64	69%
Nye County	\$ 101,600.00	\$ 101,600.00	\$ -	100%
White Pine County	\$ 203,860.00	\$ 188,407.44	\$ 15,452.56	92%
<b>Total</b>	<b>\$ 768,444.42</b>	<b>\$ 592,887.01</b>	<b>\$ 175,557.41</b>	<b>77%</b>



# FFY 2017

FY17	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 80,000.00	\$ 67,378.88	\$ 12,621.12	84%
Elko County	\$ 47,927.00	\$ 41,273.57	\$ 6,653.43	86%
Esmeralda County	\$ 46,000.00	\$ 23,313.06	\$ 22,686.94	51%
Lincoln County	\$ 78,685.03	\$ 46,370.33	\$ 32,314.70	59%
Nye County	\$ 77,000.00	\$ 61,524.55	\$ 15,475.45	80%
White Pine County	\$ 113,199.57	\$ 45,554.44	\$ 67,645.13	40%
DEM	\$ 20,000.00	\$ -	\$ 20,000.00	0%
<b>Total</b>	<b>\$ 462,811.60</b>	<b>\$ 285,414.83</b>	<b>\$ 177,396.77</b>	<b>62%</b>



# FFY 2018

FY18	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 92,300.00	\$ -	\$ 92,300.00	0%
Elko County	\$ 79,650.00	\$ -	\$ 79,650.00	0%
Esmeralda County	\$ 91,000.00	\$ -	\$ 91,000.00	0%
Lincoln County	\$ 92,838.17	\$ -	\$ 92,838.17	0%
Nye County	\$ 92,000.00	\$ -	\$ 92,000.00	0%
White Pine County	\$ -	\$ -	\$ -	
DEM	\$ 20,000.00	\$ -	\$ 20,000.00	0%
Total	\$ 467,788.17	\$ -	\$ 467,788.17	0%



# Priorities

*Strengthen emergency preparedness and resiliency.*

*By 2018, align Nevada's emergency management vision with the "100 Resilient Cities Initiative" to develop innovative methods for coordinating preparedness, response, recovery, and mitigation during emergencies and disasters*



# Priorities

*Align existing resources to build statewide capacity to respond to and recover from man-made or natural emergencies and disasters, focusing especially on Cyber Security*



# Priorities

*Apply new technologies such as Unmanned Aerial Vehicles in a way that better prepares the state's response capabilities to maximize emergency and disaster resiliency in the new Nevada*



# Priorities

*Establish a statewide food security preparedness infrastructure that includes sustainable agricultural resources*



# How DEM SUPPORTS EPWG WITH THE AIP

NDEM will be the lead agency for all EPWG activities, to include review and approval of the annual work scope and funding provided to the counties.

DOE reserves the right to approve or remove any item from the proposed scope of work for each fiscal year.

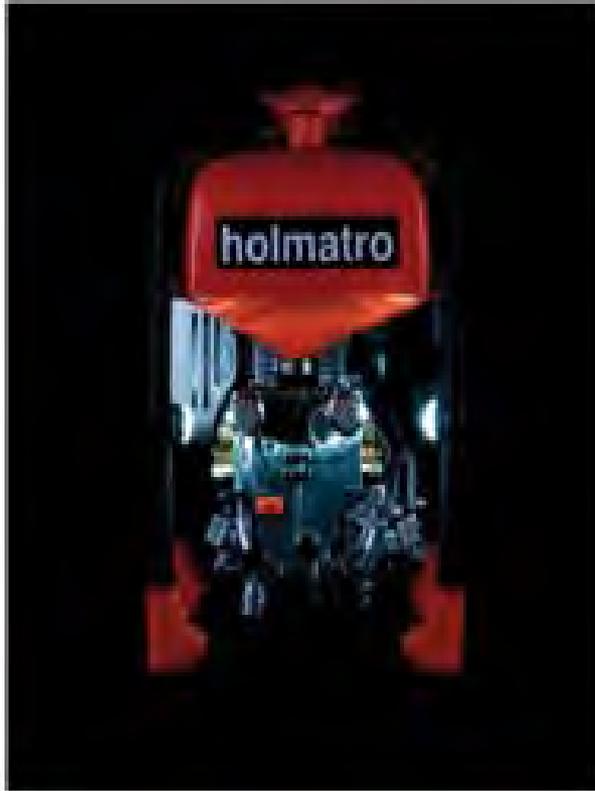


# GRANT PROCESS

- Funding Received by Modification and Amount
- DEM holds modification to grant 1 year of funding at a time
- DEM Requests Grant Applications
- Narrative and Budgets
- All applications are vetted by Members in Open Meetings in Compliance with Nevada Law
- Grant Requested Reviewed and Voted by Allocation and Priority
- DEM issues Sub-Grants



# EXAMPLES OF EQUIPMENT



## Gas/Petrol Duo Pump SR 20 PC 2

Petrol driven Spider duo pump, CORE version, with 2 tool connections (MTO).

### Standard supplied with:

- CORE Technology
- Quicker (saves time)
- Safer (more user-friendly)
- Easier (allows more efficient use of manpower)

Clark FY17 2 @ \$7,602.40



# EXAMPLES OF EQUIPMENT

## Combi Tool CT 5111

For spreading, cutting and squeezing with one tool - CORE version.

### Standard supplied with:

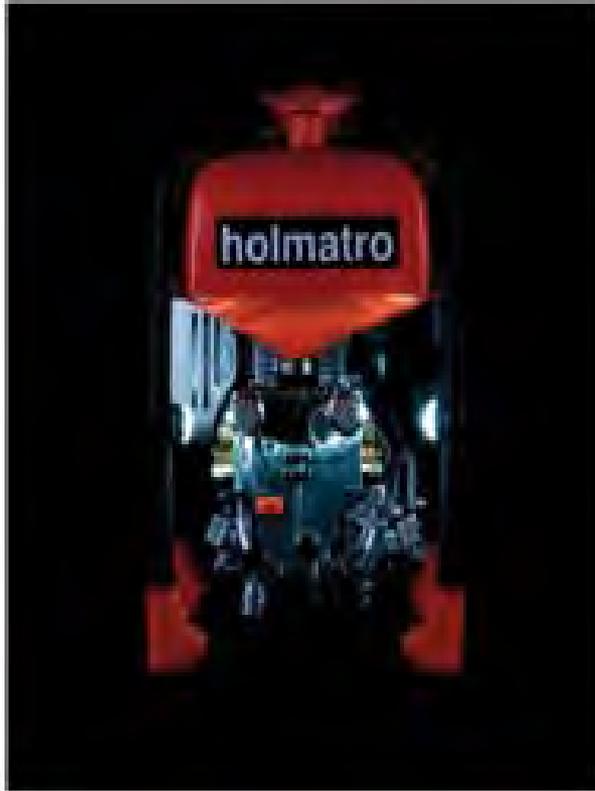
- Carrying handle with integrated LED lighting
- i-Bolt Technology
- Redesigned, ergonomic control handle with improved grip

Clark County FY17 1 @\$4,723.50





# EXAMPLES OF EQUIPMENT



## Gas/Petrol Duo Pump SR 20 PC 2

Petrol driven Spider duo pump,  
CORE version, with 2 tool  
connections (MTO).

### Standard supplied with:

- CORE Technology
- Quicker (saves time)
- Safer (more user-friendly)
- Easier (allows more efficient use of manpower)

Clark FY17 2 @ \$7,602.40



**Drone  
Package**  
**Eiko FY17 1**  
**@ 8,191.39**



**NIGHT SCAN XL200 LED  
LAMPS  
CREATED FOR NIGHT SCAN  
TOWERS**

Elko FY17 1 @ \$9,995.00



**Esmeralda  
FY12  
Turnout  
Gear**

**\$20,480.00**



## Power Load System

Esmeralda

FY131@

\$19,623.00



## Ambulance

Esmeralda FY14

\$51,840.00



## Lincoln FY14 AED

35 @ \$1388.00 =  
49,966.00



## Lincoln FY15 & 16 2016 Chevy K350 Coach Ambulance

1 @ \$150,500.00



**Lincoln FY15 80  
KW Generator  
1 @ \$23,500.00**



**Nye County Beatty  
Ambulance Barn**



**Nye County FY15  
\$34,876.25**



**48kW Standby Diesel  
Generator**

Nye County FY16

\$19,000.00



## Ludlum Model 14C Survey Meter for Nuclear Medicine Applications

The Ludlum Model 14C survey meter was designed to meet nuclear medicine requirements. The Model 14C is similar to the Model 3, but with an internal energy compensated G-M detector. It can be used with one or more external GM or scintillation detectors for alpha, beta, or gamma detection up to 0-200 mR/hr. This additional internal detector creates fifth high range of 0-2000 mR/hr in addition to the four ranges covered by the external probe. It is used in hospitals, universities, power plants and regulatory facilities. Standard scale is 0-2 mR/hr with five counting ranges: x0.1, x1, x10, x100, and x1000. (Dual scale cpm & mR/hr are available on request). Two "D" cells provide over 200 hours of operation. The Model 14C is supplied as shown with built-in speaker.



