Former Tronox/Kerr-McGee Caselton Mine Area and Mill Site, Pioche, NV

# Community Meeting Question-and-Answer Session June 28, 2023 6:00-8:00 PM

Nevada Division of Environmental Protection and Greenfield Environmental Multistate Trust LLC, Trustee of the Multistate Environmental Response Trust



Greenfield Environmental Multistate Trust LLC Trustee of the Multistate Environmental Response Trust



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## **Meeting Topics**

- ✓ Introductions and overview
- ✓ Tank Road Tailings characterization results
- Brownfields Programs characterization and cleanup approach
- ✓ Exploring a "Mining the Sun" opportunity
- BLM's Caselton Mine & Mill and impacted watershed restoration project
- Community survey results and continued opportunities for community input
- ✓ Question-and-answer session



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# Introductions and Overview

### Tasha Lewis, Multistate Trust



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## Introductions

 $\checkmark\,$  Site Investigation and Cleanup Team

- Nevada Division of Environmental Protection (NDEP)
- Bureau of Land Management (BLM)
- U.S. Environmental Protection Agency (EPA)
- Multistate Environmental Response Trust (Multistate Trust)
- ✓ Partners
  - The Nature Conservancy (TNC)
  - Lincoln County
  - Lincoln County Power District No. 1



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## Site Overview

- ✓ ±3,200-acre Site located in Pioche Mining District with long history of silver, gold, lead, zinc, and copper production, beginning in the 1860s
- ✓ Combined Metals Reduction Company (CMR) operated at Site from 1924 to 1976
- ✓ 1976: Site was acquired by Kerr-McGee Corp. (Kerr-McGee) (and later Tronox Inc. and its affiliates [Tronox])
- ✓ 2009: Tronox, largely unable to pay for investigating or cleaning up the Site along with hundreds of other Kerr-McGee sites, filed for bankruptcy
- ✓ 2011: As part of the court-approved Tronox bankruptcy settlement, the Multistate Trust was created to own, investigate, clean up the Site and facilitate its safe, beneficial reuse
- ✓ 2015: After Anadarko litigation settlement funds were received, NDEP and the Multistate Trust began investigation activities in Pioche and Caselton Heights
- ✓ 5 operable units (OUs) based on mining activities and potential receptors (e.g., residents, trespassers, recreators, industrial workers, ecological)
- ✓ Chemicals of concern are metals, including lead and arsenic





The map shows the Operable Units (OUs) at the Site outlined in blue

# Tank Road Tailings Characterization and Results

### Paul Eckert, NDEP Tasha Lewis, Multistate Trust



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#### Background Information Tank Road Tailings – Treasure Hill (OU1)

- ✓ Assessor Parcel No. (APN) 001-111-21
- Previously collected 40 samples
  - Lead = 250 milligram/kilogram (mg/kg ) to 38,000 mg/kg
     Arsenic = <46 mg/kg to <508 mg/kg</li>
- Tailings identified on this property
  - Tailings are a fine-grained byproduct from mining and/or milling operations that can migrate with surface water and move contamination
  - Stormwater is primary mechanism for transporting tailings offsite
- Potential stormwater retention basin was identified on this property in Pioche Stormwater Capital Improvement Plan (CIP)
- Multistate Trust with approval from NDEP, supported the acquisition of this property by Lincoln County
- November 2022 applied Envirotac II to temporarily stabilize tailings







## Additional Investigations and Approach to Cleanup Tank Road Tailings – Treasure Hill (OU1)

- ✓ In November 2022, the Multistate Trust performed additional investigations on the OU1 Tank Road Tailings to:
  - Define extent of and characterize (geochemically and physically) tailings material
  - Determine type, thickness and characteristics of material underlying tailings
  - Determine depth to bedrock beneath tailings
- Drilled 12 Boreholes for geotechnical characterization
- Drilled 4 boreholes for soil properties characterization
- ✓ Real-time analysis using X-Ray Fluorescence (XRF)
- ✓ 15 soil samples submitted to laboratory







## Additional Investigations and Approach to Cleanup Tank Road Tailings – Treasure Hill (OU1)









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### Results

## Tank Road Tailings – Treasure Hill (OU1)

- Depth: 7.6 feet
- Volume: 6,200 cubic yards  $\checkmark$
- Maximum contamination levels
  - Arsenic: 438 mg/kg
  - Lead: 30,000 mg/kg
- ✓ Results within range of previous sample results
- $\checkmark$  Lead and arsenic are above established residential riskbased cleanup levels
  - Arsenic: 60 mg/kg
  - Lead: 400 mg/kg



