FORT McDERMITT PAIUTE-SHOSHONE TRIBE

of the Fort McDermitt Indian Reservation

Humboldt County, Nevada | Malheur County, Oregon

TRIBAL HAZARD MITIGATION PLAN

2026–2031

Effective Date: [To be set upon Tribal Council adoption]

Plan Status: Tribal Review / Validation

Five-Year Planning Cycle per 44 C.F.R. § 201.7

Prepared for and by the Fort McDermitt Paiute-Shoshone Tribe

P.O. Box 457, McDermitt, Nevada 89421

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Acknowledgments

The Fort McDermitt Paiute-Shoshone Tribal Council and the planning team offer sincere appreciation to all who contributed their time, knowledge, and commitment to the development of this plan. Hazard mitigation planning depends on the participation of community members, Tribal leaders, agency partners, and technical advisors, and this plan is richer for every conversation, site visit, and survey response that shaped it.

Fort McDermitt Paiute-Shoshone Tribe

- David Hinkey, Tribal Council Chairman (Former)
- Ryan Smart, Council Vice-Chair
- Maxine Redstar, Council Secretary
- Sherry Tom, Council Treasurer
- Jody Smart, Council Member
- Justina Paradise, Council Member
- Maureen Northrup, Council Member
- Vonnie Curtis, Council Member
- Duane Masters, Tribal Emergency Management Lead (Former)
- Dackota (Natasha) York, Council Member (Former), Tribal Administrator (Former), and Tribal Emergency Management Lead (Former)

Upper Snake River Tribes (USRT) Foundation

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- Lauren Noeker, Environmental Program Director and Planning Lead
- Dennis Daw, Fish and Wildlife Program Director

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- Damon Coppola, Hazard Mitigation Specialist
- Alexander “Sascha” Petersen, Director and Climate Adaptation Specialist
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Agency and Jurisdictional Partners

- Heather Lafferty, Nevada Division of Emergency Management, State Hazard Mitigation Officer
- Zach McCullough, NVOEM, Assistant State Hazard Mitigation Officer

- Aaron Thacker, NVOEM, Tribal Liaison
- Josie Burnett, FEMA Region 9, Tribal Coordinator
- Jaime Symons, Kiana Wong, and Avery Frank; FEMA Region 9; Mitigation Division
- Carol Lynn; Humboldt County, NV; Emergency Management Director
- Lt. Richard Harriman; Malheur County, OR; Emergency Management Director
- Anna Murphy, Oregon Department of Emergency Management, Natural Hazards Mitigation Planner
- Dale E. Hartley, McDermitt Fire District, Fire Chief

The planning team also thanks the 26 Tribal community members who completed the community survey, and the many more who stopped at the Birthday Celebration booth, asked questions, and shared their experience of living with hazards on land their ancestors have called home for thousands of years.

Foreword

For generations beyond counting, the Numu (Northern Paiute) and Newe (Western Shoshone) people of the Fort McDermitt Indian Reservation have called this high desert valley home. Their Northern Paiute Band (the Atsakudokwa Tuviwa ga yu, the People of the Red Mountain) built a way of life shaped by the rhythms of the Quinn River, the sagebrush steppe, the mountains to the north, and the volcanic landscape that holds their history. That relationship continues today in the language spoken by elders, in the plants gathered for medicine and ceremony, in the cattle that graze the same ground their ancestors hunted, and in the deep care community members bring to their land.

The hazards addressed in this plan are not abstractions. Wildfire has swept through this community and threatened homes that carry generations of memory. Water contamination from a mercury mine that operated for decades has left lasting marks on the soil and on community trust. Drought has dried the springs that hold spiritual meaning. The drug crisis has torn at families and disrupted the cultural networks that have always been the Tribe's primary resilience. Each hazard in this plan has a face and a name to someone in this community.

This plan was developed with that understanding. It draws on the scientific record, the knowledge of regional planners and emergency managers, and the irreplaceable ground truth that comes from walking this land with community members who know it intimately. It was built in partnership with the Upper Snake River Tribes Foundation, with Adaptation International, with Nevada and Oregon state emergency management agencies, and above all with the Tribal Council and the people they represent.

