

# 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

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- 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

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- 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

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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.*  
[https://qonm.biz/uploads/documents/Statewide\\_Plan\\_COGS.pdf](https://qonm.biz/uploads/documents/Statewide_Plan_COGS.pdf)

# Environmental Remediation as a Target Industry

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*Environmental remediation is emerging as a growth industry for the 21<sup>st</sup> 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

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## Navajo Nation/Environmental Protection 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

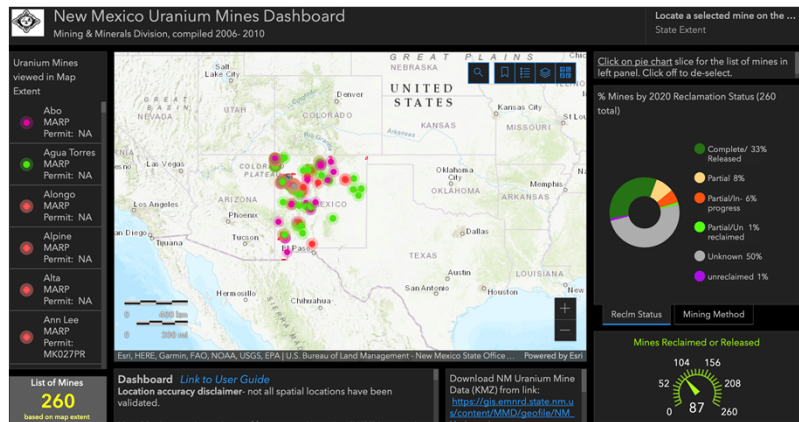
*(\$29.5 billion), Sen. Heinrich amendments to Infrastructure Bill:*

- 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.
- Support coal workers by enacting the Black Lung Benefits Disability Trust Fund Solvency Act and Protection of Social Security Benefits Restoration Act.

# 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://nhnm.unm.edu/data/nm_ert)

<https://www.arcgis.com/apps/dashboards/91f296cb3ea24f689329eb5075ec3bb7>

# Workforce Development and Training Programs

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## **Bureau of Mine Safety**

- Provides Mine Safety and Health Administration (MSHA) trainings across New Mexico
- <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
- <http://www.navajotech.edu/academics/bachelor-of-science/environmental-science-naturalresources>

## **Greater Gallup Economic Development Corporation (GGEDC)**

- developed industrial workforce programs with employers
- <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

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*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