White Pine FY13 Radiation Emergency Response Kits 4 @ \$1,972.00 =  
\$7,888.00



## White Pine FY14 Copy Machine

1 @ \$8,971.00



## White Pine FY14 Radiation Detector

1 @ \$13,411.00



# DEM ANNUAL REPORT

State of Nevada



Annual Report  
2017- 2018

Nevada Department of Public Safety's  

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Division of Emergency Management



# RESILIENCE PLAN

2018

## Statewide Resilience Strategy and Legislative Recommendations to the Nevada Commission on Homeland Security

Deputy Chief John Steinbeck, Co-Chair, HSWG  
Chief Caleb S. Cage, Co-Chair, HSWG

June 30-July 1, 2018



Nevada Department of Public Safety  
Division of Emergency Management and Office of Homeland Security

# QUESTIONS ?

**Kelli Anderson, Emergency Management Programs Manager  
Grants, Recovery and Mitigation**

**775-220-1618**

**[kanderson@dps.state.nv.us](mailto:kanderson@dps.state.nv.us)**

# Underground Test Area (UGTA) Overview



**Bill Wilborn**

Deputy Program Manager, Operations  
Environmental Management (EM) Nevada Program  
November 7, 2018



**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

[www.nnss.gov](http://www.nnss.gov)

# 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
- Much of the contaminants are trapped in the test cavity
- Radioactive contamination has not been detected above the Safe Drinking Water Act (SDWA) in groundwater beyond the NNSS and the Nevada Test and Training Range (NTTR)



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# UGTA Activity

- Complex geology and hydrology of the NNSS presents unusual challenges in understanding boundary conditions, velocity, and direction of groundwater flow
  - Challenges addressed in UGTA strategy through drilling, well sampling, characterization, and computer model development
- No practical technology for clean-up
  - Natural processes occur that reduce and remove contamination



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# Why Monitor NNSS Groundwater

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



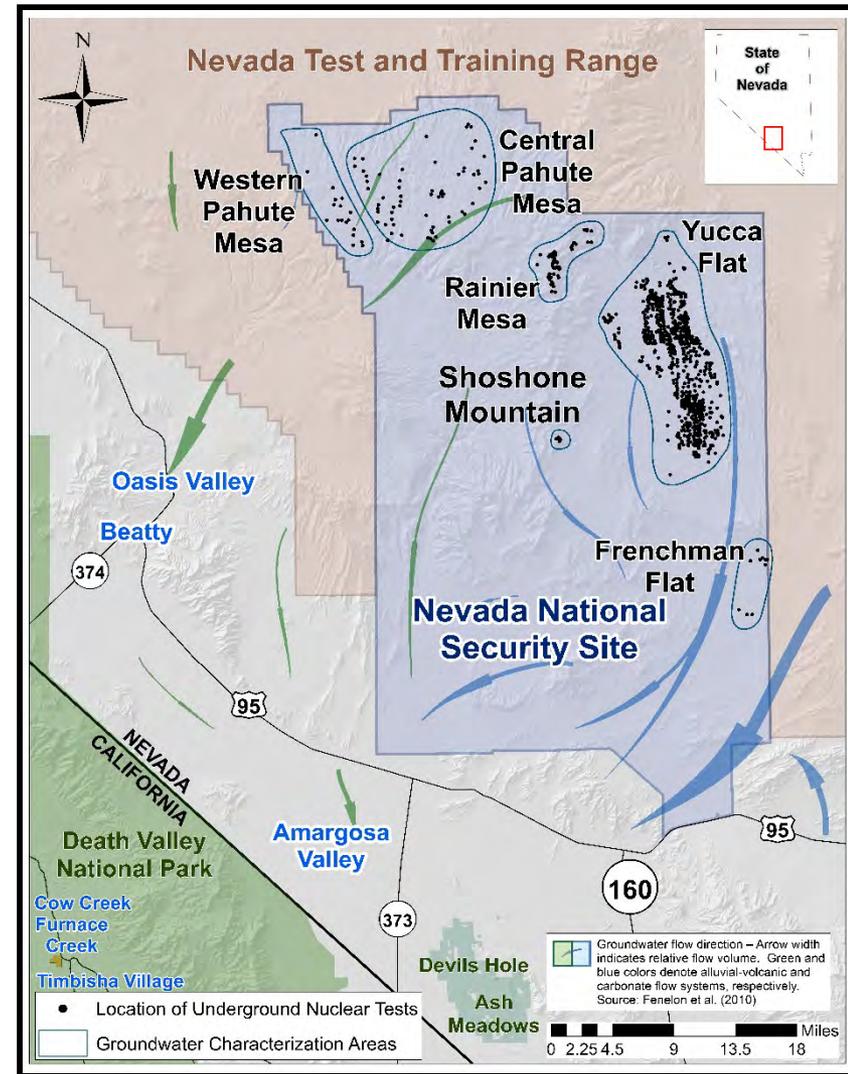
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# Corrective Action Units

- 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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# 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