The Fort McDermitt Paiute-Shoshone Tribe offers this plan as a practical commitment to the safety of every member, and as a statement that the People of the Red Mountain will continue to face what comes with knowledge, preparation, and the enduring strength of community.

Dedication

This plan was developed in memory of and dedicated to Clifton Smart, who served as the Fort McDermitt Environmental Department Director and was the Tribe's primary emergency management point of contact throughout much of the planning process. Clifton brought deep commitment to his community, genuine expertise in the environmental conditions facing the Reservation, and a frank and generous spirit to every interaction with the planning team. He passed away in February 2026. The people who will be protected by this plan are better off for the work he did. This plan is dedicated to his memory.

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SECTION 1: INTRODUCTION

Introduction

Purpose and Scope

The Fort McDermitt Paiute-Shoshone Tribal Hazard Mitigation Plan (THMP) identifies, assesses, and proposes actions to reduce risks posed by natural and human-caused hazards to the people, infrastructure, environment, economy, and cultural resources of the Fort McDermitt Indian Reservation. This plan provides a strategic framework for the Tribe to strengthen long-term resilience, protect critical assets, and safeguard the health and safety of Tribal members through coordinated mitigation actions. It covers all Tribal trust lands, buildings, infrastructure, populations, and activities within the Reservation boundaries in Humboldt County, Nevada and Malheur County, Oregon. The 145-acre Hog John Ranch allotment is noted in the Tribal profile but not included in the risk assessment.

This plan was developed to satisfy the requirements of the Disaster Mitigation Act of 2000 (DMA2K), 44 C.F.R. § 201.7, and the FEMA Tribal Mitigation Plan Review Guide. Maintaining a current, FEMA-approved THMP is required for the Tribe to access Hazard Mitigation Assistance

funding, including the Hazard Mitigation Grant Program (HMGP) and the Building Resilient Infrastructure and Communities (BRIC) program.

Mitigation Goals and Objectives

The planning team identified five overarching mitigation goals following outreach with community members and discussions with tribal leaders and department heads. These goals and the associated objectives guided both the assessment of hazards and their associated risk, and the identification and prioritization of risk reduction (mitigation) activities.

Goal	Title	Key Objectives
Goal 1	Protect the Health, Safety, and Welfare of Tribal Members	Improve hazard mapping; reduce risk to people and property; ensure vulnerable populations (elders, children, those with medical dependencies) are protected; maintain emergency access; build psychosocial support capabilities.
Goal 2	Protect the Environment and Natural Ecosystems	Advance climate adaptation; promote water conservation, energy efficiency, and sustainable land use; conserve ecosystems that serve as natural hazard buffers; integrate traditional ecological knowledge.
Goal 3	Safeguard Housing, Critical Infrastructure, and Key Facilities	Ensure disaster-resistant housing; identify and retrofit at-risk infrastructure; improve drainage and erosion control; establish redundancy; support continuity of essential Tribal services.
Goal 4	Preserve Cultural and Natural Resources	Protect culturally significant sites, burial grounds, and traditional use areas; build cultural practice resilience; preserve traditional plants and ecological relationships used in ceremony and subsistence.
Goal 5	Strengthen Government Continuity and Emergency Management Capacity	Expand community education; train staff and volunteers; foster intergovernmental coordination; advance continuity planning; build emergency services capacity through funding, training, and equipment.

Figure 1: Mitigation Goals and Objectives

Promulgation

The Fort McDermitt Paiute-Shoshone Tribal Council will formally adopt this plan by resolution prior to final submission to FEMA Region 9. The resolution commits the Tribe and all departments to integrate this plan's goals and actions into capital-improvement budgeting, land-use decisions, emergency management procedures, and grant applications.

See APPENDIX A: Resolution.