 Tank Road Tailings are consistent in characteristics and concentrations with OU4 and OU5 tailings, as well as tailings found on other public lands managed by BLM





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## Results Tank Road Tailings – Treasure Hill (OU1)



 Used results and survey data to develop a Leapfrog 3-Dimensional Model to visualize contamination and support cleanup design options



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✓ Currently evaluating multiple options for cleanup

- Alternative 1: No Action (or implement short-term maintenance activities)
- Alternative 2: Cap or stabilize tailings in place
- Alternative 3: Remove tailings and transport to BLM North Caselton Repository
- Alternatives 4, 5, & 6: Remove tailings <u>and underlying</u> <u>contaminated soils</u> and transport to BLM North Caselton Repository







✓ Alternative 1: No Action

✓ Alternative 2: Cap and stabilize tailings in place







 ✓ Alternative 3: Excavate tailings and 6-inches of underlying contaminated soils and disposed at the BLM North Caselton Repository



 ✓ Alternative 4: Excavate tailings and underlying contaminated soils and disposed at the BLM North Caselton Repository



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✓ Alternative 5 – Phase 1

✓ Alternative 5 – Phase 2

Note: Similar to Alternative 4, except Sediment Basin 1 is larger and co-located on Lincoln County-owned and privately-owned property. In Phase 2, tailings and underlying contaminated soils are excavated and disposed at the BLM North Caselton Repository; and Temporary Sediment Basin is replaced with Sediment Basin 2.





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✓ Alternative 6 – Phase 1

✓ Alternative 6 – Phase 2

Note: Similar to Alternative 4, except Sediment Basin 1 is larger. In Phase 2, tailings and underlying contaminated soils are excavated and disposed at the BLM North Caselton Repository; and Temporary Sediment Basin is replaced with Sediment Basin 2.





Alternatives Evaluated	Preliminary Cost Estimates and Subject to Change		
	Estimated Costs <sup>1,2</sup> (Millions)	Estimated Year-End 2023 Remaining ECA Funds (Millions)	Funding Deficit (Millions)
Alternative 1 – No Action	\$0*	\$1.4	N/A
Alternative 2 – Cap and stabilize tailings in place	\$3.6		(\$2.2)
Alternative 3 – Excavate tailings and 6-inches of contaminated soils and dispose at BLM North Caselton Repository	\$2.8		(\$1.4)
Alternative 4 – Excavate tailings and underlying contaminated soils and dispose at BLM North Caselton Repository	\$4.0		(\$2.6)
Alternative 5 – Phase 1: Excavate tailings and underlying contaminated soils and dispose at BLM North Caselton Repository	\$1.6		(\$0.2)
Alternative 5 – Phase 2: Excavate tailings and underlying contaminated soils and dispose at BLM North Caselton Repository	\$3.7 [Total: \$5.3]		Total: (\$3.9)
Alternative 6 – Phase 1: Excavate tailings and underlying contaminated soils and dispose at BLM North Caselton Repository	\$1.6		(\$0.2)
Alternative 6 – Phase 2: Excavate tailings and underlying contaminated soils and dispose at BLM North Caselton Repository	\$4.3 [Total: \$5.9]		[Total: (\$4.5)]
<ol> <li>Notes:</li> <li>The costs presented in this table were developed by the Multistate Trust's third-party contractor.</li> <li>Costs are based on information available at that time and are subject to change.</li> <li>* Short-term maintenance options would be implemented. Approximate initial cost is \$75k.</li> </ol>			

## **Implement Short-Term Maintenance Activities** Tank Road Tailings – Treasure Hill (OU1)





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# **Caselton Mill Site** Brownfields Assessment & Investigation June 28, 2023

### **Presented by**

David Friedman Supervisor, Superfund Branch NDEP Bureau of Corrective Actions

# What is a brownfield?

#### EPA-funded Program

Multiple Funding Mechanisms

Caselton taking advantage of Targeted Brownfields Assessment (TBA) and Nevada Brownfields Program(NBP) funding

#### • Targeted Brownfield Assessment (TBA)

EPA Region 9 project manager; Toeroek & Associates and Tetra Tech technical contractors

Phase I Environmental Site Assessment

Phase II Environmental Site Assessment & Sampling and Analysis Plan

#### • Nevada Brownfields Program (NBP)

NBP will continue work unfinished by TBA Key limitations based on maximum funding per site TBA approximately \$100k

NBP \$200K per site assessment and \$200k per site clean-up



















Jaina Moan, External Affairs Director and Climate Change Lead <u>Jaina.moan@tnc.org</u>

Inith.