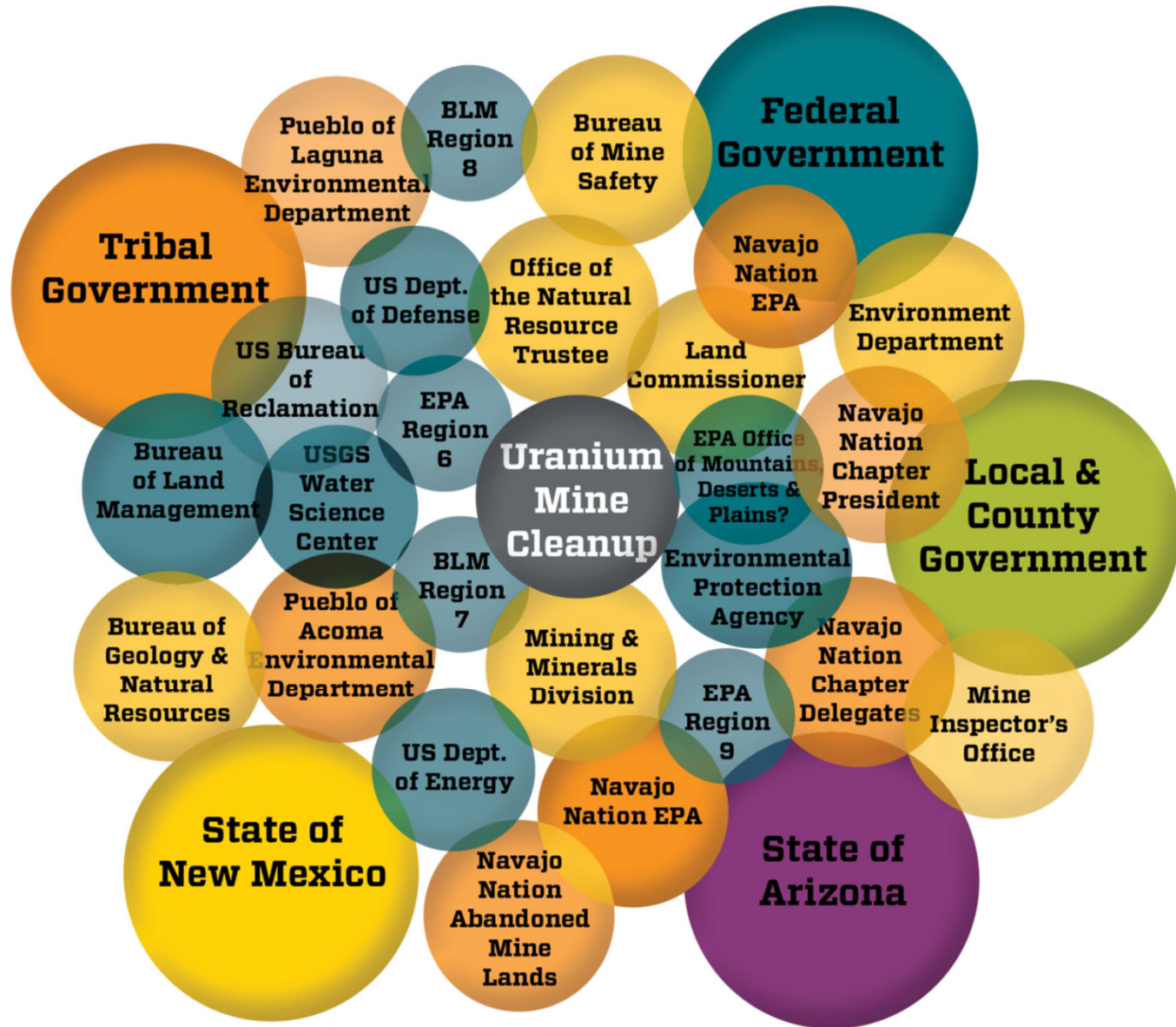
- In the mid-2000s, Utah's Division of Oil, Gas, and Mining (DOGM) began preliminary closure activities on open mine shafts funded by a tax on coal production.

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.

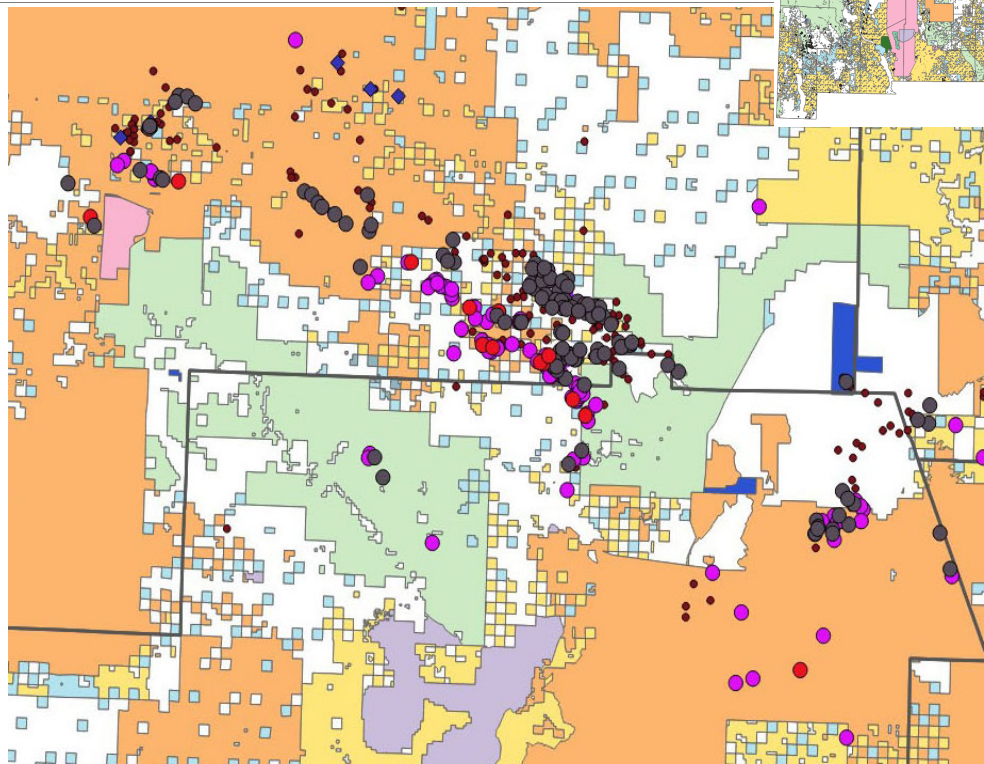
Costs of remediation fail to account for **ongoing public health and community impacts**.