SECTION 2: TRIBAL PROFILE

Tribal Profile

The Paiute-Shoshone People

The residents of Fort McDermitt identify as both Numu (Paiute) and Newe (Shoshone), meaning 'The People.' Their Northern Paiute Band is historically known as Atsakudokwa Tuviwa ga yu, or “the People of the Red Mountain.” The Tribe speaks Northern Paiute, known as Numu Yadooana, from the Western Numic language family. Fort McDermitt holds the highest rate of Northern Paiute fluency among nearby communities: approximately 50 percent of the adult population speaks the language, and 20 to 30 percent of children speak it as their first language.[1] The language is actively taught through the Tribe's Language Preservation Department and is central to cultural identity.

The Northern Paiute are culturally and linguistically linked to the Shoshone, Bannock, and other Great Basin Indigenous groups. Historically, their seasonal territory spanned portions of Nevada, Oregon, and Idaho. Their diet drew on roots, seeds, fish, birds, small mammals, and large game, a diverse ecological relationship that persists today in traditional food practices and stewardship ethic.

The Fort McDermitt Paiute-Shoshone people have faced profound environmental disruptions, including the end of the last ice age, the impacts of colonization, and now rapid climate change. Loss of Chinook salmon is a central example: dams on the Snake River system, particularly the Hells Canyon Complex (1958–1967), blocked anadromous fish from reaching upstream spawning habitat, permanently severing a food source and spiritual connection that had sustained the Tribe for generations. Tribal members have documented direct climate shifts on their land: drying sagebrush steppe, longer wildfire seasons, reduced snowpack, earlier spring runoff, declining summer streamflows, rising water temperatures, invasive species expansion,

1 Achievement Network (ANet), 2024. *A Beacon of Excellence: McDermitt Combined School's Journey to Success.* (https://bit.ly/3UHiBTg)

and lower rangeland productivity. These are lived experiences, not projections. The People are drawing on cultural resilience and traditional knowledge alongside new tools to adapt.

Tribal Authority and Sovereignty

The Fort McDermitt Paiute-Shoshone Tribe (FMPST) is a sovereign, self-governing entity with complete jurisdiction over its Reservation. Following the Indian Reorganization Act of 1934, the Tribe adopted a Constitution and Bylaws in 1936, establishing a democratically elected government. The Tribal Council comprises eight members, a Chairman, and a Vice-Chair, exercising legislative, executive, and administrative authority. Article I of the Constitution affirms jurisdiction over all Reservation lands. The Tribe holds sovereign immunity from lawsuits except where explicitly waived by Council resolution.

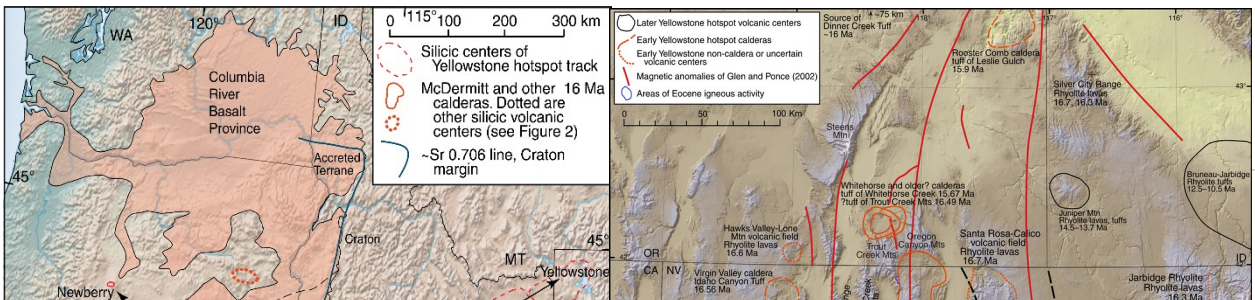
The Fort McDermitt Reservation

The Fort McDermitt Reservation was officially established on July 5, 1889. It is located approximately four miles southeast of unincorporated McDermitt, NV, and 70 miles north of Winnemucca, NV. The Reservation straddles the Nevada-Oregon border: approximately 40 percent lies in Humboldt County, NV and 60 percent in Malheur County, OR. Tribal housing and most community infrastructure are concentrated within the Nevada portion along the Quinn River valley.