**Peter Gower**, Strategy Director for Energy, Infrastructure, and Land Use <u>Peter.gower@tnc.org</u>

## The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends.



## **The Nature Conservancy's Approach**

#### Provide Science-based Solutions that Benefit Nature and People



Our 2030 Priorities Tackle Climate Change Protect Lands and Waters Sustain Food and Water

#### **Respect for People, Communities and Cultures**

Enduring conservation success depends on the active involvement of people and partners whose lives and livelihoods are linked to the natural systems we seek to conserve. We respect the needs, values and traditions of local communities and cultures, and we forge relationships based on mutual benefit and trust.

## Smart-from-the-Start Energy Strategy Conservance



https://www.nature.org/content/dam/tnc/nature/en/docume nts/FINAL\_TNC\_Power\_of\_Place\_National\_Executive\_Summa ry\_5\_2\_2023.pdf



https://www.nature.org/content/dam/tnc/nature/en/documents/west-virginia-solar-road-map-exec-summary.pdf





https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/site-wind-right/

https://www.nature.org/en-us/what-wedo/our-insights/perspectives/clean-greenrenewable-energy-buildout/

## Mining the Sun

## A Smart Approach for Renewable Energy on Active and Former Mine Sites

- 1. Identifying and mapping potential sites for renewable development
- 2. Working with stakeholders to implement pilot projects
- 3. Working with policymakers to incentivize and provide funding

The Nature Conservancy

nature.org/nevada

## Caselton: An Example of Collaboration and Vision





#### Solar Feasibility Study

- Supported by the U.S. Environmental Protection Agency
- Conducted by the National Renewable Energy Lab (NREL)
- Findings:
  - Site has good solar potential
  - Site could support a communityscale (2-12MW project)
  - Economic feasibility depends on system type and external financing opportunities

### Community-Scale Solar – A Clean (Energy) Path Forward



A typical grid-tied ground mount PV system Source: NREL

Positive outcomes for Lincoln County and Nature

- Community-scale positive end use for the site
- Community-driven, collaborate approach
- Clean, reliable energy
- Conserves natural landscapes

#### (Not Utility-Scale Solar)





Example of a 2MW community-scale solar PV project source: https://www.mercomindia.com/bids-invited-to-install-2-mw-solar-project

100MW utility-scale solar PV facility north of Las Vegas Source: Las Vegas Review Journal

# Thank You!

Jaina Moan, External Affairs Director and Climate Change Lead Jaina.moan@tnc.org

**Peter Gower**, Strategy Director for Energy, Infrastructure, and Land Use <u>Peter.gower@tnc.org</u>



# Lincoln County Power District

### Why is LCPD Interested?

- Reduce energy market purchases
- Reduce energy market volatility risk
  - Reduce transmission line losses
- Increase resiliency and reliability
- Increase diversity of power supply portfolio



#### What's The Plan?

- Install renewable energy generation
- Begin with 2-Megawatt solar facility
- Approximately 10 acres needed for project size
- Possible addition of battery storage
- Build in 2MW blocks as cost & demand allows







Winter 2015 looking West Near Pond # 4

### Bureau of Land Management

Caselton Wash Tailings (Operable Unit 5) & Caselton Watershed Restoration Funding.



Caselton Mine & Mill Site Operable Units 2015

• Operable Unit 5 Caselton Wash Tailings located on BLM Managed lands with the bulk of tailings material were placed during operating years.

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# **OU-5**

- The public lands are being managed under the Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA).
- The OU-5 boundary includes an approximate 100 acres of tailings ponds, dams, and drainage features within the Wash that have a combined length of over 1.5 miles.
- However, tailings material have migrated downstream and efforts to determine nature & extent of contamination continues. These pose a low risk under current conditions, but heavy monsoonal rains could move material further downstream.





