THE ECONOMIC OPPORTUNITIES AND CHALLENGES OF URANIUM MINE CLEANUP IN NEW MEXICO

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Prepared for the Radioactive & Hazardous Materials Committee by
The University of New Mexico’s Bureau of Business and Economic Research
The Economic Opportunities and Challenges of Uranium Mine Cleanup in New Mexico

- The University of New Mexico Bureau of Business and Economic Research (BBER) conducted research during 2019 and 2020

- Interviewed more than 75 industry professionals, educators, community members, and government employees statewide

- Developed economic projections of potential revenues and job creation for an injection of $1 billion into uranium remediation

- Provided a blueprint for the State to leverage existing expertise in environmental remediation and resources for workforce and business development
Potential Economic Benefits

- US EPA recovered $1 billion to cleanup uranium sites on/near Navajo land in AZ and NM.

- BBER estimates that $1 billion could create:
  - Revenues $177.8 million/year for 10 years for local businesses.
  - 1,040 jobs for 10 years at an average salary of $54,663/year.

- Some jobs would be in the trades (similar to construction), others professional.

- This includes both NM and AZ, and some will leak from the state.

- This is the tip of an iceberg – future settlements could generate far more.

- Business & workforce development for uranium cleanup can be transferred to other areas of environmental remediation.
Environmental Remediation as a Target Industry

The current target industries for the **Statewide Comprehensive Economic Development Plan**:

- Aerospace & Defense
- Biosciences
- Film & Television
- Global Trade
- Cybersecurity
- Intelligent Manufacturing
- Outdoor Recreation
- Sustainable Agriculture
- Sustainable & Green Energy

*NM Economic Development Department’s plan is focused on workforce and innovation.*

Environmental Remediation as a Target Industry

*Environmental remediation is emerging as a growth industry for the 21st century.*

- Prioritization of uranium mining remediation can be leveraged for other remediation opportunities and could create a significant new business sector
- NM already has expertise in nuclear materials, mining, engineering, health, legal, and legislative matters
- NM could develop a skills list for businesses and individuals trained to do uranium mine cleanup work and help grow our educational programs alongside our businesses
Current Funding Sources

Navajo Nation/Environmental Protect Agency - Settlements
- $917 million for cleanup of 54 uranium sites
- $92 million for the Quivera Mine site
- $45 million for Shiprock Uranium Mill site

San Mateo Creek Basin
- Recommended designation as a Superfund site
- Currently undergoing analysis to determine cleanup needs and costs

Reclaim Degraded Lands ($29.5 billion), Sen. Heinrich amendments to Infrastructure Bill:
- Fund $16 billion for the cleanup, reclamation, and restoration of abandoned coal, hard rock, and uranium mines across jurisdictions.
- Fund $8 billion for plugging and reclaiming thousands of orphaned onshore oil and gas wells across jurisdictions.
- Fund $5 billion for the remediation and redevelopment of brownfield and Superfund sites.
- Fund $1.5 billion for Appalachian Regional Commission priority restoration/revitalization projects.
Information Gathering

The state needs to create a clearinghouse for all documentation related to uranium mining, employment, remediation, ownership, and land status.

Uranium Mines Dashboard created by the Energy, Minerals and Natural Resources Department (EMNRD)

New Mexico Environmental Review Tool

HB51 Environmental Database Act - Expands NM Environment Review Tool, managed by Natural Heritage Division of Museum of SW Biology

https://nhnm.unm.edu/data/nm_ert

https://www.arcgis.com/apps/dashboards/91fd2b8cb3eaa2df689329eb5075ec3bb7
Workforce Development and Training Programs

**Bureau of Mine Safety**
- Provides Mine Safety and Health Administration (MSHA) trainings across New Mexico
  - [http://www.bmi.state.nm.us/navContact.htm](http://www.bmi.state.nm.us/navContact.htm)

**Diné College’s Uranium Education Program (UEP)**
- UEP students work with community members to research and rectify environmental health issues arising from the legacy of uranium mining on the Navajo lands.
  - [https://www.dinecollege.edu/about_dc/uraniumeducation-program/](https://www.dinecollege.edu/about_dc/uraniumeducation-program/)

**Navajo Technical University’s (NTU) Environmental Science & Natural Resources Department**
- Conducts uranium mine assessments, provides uranium remediation training, and health and OSHA training thru federally funded Community College Consortium for Health and Safety Training

**Greater Gallup Economic Development Corporation (GGEDC)**
- developed industrial workforce programs with employers
  - [https://www.gallupedc.com/](https://www.gallupedc.com/)

**New Mexico Clean Energy Workforce Study** (June 2020)
- [https://www.dws.state.nm.us/Portals/0/DM/LMI/NM_Clean_Energy_Workforce_Report.pdf](https://www.dws.state.nm.us/Portals/0/DM/LMI/NM_Clean_Energy_Workforce_Report.pdf)
Models from Other States

No single state has a comprehensive economic plan to address environmental remediation in the way we have proposed. However, some states have programs worthy of our attention.

Nevada
- Commissioned a front end cost estimator used for permitting new mines.

Utah
- In the mid-2000s, Utah’s Division of Oil, Gas, and Mining (DOGM) began preliminary closure activities on open mine shafts funded by a tax on coal production.

In New Mexico and beyond, remediation technologies are dated, expensive, and do not provide a permanent solution.

Strategies fail to incorporate local & traditional ecological knowledge and context.

Costs of remediation fail to account for ongoing public health and community impacts.
Challenges to a Comprehensive Cleanup Strategy
Planning & Administration

- Incomplete, contradictory, non-transparent information about uranium sites (e.g. location, ownership, status) and cleanup activities, with no centralized repository.
- NM lacks unified voice within State government, in public-private initiatives, and in relation to tribal and federal governments.
- NM lacks a strategic plan, making cleanup efforts often more reactive than proactive.
Concluding Thoughts

- Abandoned uranium sites are a threat to public safety, especially among Native communities.
- Efforts to cleanup these sites have been slow to develop but settlements such as the $1 billion Tronox agreement are promising.
- Remediation of uranium sites is an economic opportunity for NM and the Native communities – $1 billion in settlement funds could support more than 1,000 well-paying jobs for 10 years.
- *Either NM gets involved or the contracts and jobs will leave the state.*
- Not starting from scratch – the state has most of necessary workforce and necessary resources.
- Better coordination and basic levels of support – marshalling the resources that already exist.
- The initiatives require little funding – compared to other state-funded economic development initiatives: 4 or 5 FTE; one or two community-based offices; planning & startup funding.
- Initiatives to support uranium cleanup can be leveraged to create a larger industry in environmental remediation.
What Can the Radioactive & Hazardous Materials Committee Do?

We are asking for your:

✦ Leadership to bring New Mexico Economic Development Department on board with prioritizing Environmental Remediation as a target industry
✦ Guidance on how to bring stakeholders and rights holders together for a long-term planning process for uranium mine cleanup
✦ Knowledge of additional resources and initiatives to leverage or join
✦ Suggestions about possible bills or memorials for the 2022 Regular Legislative Session
✦ Ongoing oversight of progress on the various recommendations and ultimately remediation in affected communities
Thank you!

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The unemployment rate in these three counties exceeded the average annual unemployment rate statewide from 2016-2020, with McKinley County reaching a rate of over 10% in 2020.

All data and definitions are from the newly updated Bureau of Labor Statistics Local Area Unemployment Statistics. https://www.bls.gov/lau/
The number of unemployed individuals in these counties ranges is important to illustrate the potential workforce available to take on new jobs.