Original trust lands total approximately 35,400 acres. The 2016 Nevada Native Nations Land Act placed an additional 19,094 acres of adjacent BLM rangeland into trust, bringing the total Reservation land base to approximately 54,277 acres (roughly 85 square miles). A separate 145-acre undeveloped parcel, Hog John Ranch, provides additional land for potential future Tribal use.

The Reservation sits on the southeastern rim of the McDermitt Caldera, a 25-mile-wide Miocene volcanic collapse structure. This geology produced heavy mercury deposits that made the adjacent Cordero and McDermitt mines the two largest mercury producers in North America (1933–1989). Residual calcine piles and tailings remain legacy contamination sources on and near the Reservation, and are a defining context for the water quality and hazmat hazard profiles in this plan. Contemporary exploration has targeted lithium-bearing claystone in the same caldera sequence, generating new NEPA reviews and ongoing Tribal consultation.

In the 1860s, the U.S. Cavalry built a fort here to guard a stagecoach route from Virginia City, Nevada, to Silver City, Idaho. The post was named for Lieutenant Colonel Charles McDermitt, killed in a local conflict in 1865. The military presence lasted until the 1890s. The fort's physical legacy includes historic stone and masonry structures still in use today, as the Senior Center and for storage, whose cultural and historical significance is a factor in the plan's earthquake and hazmat assessments.