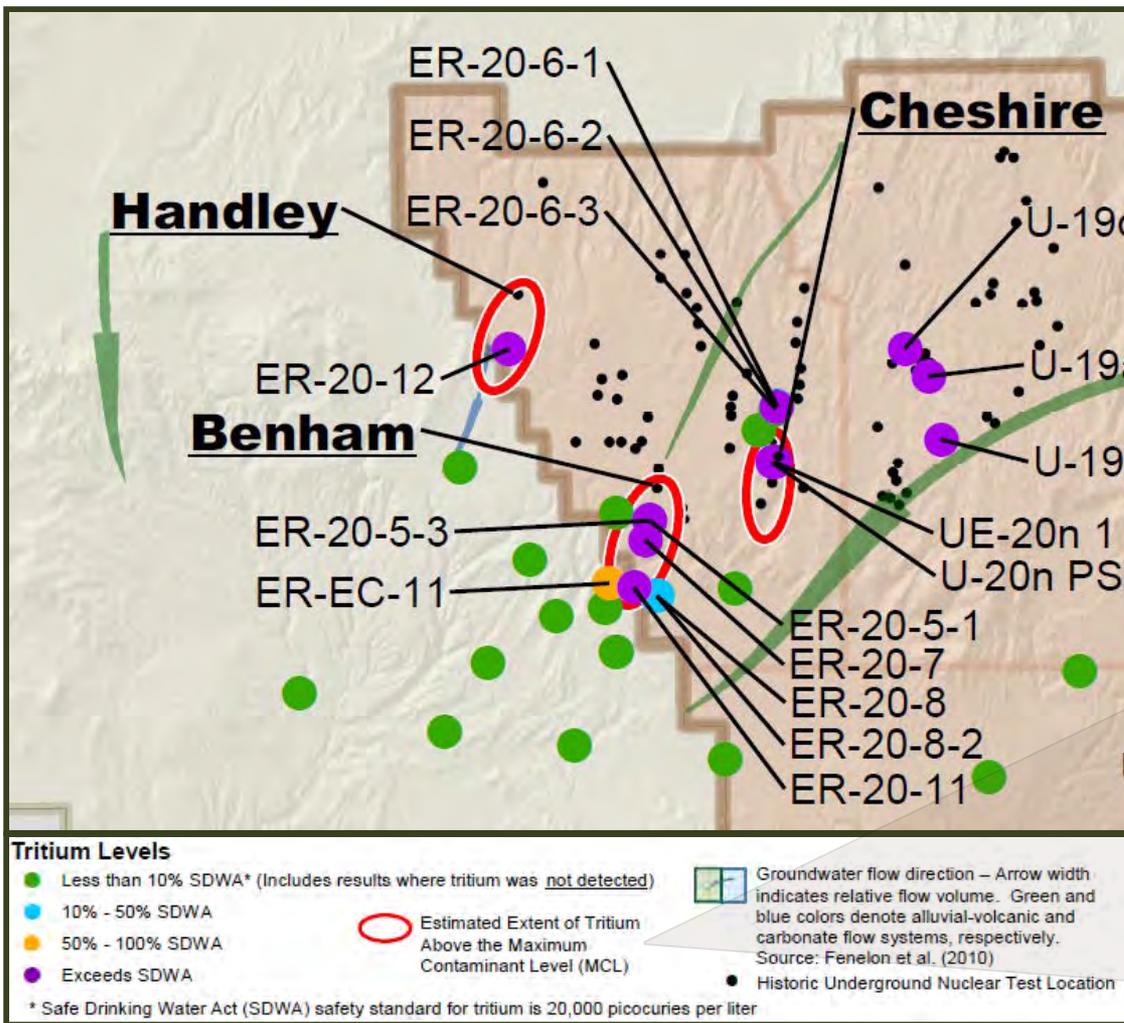


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# Tritium Observations



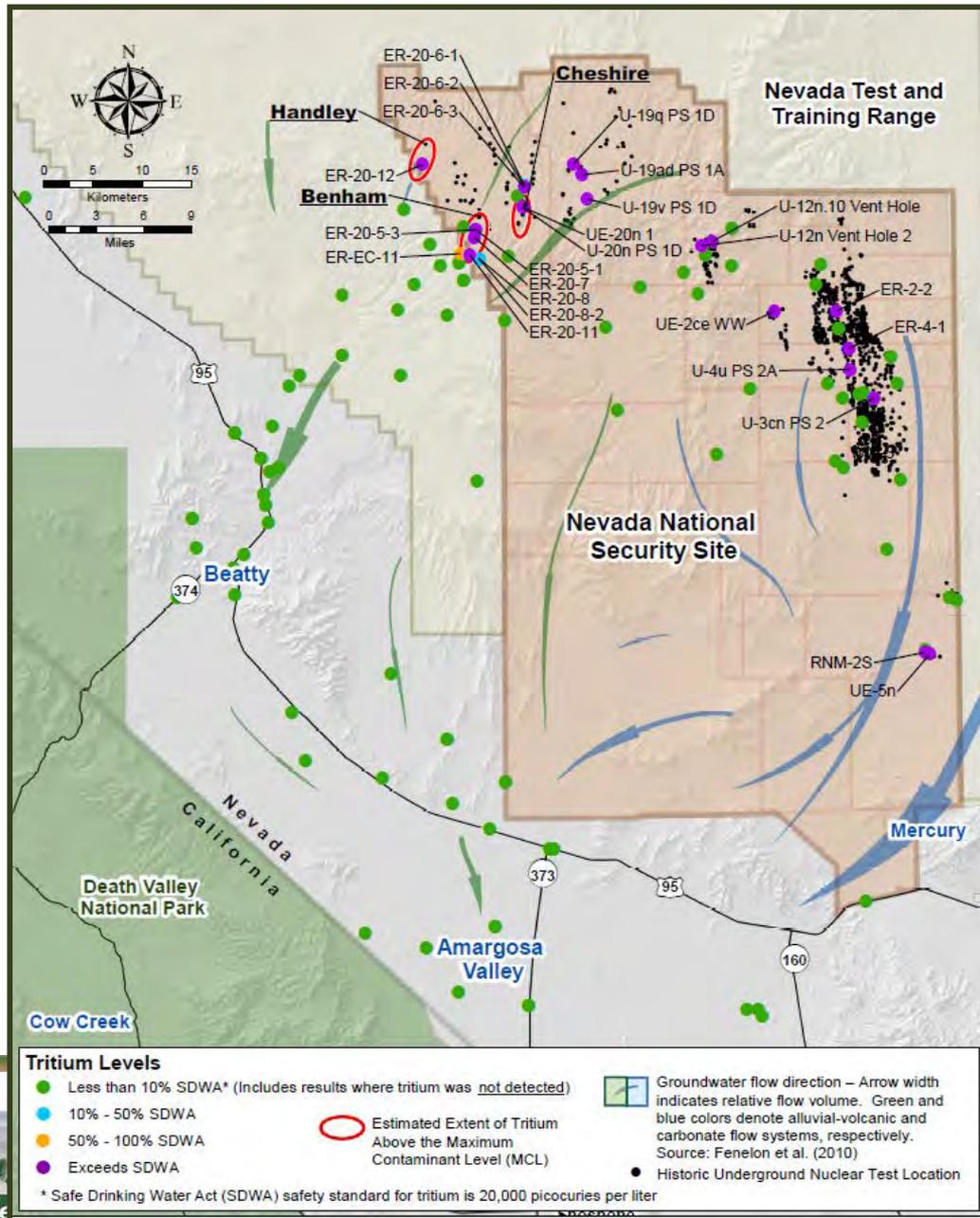
Estimated extent of tritium above the maximum contaminant level (MCL)



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# Current Groundwater Contamination Levels\*

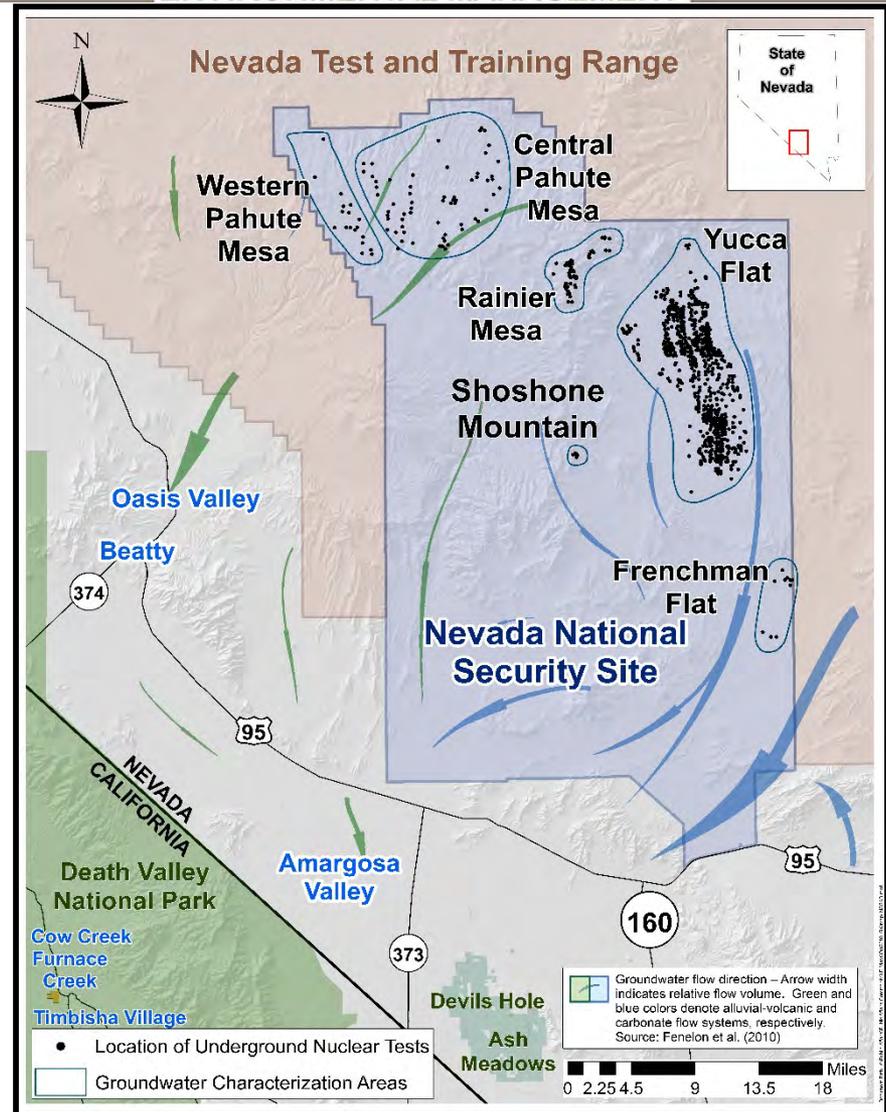


\*as of September 30, 2018



# Groundwater Flow on the NNSS

- 60 years of data collected indicate that groundwater:
  - In the eastern portion, eventually discharges to the Ash Meadows/Devils Hole or Death Valley areas
  - In the northwestern portion, locally discharges to springs in Oasis Valley



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# Groundwater Flow on the NNSS

## (continued)

- Estimated velocities (speed) range from a few feet up to 300 feet per year dependent on geology, hydraulic properties (i.e., ability of water to flow through rock), and elevation of the water table
- Model forecasts show contaminants would not reach publicly accessible water supply



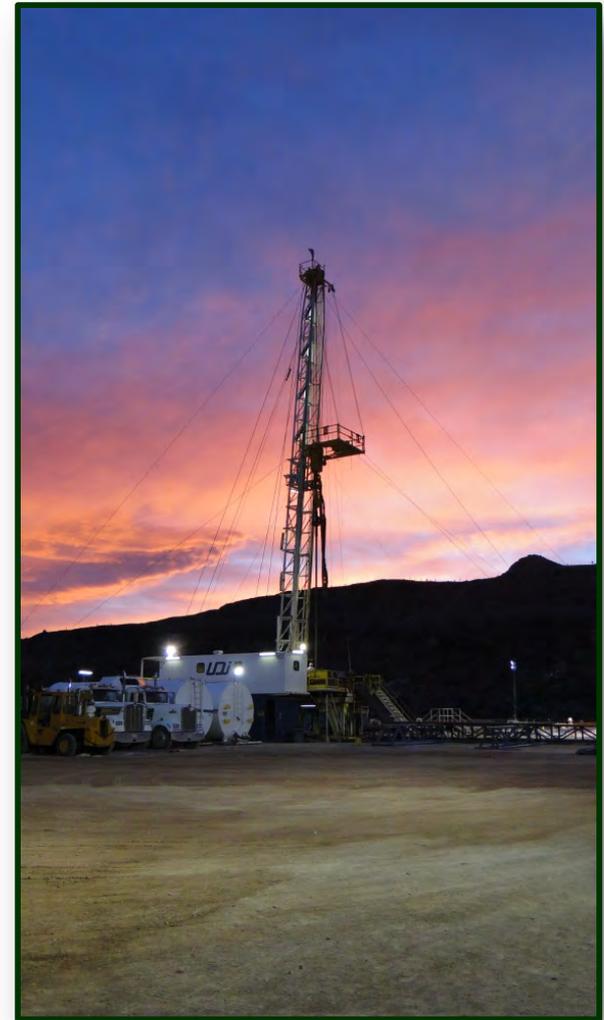
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# Key Messages

- Current research shows the public water supply is safe from the impacts of historic underground nuclear testing
- Groundwater contamination affected by historic NNSS activities has not gone beyond restricted Federal land
- Groundwater models are providing output that is key to enhancing current and developing future monitoring strategies