OU-5 Tailings near ponds 4 & 5 August 2015

### **Caselton BIL Funding**

The Bipartisan Infrastructure Law (BIL) funded, under Section 8 – Watershed Restoration, awarded \$1.7 million through the Department of the Interior for the Caselton watershed in 2022.

These funds are designated for watershed restoration and among other actions, conduct a Comprehensive Remedial Investigation & Feasibility Study for the OU-3, OU-4 (both located on private property), and OU-5 that has had the bulk of tailings material placed on BLM managed lands.

### **Caselton BIL Funding**

As the CERCLA process moves forward, there may intermediate actions that could be initiated to reduced contamination migration or eliminate certain conditions on the site.

Caselton Mine & Mill site is a complicated site that will require funding being obtained from several sources such as EPA & NDEP Brownfields programs, additional funds added possibly to the Multistate Environmental Response Trust and from the Department of the Interior. The site is a jointly managed and funded property that is long overdue for a remedy.



## Questions? OU-5 2010

# Community Survey Results and Continued Opportunities for Input

## Paul Eckert, NDEP Tasha Lewis, Multistate Trust



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## **Community Survey Results**



 ✓ One overarching concern was that solar panels would be placed on Treasure Hill No. 3 and directly within Caselton Heights residents' view of mountains





## **Opportunities for Community Input**

- ✓ We want to hear your ideas and what is important to you
- ✓ Please complete our community survey to share your ideas for the Site's reuse
- $\checkmark$  Discuss with your neighbors
- $\checkmark$  Attend community meetings
- ✓ Submit input through the website
- ✓ Contact us



This illustration depicts how we work with our beneficiaries, neighbors, and other stakeholders.



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## **Multistate Trust Site-Specific Website**



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Home

Overview

Cleanup

Community **News & Events** 

Documents

Contact

#### **Caselton Mine Area and Mill Site**

The Multistate Environmental Response Trust (Multistate Trust), with the Nevada Division of Environmental Protection (NDEP), is investigating and addressing mine- and mill-related contamination at the Caselton Mine Area and Mill Site (Site) near Pioche, Nevada.

Learn More

Sign Up

#### What's Happening at the Site?





#### **Events**

The Multistate Trust, together with NDEP, is hosting a community meeting in June 2023 to update residents and other stakeholders about Site investigations, cleanup activities and reuse planning. Check back for more information.

See more at News & Events



Subscribe

Cleanup

The Multistate Trust is evaluating and remediating waste rock, tailings and related contamination around the Site, especially near residential areas.

#### https://caselton.greenfieldenvironmental.com

## **Information Repository**

#### The community can access Site documents on the Multistate Trust Site-specific website:

https://caselton.greenfieldenvironmental.com





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## **NDEP Site-Specific Website**



NEVADA DIVISION OF ENVIRONMENTAL PROTECTION NEWS & PUBLIC NOTICES PERMITS & RESOURCES NDEP CAREERS CONTACT US DCNR Land Water Air Environmental Cleanup Recycle About



LAND > ABANDONED MINE LANDS PROGRAM > CASELTON MINE AREA AND MILL SITE, LINCOLN COUNTY

## Caselton Mine Area and Mill Site, Lincoln County

#### **Multistate Trust Information**

Detailed information is provided in Chapter 3.S of the Multistate Trust 2022 Annual Progress Report, including ongoing cleanup efforts. This report is updated annually.

Note: although you can view the Annual Progress Report in a web browser, it is recommended that you download the PDF to see the bookmarks that provide easy access to individual sections.

For more information about the Multistate Trust, visit https://multistatetrust.org. The Multistate Trust is planning to publish a detailed website for the Caselton Mine Area in 2023 (https://caselton.greenfieldenvironmental.com).

#### https://ndep.nv.gov/land/abandoned-mine-lands/caselton-mine



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Ore aerial tramway and ore bucket system was built in 1920 and operated until the early 1930s in Pioche, Lincoln County, NV.





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## **Contact Information**

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✓ John Callan, Physical Scientist, BLM jcallan@blm.gov, (775) 861-6571

 ✓ Tasha Lewis, Program Director, Multistate Trust <u>TL@g-etg.com</u>, (602) 312-6993

✓ Peter Gower, Strategy Director – Energy, Infrastructure, and Land Use, TNC <u>Peter.gower@tnc.org</u>, (775) 446-5525





## **Question-and-Answer Session**



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