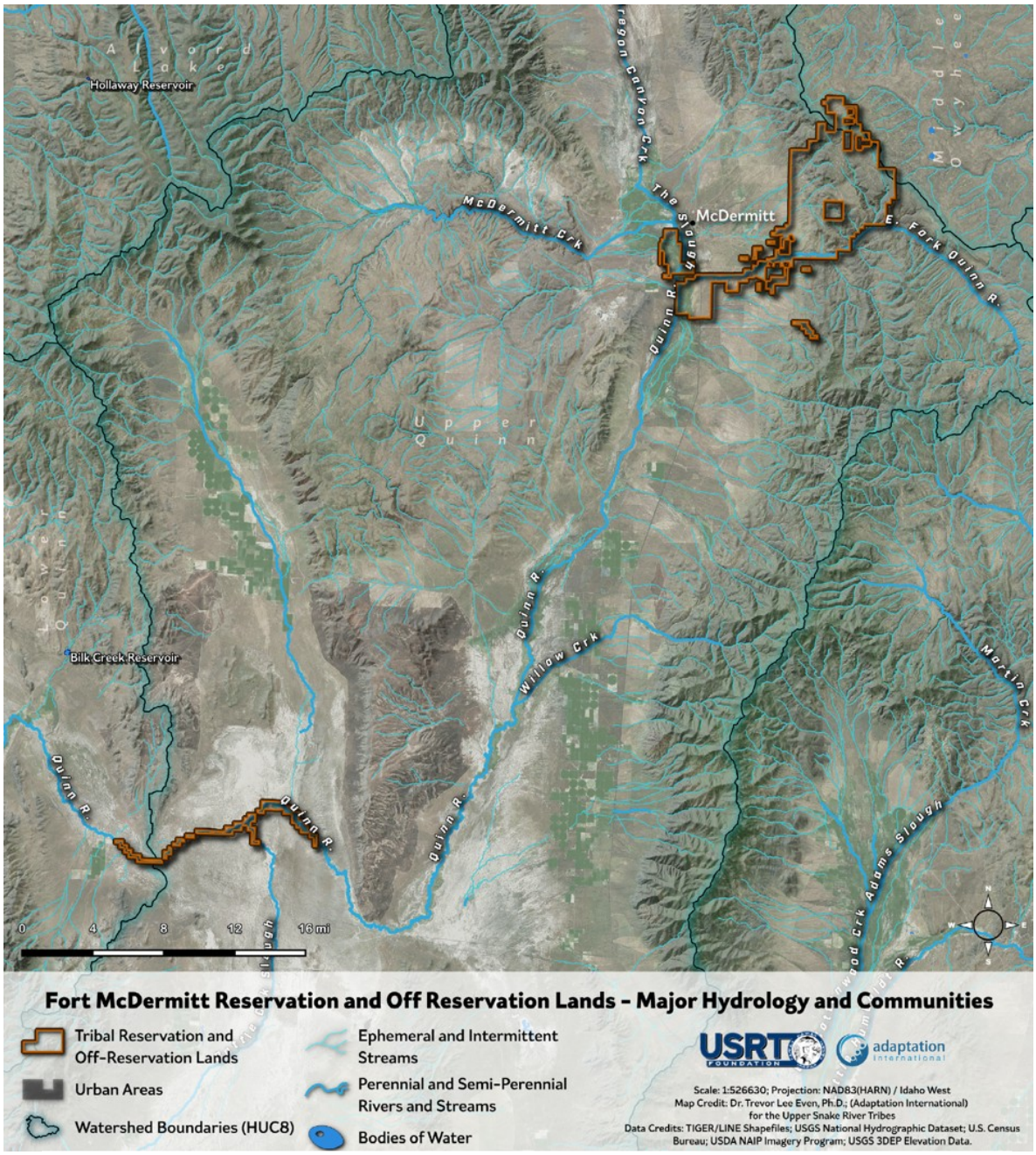


Figure 3: Fort McDermitt Reservation Community and Overview Maps

Tribal Government and Administration

The FMPST Tribal Council comprises eight elected members serving staggered four-year terms, plus a Chairman, Vice-Chair, Secretary, and Treasurer. Current leadership elected November 2025:

- Chairman: (vacant at time of DRAFT)
- Vice-Chair: Ryan Smart
- Treasurer: Sherry Tom
- Secretary: Maxine Redstar
- Council Members: Jody Smart, Justina Paradise, Maureen Northrup, Vonnie Curtis

Maxine Redstar serves as Tribal Administrator. Responsibilities of Tribal emergency management are shared but are currently being coordinated by Adrie Smart. Key Tribal departments include Finance, Human Services, Housing, Environmental Protection, Roads and Maintenance, Language Preservation, Enrollment, and the Wellness Center.

Emergency Management Structure

Fort McDermitt maintains very limited emergency services. The Reservation is effectively an emergency services desert (a geographic area where residents lack timely, reliable access to ambulance service, fire protection, law enforcement, and emergency medical care because of distance, limited resources, and infrastructure gaps).

Figure 4: Fort McDermitt EMS Vehicles

Emergency Medical Services: Fort McDermitt currently has no ambulance service. The Tribe previously operated two fully equipped ambulances and two rescue pickups, but budget constraints forced cancellation of that program. Ambulances must now be requested from Winnemucca, requiring a minimum one-hour response time. Lifestar helicopter service requires comparable lead time. The nearest full-service hospital, Humboldt General Hospital in Winnemucca, is approximately 70 miles away. The nearest pharmacy is also in Winnemucca. This gap is life-threatening for any serious emergency, whether hazard-related or not.

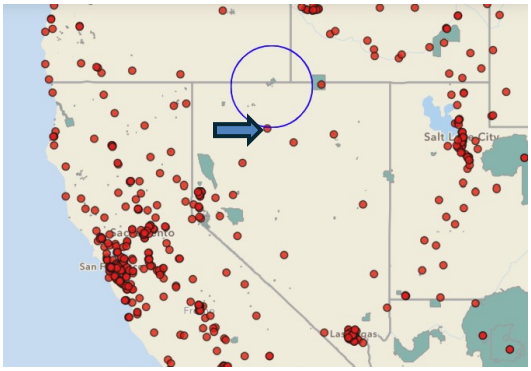


Figure 5: Detail showing the relative distance from the Fort McDermitt Reservation (center of the blue circle) to the nearest hospital, Humboldt General Hospital in Winnemucca (indicated by arrow). Blue circle has a radius of approximately 70 miles. Source: FEMA Resilience Analysis and Planning Tool.