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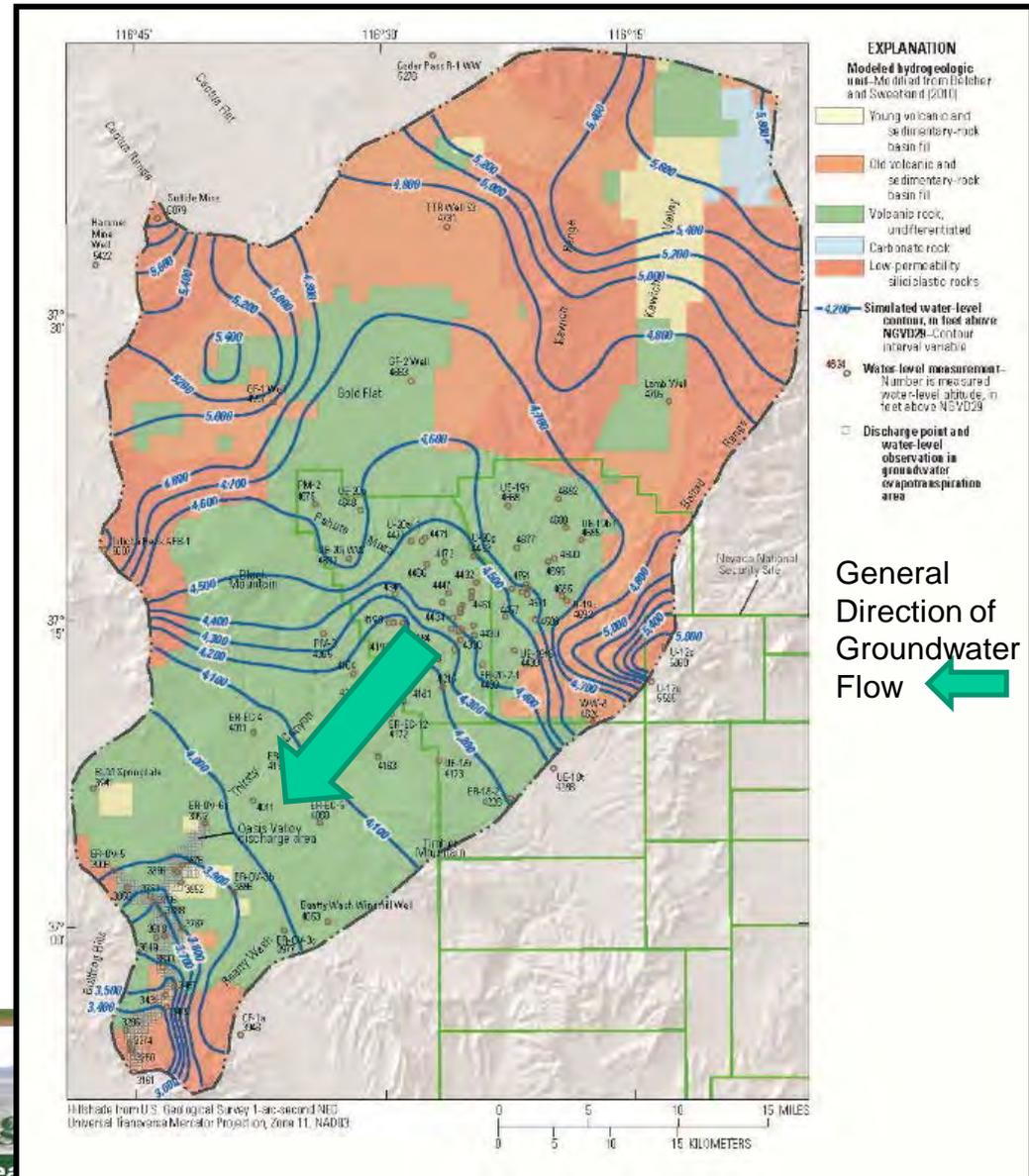
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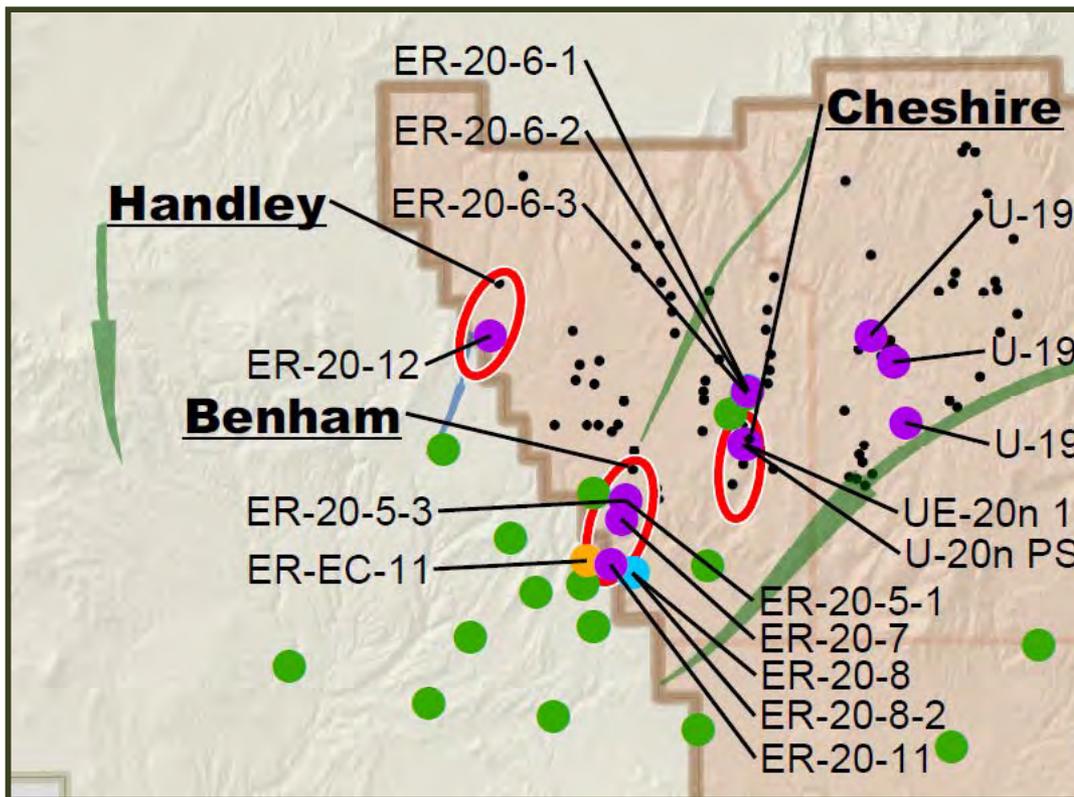
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# Pahute Mesa Phase II

- Groundwater flows from Pahute Mesa (Areas 19 and 20) toward Oasis Valley near Beatty
- 82 underground tests comprise about two-thirds of radionuclide inventory underground tests conducted on the NNSS
- Investigations focused on protecting human health and the environment



# Tritium Observations Near Benham Plume



**Tritium Levels**

- Less than 10% SDWA\* (Includes results where tritium was not detected)
  - 10% - 50% SDWA
  - 50% - 100% SDWA
  - Exceeds SDWA
- Estimated Extent of Tritium Above the Maximum Contaminant Level (MCL)

Groundwater flow direction – Arrow width indicates relative flow volume. Green and blue colors denote alluvial-volcanic and carbonate flow systems, respectively. Source: Fenelon et al. (2010)

● Historic Underground Nuclear Test Location

\* Safe Drinking Water Act (SDWA) safety standard for tritium is 20,000 picocuries per liter

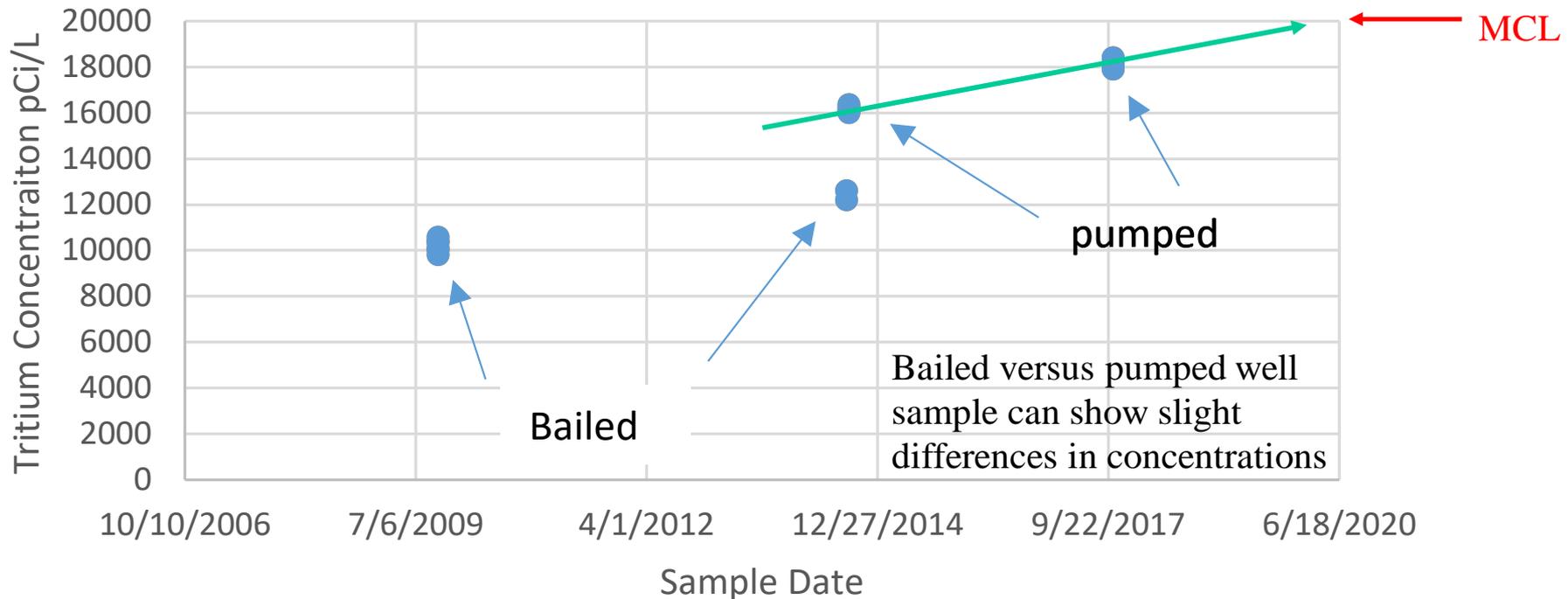


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# Trend of Tritium Concentrations in Well ER-EC-11