# 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

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- ❑ 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?

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## 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

# BUREAU OF BUSINESS & ECONOMIC RESEARCH

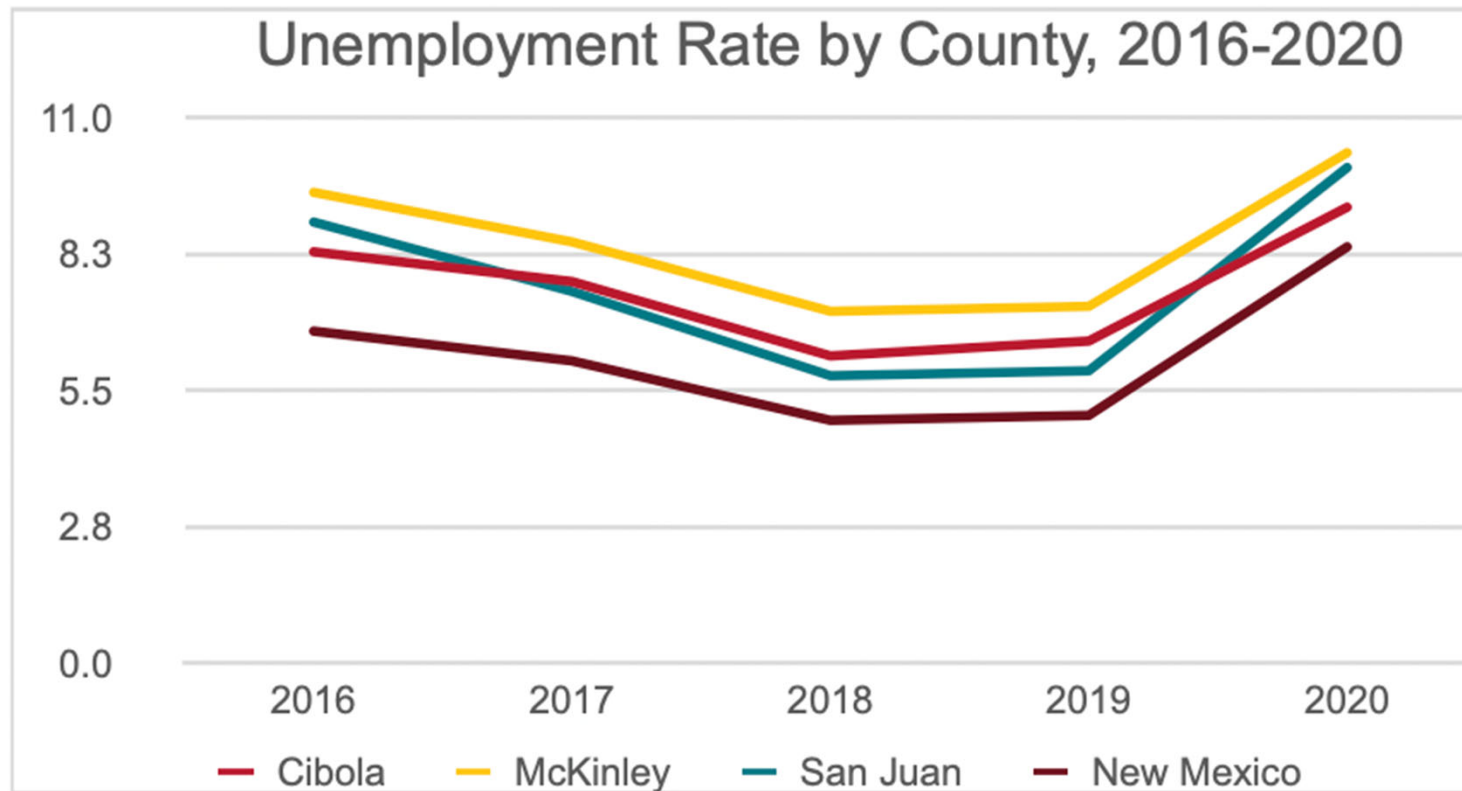


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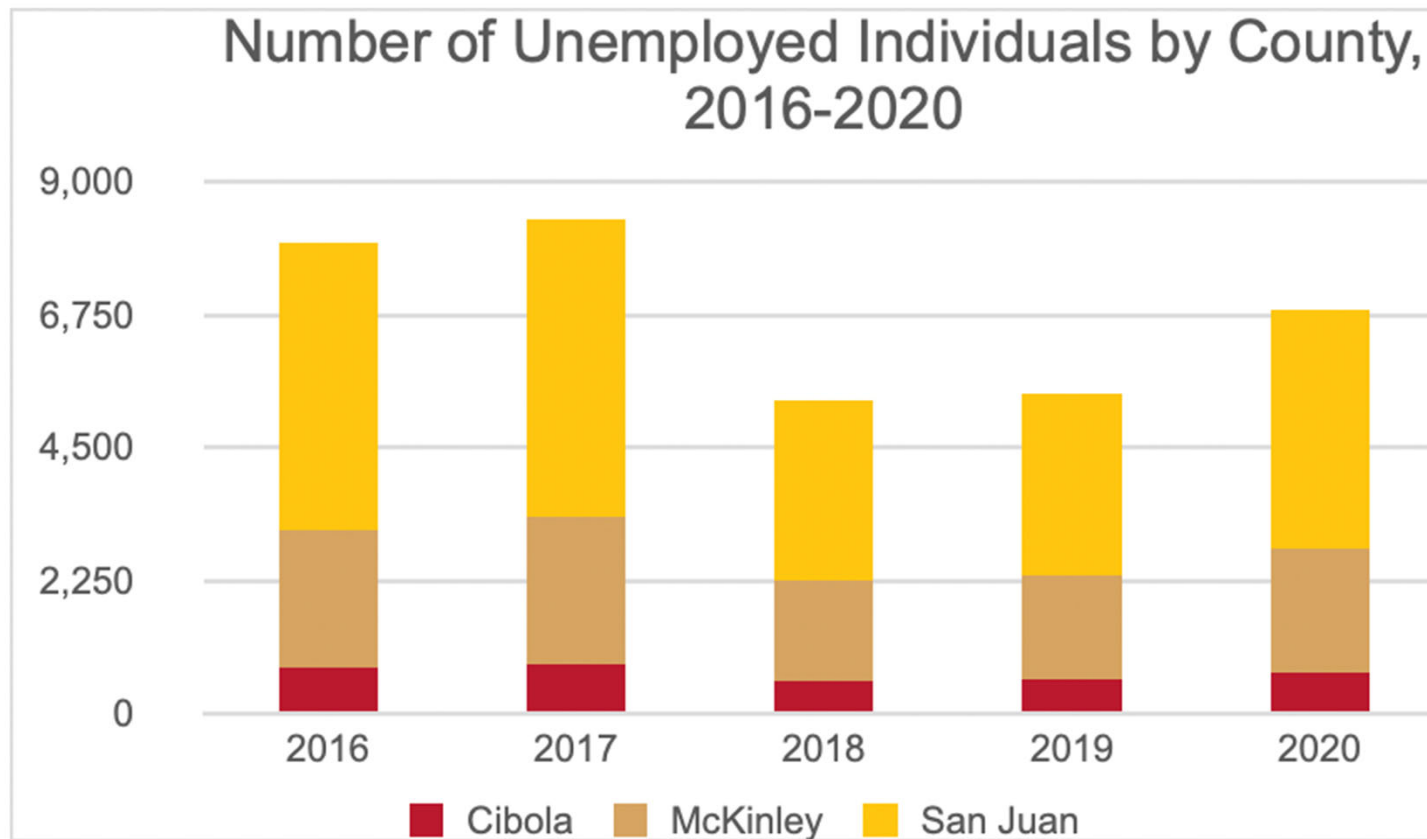
Thank you!





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.



# Labor Force by County, 2016-2020