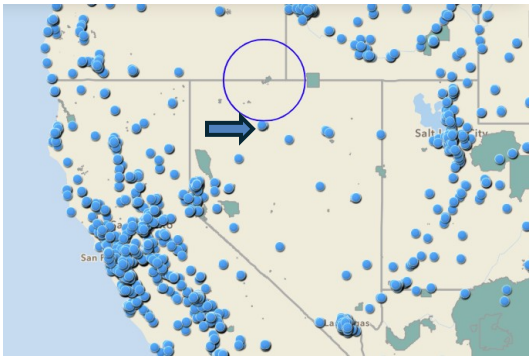


Figure 6: Detail showing the relative distance from the Fort McDermitt Reservation (center of the blue circle) to the nearest pharmacy, Ridley's Pharmacy #1135, located in Winnemucca (indicated by arrow). Blue circle has a radius of approximately 70 miles. Source: FEMA Resilience Analysis and Planning Tool.

Fire Services: Fort McDermitt does not operate its own fire department. The Tribe has one aging 1973 Ford Structural cabover tanker and a network of hydrants fed by water storage tanks which are not all functional. All hydrants were observed by the planning team during the October 7, 2025 site visit. Fire suppression is provided primarily by the Frank Stinton Fire Station in McDermitt, NV, and by BLM. The McDermitt Fire District has six vehicles and 14 volunteers; one vehicle is unavailable during winter months. During the October 2025 site visit, Fire Chief Dale Hartley expressed strong concern about the Tribe's level of dependence on his department and recommended the Tribe apply for grants for its own apparatus. A coordination gap was confirmed during the visit: responding crew members were unaware of Tribal incident command authority during recent fire events, requiring the Tribal Environmental Director to make repeated contact attempts to establish communication with crews already on scene. This gap is addressed directly in the wildfire mitigation actions.

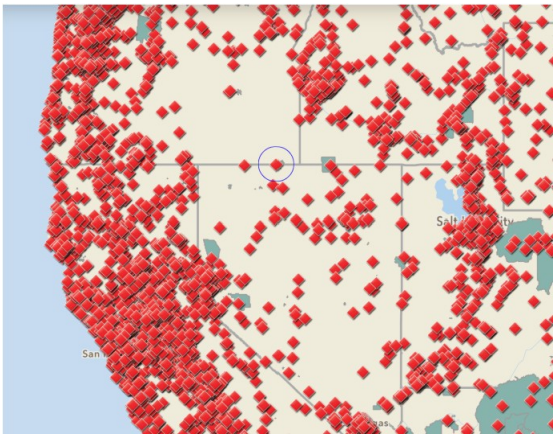


Figure 7: Detail showing the relative distance from McDermitt Fire Protection District (center of the blue circle) to neighboring jurisdictions as compared to other communities in the Northwest. The blue circle has a radius of approximately 30 miles. Source: FEMA Resilience Analysis and Planning Tool.

Law Enforcement: Fort McDermitt does not operate a Tribal police department. BIA law enforcement and county sheriffs provide day-to-day policing. Response times outside regular business hours can be lengthy.

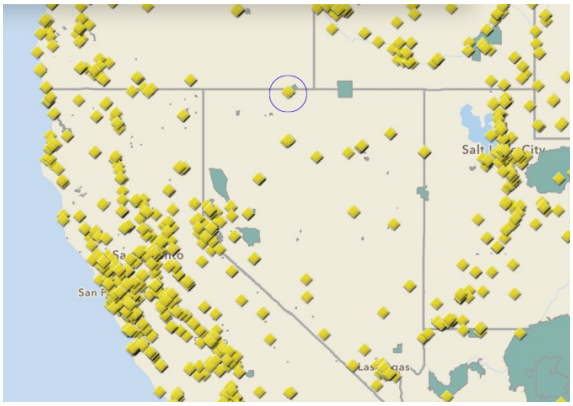


Figure 8: Detail showing the relative distance from the Bureau of Indian Affairs Law Enforcement Substation (433 South Reservation Road – center of the blue circle) neighboring jurisdictions as compared to other communities in the Northwest. The blue circle has a radius of approximately 30 miles. Source: FEMA Resilience Analysis and Planning Tool.