Benham Aquifer



- Key Message: Trend is increasing and nearing the MCL



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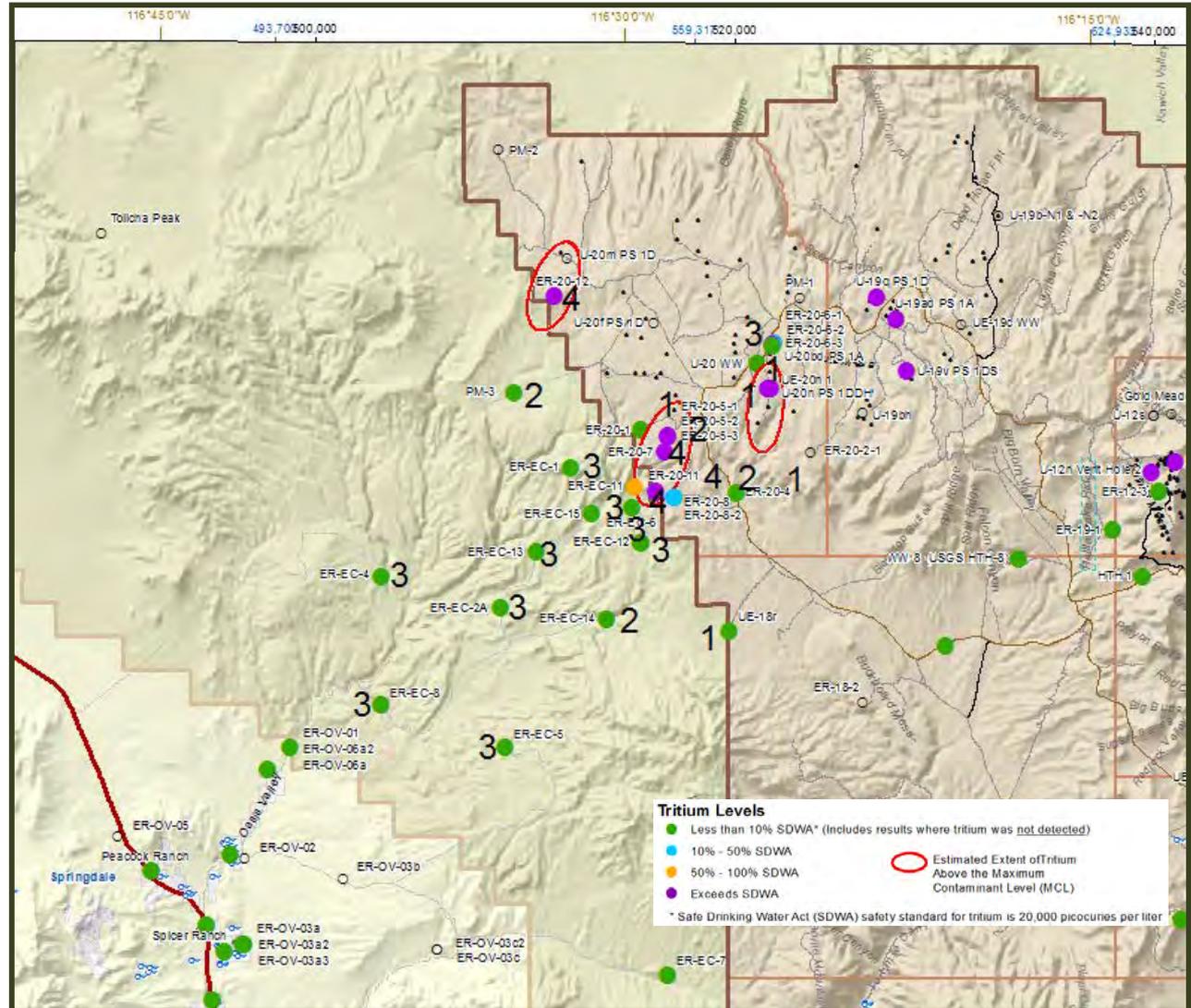
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# Pahute Mesa

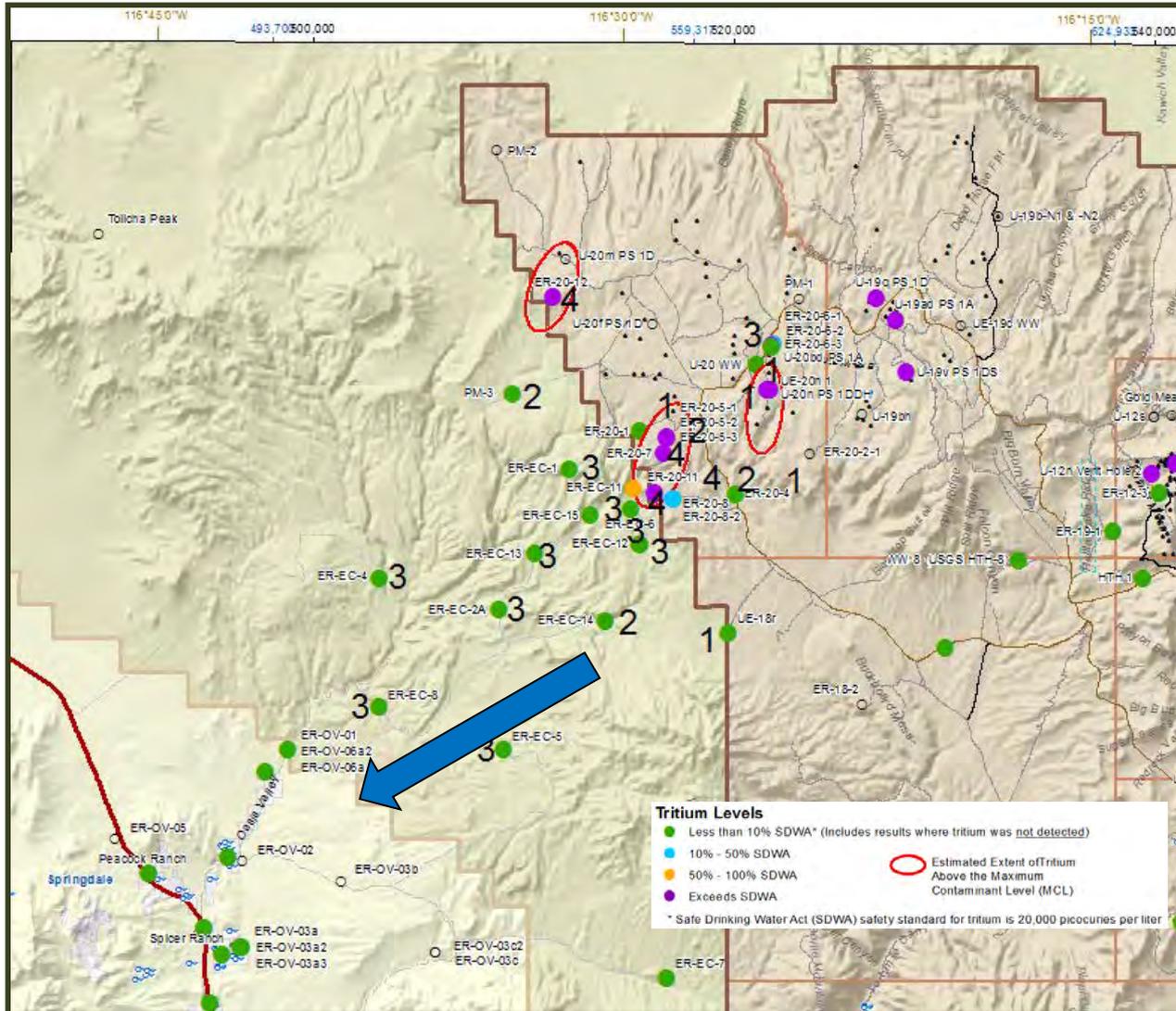
- Downgradient wells in Pahute Mesa:
  - 27 wells
  - 54 intervals
  - 1,391 samples since 1995
- 1,2,3,4: number of completion intervals in each well



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# Pahute Mesa (continued)



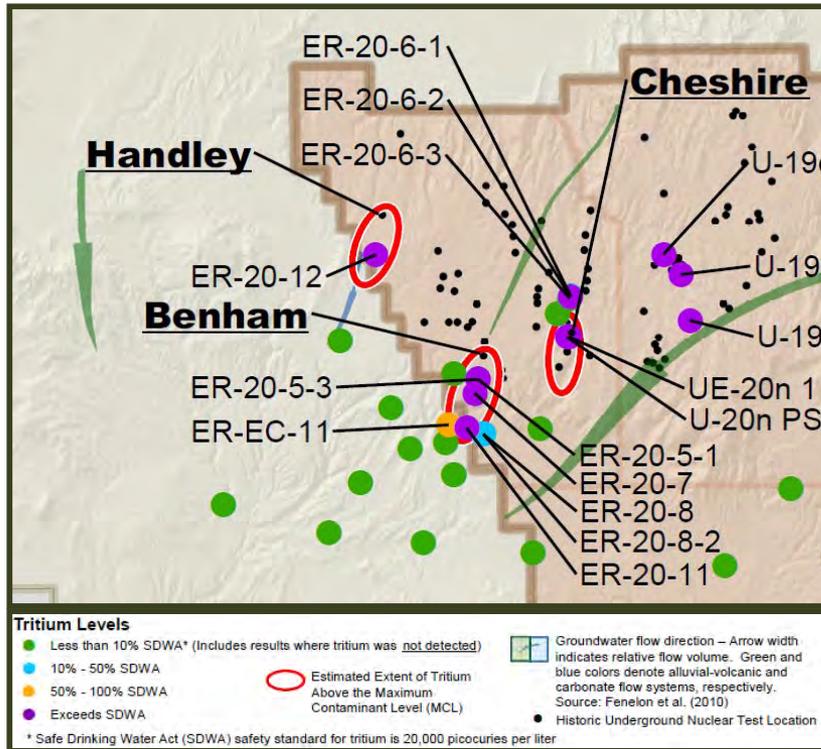
- At the current rate of migration, tritium above the MCL will not reach the NTTR boundary



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# Radionuclides Above the MCL: A Benham Plume Perspective



- A radionuclide plume is moving south from Benham
- Measured concentrations from ER-20-5-1 (closest well to Benham)
  - Tritium is ~1,300 times the MCL
  - Plutonium is ~0.05 times the MCL
  - Iodine is ~0.27 times the MCL
  - Carbon-14 is ~0.24 times the MCL
  - All others are less than 1% of MCL



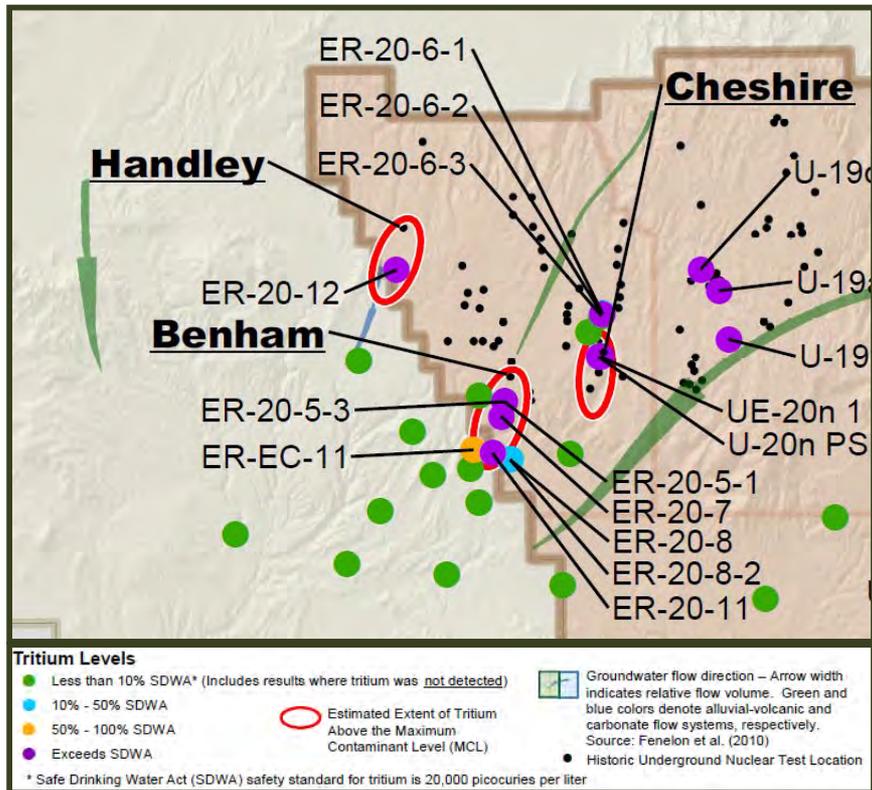
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# Radionuclides Above the MCL: A Benham Plume Perspective (continued)



- Measured concentrations from ER-20-7 (further downgradient)
  - Tritium is ~680 times the MCL
  - Iodine is ~0.15 times the MCL
  - Carbon-14 is ~0.08 times the MCL



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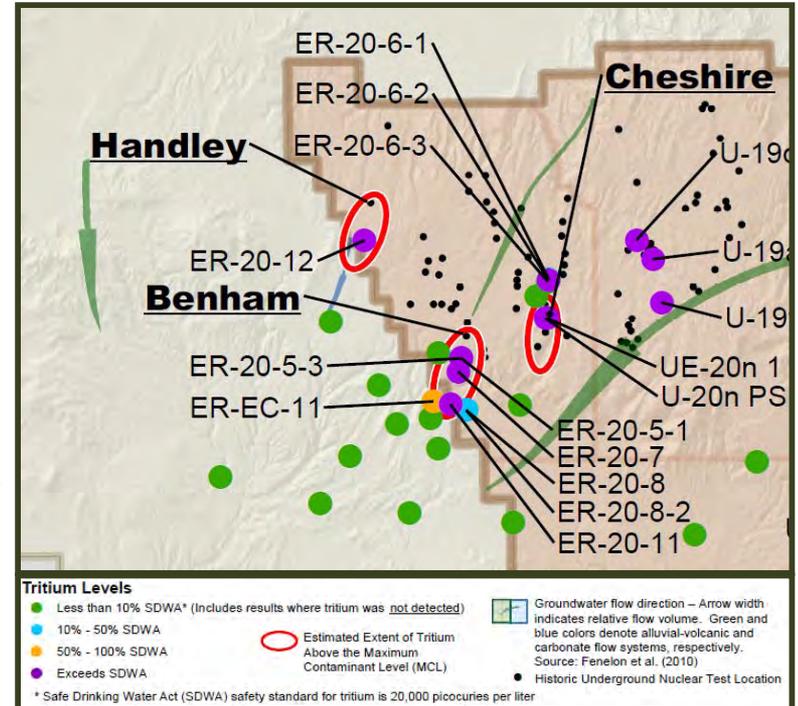
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# Radionuclides Above the MCL: A Cheshire Plume Perspective

- A radionuclide plume is moving south from Cheshire
- Measured concentrations from UE-20n 1 (closest well to Cheshire)
  - Tritium is ~2,650 times the MCL
  - Technetium is ~0.05 times the MCL
  - Iodine is ~0.41 times the MCL
  - Carbon-14 is ~0.11 times the MCL
  - All others are less than 2% of MCL



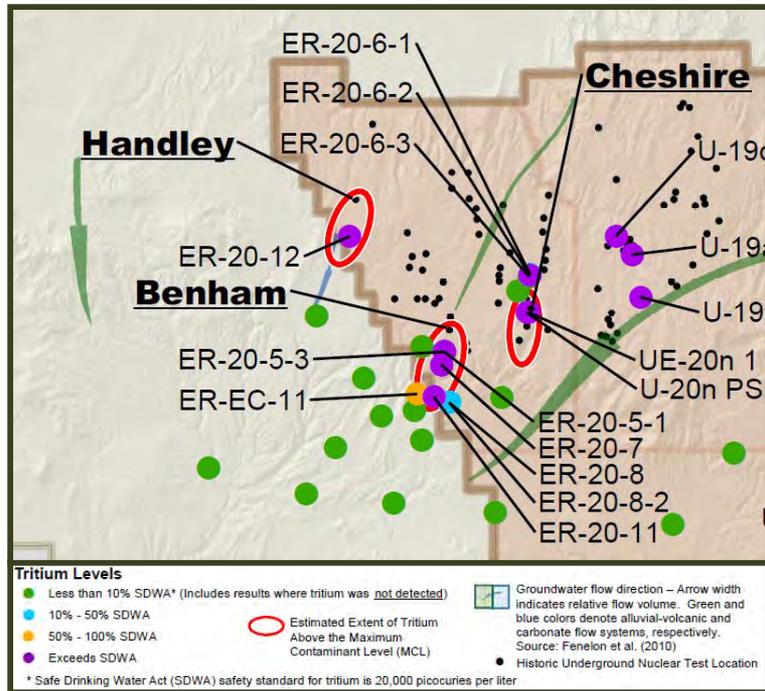
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# Other Radionuclides



- At the wells closest to the sources, only tritium is present above the MCL, but other radionuclides are present above 10% of the MCL (wells ER-20-5-1, ER-20-7, UE-20n 1)
- At wells further downgradient (wells ER-20-11 and ER-EC-11), all radionuclide concentrations decrease; only tritium is observed above MCL, no other radionuclides observed above 10% of the MCL
- The following wells have tritium observed above the MCL, but no other radionuclides observed above 10% of the MCL (wells ER-20-5-3, ER-20-6-2, and ER-20-12)



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# Offsite Groundwater Communication Plan



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Public Affairs Director  
EM Nevada Program



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# NSSAB Work Plan Item #6

- From a community perspective, provide a recommendation to the EM Nevada Program on if the Offsite Groundwater Communication Plan is supported by the Nevada Site Specific Advisory Board (NSSAB) and/or how it could be improved
- The NSSAB recommendation is due by March 2019



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# Purpose of Communication Plan

- Identifies when and with whom external communication will take place if/when radioactive contamination is found in groundwater sampled by the EM Nevada Program at locations beyond the NNSS borders



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# Five Key Components to the Communication Plan



- **Who** obtained the sample?
- **Where** are the samples taken from?
- **What** are the analytical results?
- **When** should the results be communicated?
- **Who** should DOE EM Nevada communicate the results to?



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# Multiple Entities Sample Groundwater Related to the NNSS

- DOE EM Nevada Program
- Routine Radiological Environmental Monitoring Plan (RREMP)
  - Funded by National Nuclear Security Administration (NNSA)
- Community Environmental Monitoring Program (CEMP)
  - Funded by NNSA
- Nye County Tritium Sampling and Monitoring Program (TSaMP)
  - Funded by DOE EM Nevada grant



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# Scope of Communication Plan

- Only DOE EM Nevada Program samples are within the scope of the plan
- Long-term vision: communication plan will expand to cover wells sampled by NNSA, CEMP, and the TSaMP



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# Five Key Components to the Communication Plan



- **Who** obtained the sample?
  - *DOE EM Nevada Program*
- **Where** are the samples taken from?
- **What** are the analytical results?
- **When** should the results be communicated?
- **Who** should DOE EM Nevada communicate the results to?



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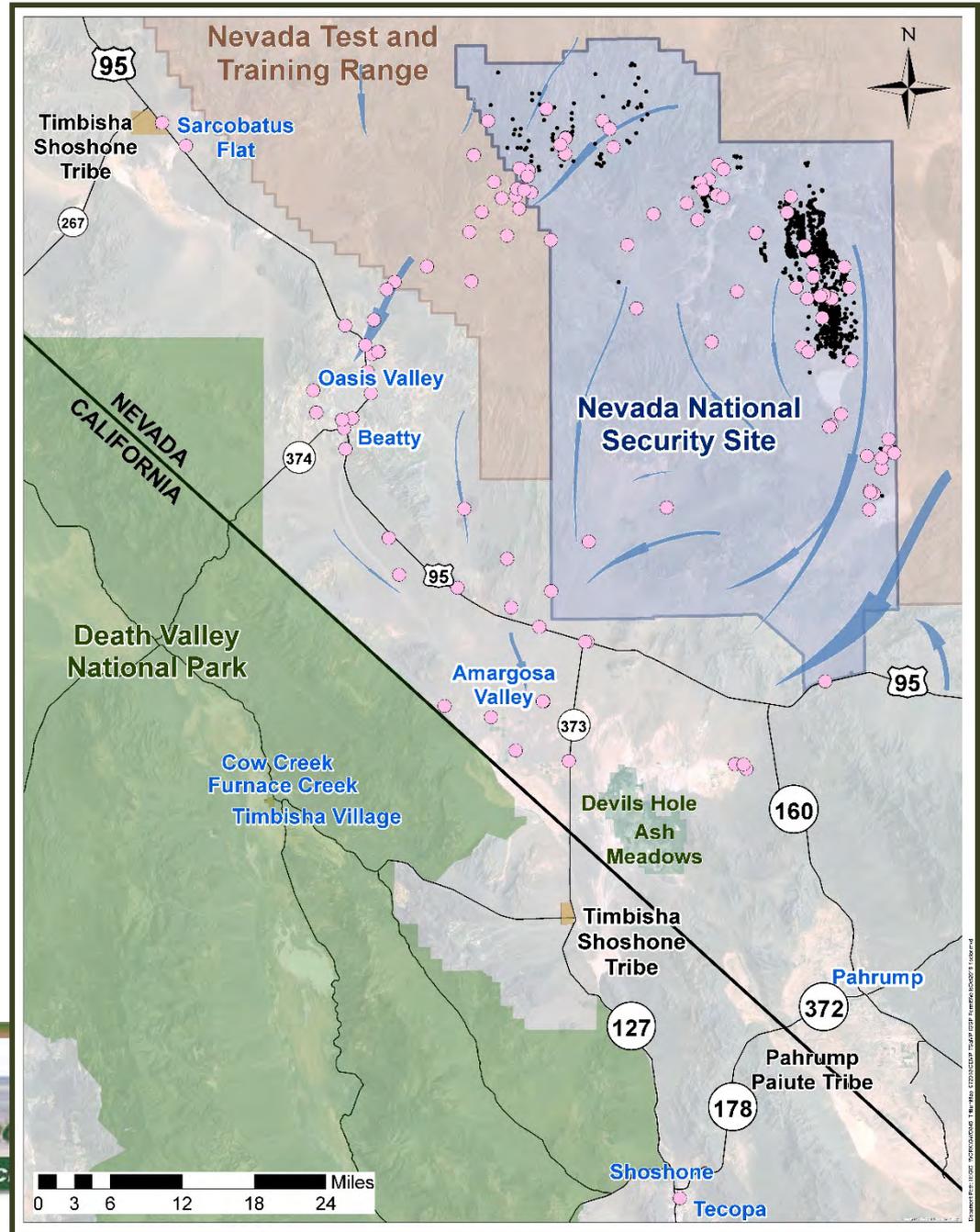
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# Groundwater Well Locations

- NNSS
- NTTR
- Gray-shaded areas:
  - Bureau of Land Management (BLM)
  - Public
  - Private



# Five Key Components to the Communication Plan



- **Who** obtained the sample?
  - *DOE EM Nevada Program*
- **Where** are the samples taken from?
  - *NTTR or Public/Private/BLM land*
- **What** are the analytical results?
- **When** should the results be communicated?
- **Who** should DOE EM Nevada communicate the results to?



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# Analytical Results

- Independent, State of Nevada-certified laboratories are used
- Samples are analyzed for:
  - Levels of general chemistry parameters, such as pH (acidity/alkalinity) and specific conductance
  - 18 different metals (including lead), as well as for gamma emitting, gross alpha and beta, and the radioisotopes tritium, strontium-90, carbon-14, chlorine-36, technetium-99, iodine-129, and plutonium-238,-239 and -240
- There are established SDWA standards for contaminants and most radionuclides



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# Tritium

- Most common radionuclide found in groundwater at the NNSS (did you know - much of the radionuclides released during underground nuclear testing are trapped in the melt glass of the nuclear test cavity and surrounding rock)
- Most mobile in groundwater; therefore, a leading indicator that other contaminants may be present, making it a primary contaminant of study
- SDWA standard for tritium is 20,000+ picocuries per liter (pCi/L)

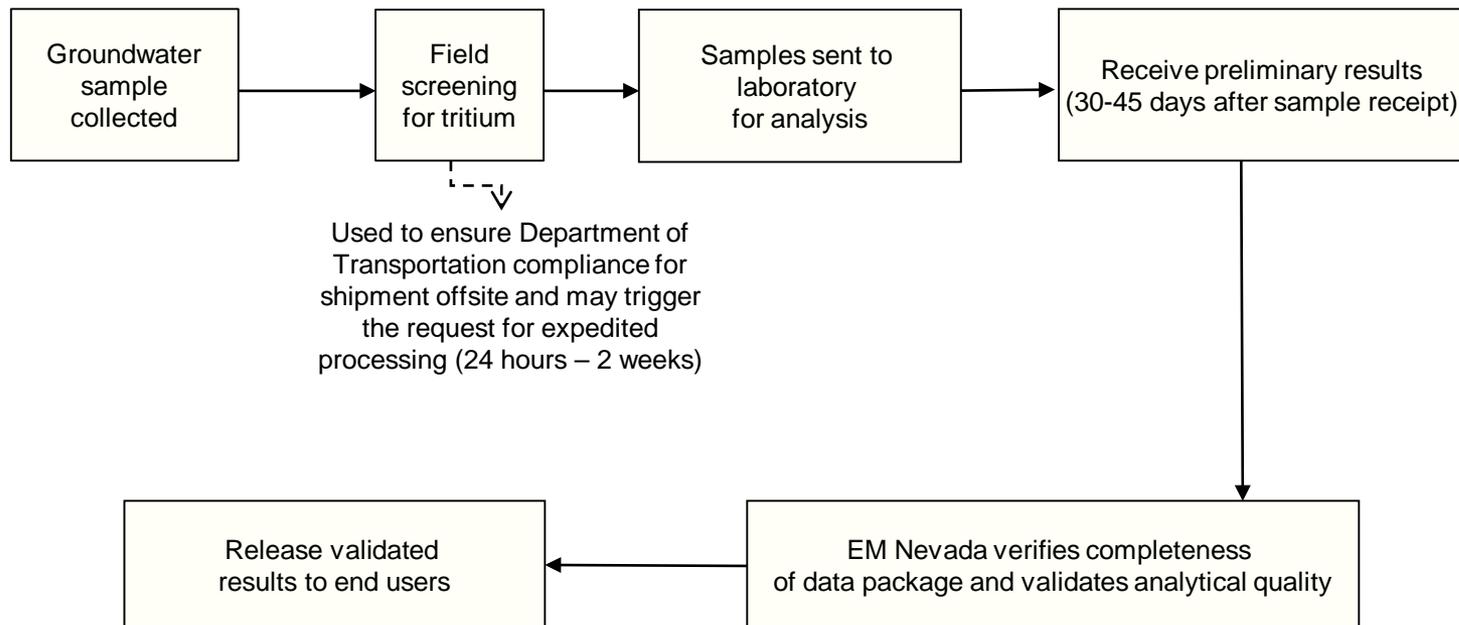


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# Flowchart of EM Nevada Samples Through Nevada State-Certified Labs



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# Understanding Analytical Results

- Divided into three categories for communication purposes:
  - More than 100% of SDWA – should not consume
    - For tritium 20,000+ pCi/L
  - More than 50% of SDWA - safe to consume
    - For tritium 10,000 – 19,999 pCi/L
  - More than 10% of SDWA - safe to consume
    - For tritium 2,000-9,999 pCi/L



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# Five Key Components to the Communication Plan



- **Who** obtained the sample?
  - *DOE EM Nevada Program*
- **Where** are the samples taken from?
  - *NTTR or Public/Private/BLM land*
- **What** are the analytical results?
  - *Guided by the SDWA*
- **When** should the results be communicated?
- **Who** should DOE EM Nevada communicate the results to?

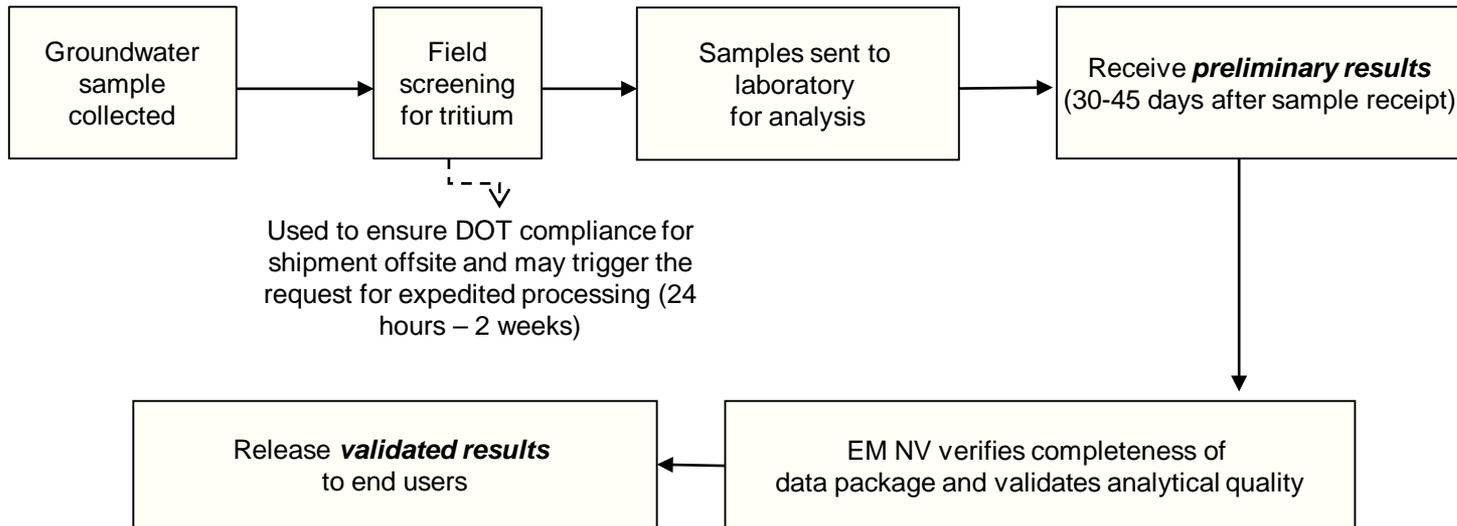


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# External Communication Points



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# Five Key Components to the Communication Plan



- **Who** obtained the sample?
  - *DOE EM Nevada Program*
- **Where** are the samples taken from?
  - *NTTR or Public/Private/BLM land*
- **What** are the analytical results?
  - *Guided by the SDWA*
- **When** should the results be communicated?
  - *Preliminary and Validated results are obtained*
- **Who** should DOE EM Nevada communicate the results to?



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# Communication Matrixes

- DOE EM Nevada will utilize communication matrixes to identify who should be told of the analytical results and when they will be told
- Communication matrixes are specific to the sampling location



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# Communication Matrix - *NTTR Locations*

Analytical Results	Communication Actions for <u>Preliminary Results</u>	Communication Actions for <u>Validated Results</u>
First-time detection of Contaminant of Concern (COC) or Contaminant of Potential Concern (COPC) is $\geq 10\%$ of its SDWA MCL	Notify State of Nevada Division of Environmental Protection (NDEP)	Notify NDEP; notify United States Air Force (USAF); notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
COC or COPC concentration is $\geq$ SDWA MCL	Notify NDEP, notify USAF	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting; EM Nevada article sent to distribution list (includes media)



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# Communication Matrix - *Public, Private, and BLM Locations*

Analytical Results	Communication Actions for <u>Preliminary</u> Results	Communication Actions for <u>Validated</u> Results
First-time detection of COC or COPC is $\geq 10\%$ of SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
COC or COPC concentration is $\geq$ SDWA MCL	Notify NDEP, notify land owner or permit holder	A specific communication plan will be written that will include notifications to at least the following: elected officials, media, NDEP, and land owner/permit holder, and NSSAB



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# Demonstration of How to Use the Communication Matrixes Using Fictitious Examples



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# Fictitious Example #1

- Well: ER-EC-123 on the NTTR
- Preliminary result: 18,400 pCi/L of tritium
- 92% of the SDWA for tritium



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# Fictitious Example #1

NTTR Locations		
Analytical Results	Communication Actions for <u>Preliminary Results</u>	Communication Actions for <u>Validated Results</u>
First-time detection of COC or COPC is $\geq 10\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
COC or COPC concentration is $\geq$ SDWA MCL	Notify NDEP, notify USAF	Notify NDEP; Notify USAF; notify NSSAB during next Full Board meeting; EM NV article sent to distribution list, including media



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# Fictitious Example #2

- Well: ABC on public land
- Validated result: 3,180 pCi/L of tritium
- 15.9% of the SDWA for tritium



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# Fictitious Example #2

Public, Private and BLM Land		
Analytical Results	Communication Actions for <u>Preliminary Results</u>	Communication Actions for <u>Validated Results</u>
First-time detection of COC or COPC is $\geq 10\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
COC or COPC concentration is $\geq$ SDWA MCL	Notify NDEP, notify land owner or permit holder	A specific communication plan will be written that will include notifications to at least the following: elected officials, media, NDEP, and land owner/permit holder, and NSSAB



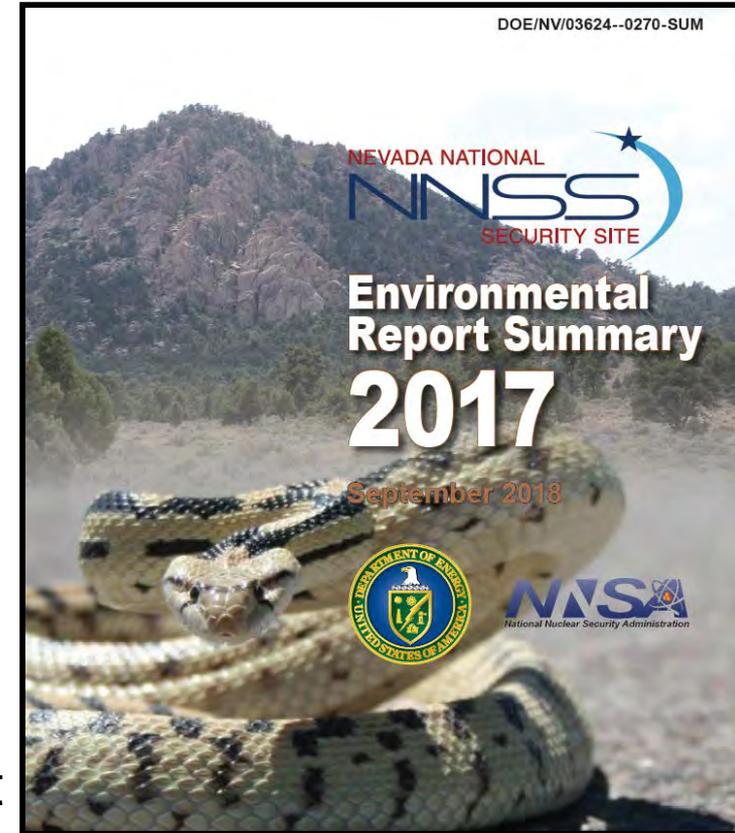
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# Things to Consider

- Ensuring communities have access to the information in a timely and accurate manner
- Avoid unnecessarily scaring communities
- Information can be miscommunicated (the telephone game, rumors, etc.)
- Privacy of private well owners
- Sampling results are published in the NNSS Annual Site Environmental Report and the UGTA Annual Sampling Report



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# Path Forward

- From a community perspective, provide a recommendation to the EM Nevada Program on if the Offsite Groundwater Communication Plan is supported by the NSSAB and/or how it could be improved
- The NSSAB recommendation is due by March 2019



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# Questions?



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