Emergency Management: The Tribe does not have a dedicated office of emergency management. In February 2026, emergency management responsibilities were assumed by Dackota (Natasha) York, serving as Tribal Administrator at the time. These duties are currently held by Justina Paradise, Council Member. The Tribe does not currently maintain an all-hazards emergency operations plan, a dedicated wildfire management plan, or a hazardous materials contingency plan. These are gaps this planning process directly addresses.

Existing Plans, Programs, and Policies

Plan / Program	Year	Relevance to THMP
Fort McDermitt Nonpoint Source Pollution Management Plan	2025	Direct input to water quality and environmental degradation profiles and actions
BOR Program Progress Report: Drought Management Infrastructure	2024–25	Water and drought actions; well mapping and QAPP in progress
Fort McDermitt Annual Water Quality Report	2024	Documents arsenic treatment history, boil-water incidents, and contamination trends
Fort McDermitt EPA Tribal Environmental Plan (ETEP)	2022	Baseline environmental priorities and departmental context
USRT Priority Climate Action Plan	2024	Climate context; co-benefits for mitigation actions
Malheur County Natural Hazards Mitigation Plan	2019 / 2025 update in progress	Oregon-side jurisdiction; planning team participated in update process
Regional Tri-County HMP (Humboldt, Pershing, Lander)	2021	Nevada-side jurisdiction; Fort McDermitt annex planned for next update

Plan / Program	Year	Relevance to THMP
Humboldt County Community Wildfire Protection Plan	2025	Wildfire profile context; fuel hazard mapping
Nevada Enhanced Hazard Mitigation Plan	2023	State planning context for NV portion of Reservation
Oregon State Natural Hazards Mitigation Plan	2025	State planning context for OR portion of Reservation

Figure 9: Existing Plans, Programs, and Policies.

Tribal History and Culture: Planning Considerations

The Paiute-Shoshone people of Fort McDermitt have sustained a relationship with this land for thousands of years. Their ecological knowledge, seasonal resource practices, and reverence for natural systems are alive today in the language spoken by elders, in the gathering of yampa roots and chokecherries, in the sage, juniper, and other herbs used in ceremony and medicine, in the weaving of baskets from riparian willows, in the cattle that reflect a ranching tradition layered onto ancient patterns of land use, and in the teaching of traditional practices to young people.

Every hazard in this plan touches that living relationship. Wildfire destroys not only structures but the sage used in sweat lodge ceremonies and the medicinal plants that sustain community health. Drought dries the springs that hold deep for community function. Contamination of water threatens not just physical health but the concept of water as something sacred. The drug crisis erodes the family networks and cultural continuity that have always been the Tribe's most essential resilience. Invasive species displace the native plants on which baskets are woven, medicines are prepared, and ceremonies depend. The proposed lithium mine threatens the very plants described throughout the planning process as being integral to Tribal spiritual practice.

Mitigation at Fort McDermitt is not only about protecting homes, people, property, and infrastructure. It is about protecting the conditions under which a culture can not only survive, but continue to thrive. Every mitigation action in this plan was evaluated in part on that basis.

SECTION 3: MITIGATION PLANNING PROCESS (ELEMENT A)

Mitigation Planning Process

The Disaster Mitigation Act of 2000

This plan was developed in accordance with the Disaster Mitigation Act of 2000 (DMA2K), Public Law 106-390, signed October 30, 2000. DMA2K amended the Robert T. Stafford Relief and Emergency Assistance Act to create pre-disaster mitigation planning requirements as a condition of eligibility for FEMA Hazard Mitigation Assistance. For Tribal governments, 44 C.F.R. § 201.7 requires a current, FEMA-approved THMP for eligibility for HMGP, BRIC, and related programs. This plan is Fort McDermitt's first FEMA-approvable THMP.

Planning Process Overview

The planning effort spanned approximately 18 months from early 2025 through mid-2026, following a four-phase structure:

- Phase I (Months 1–6): Community Engagement and Identification of Key Hazards
- Phase II (Months 4–12): Analysis of Current and Future Risk
- Phase III (Months 10–16): Development of Mitigation Actions
- Phase IV (Months 14–18): Plan Review, Community Comment, and Submission to FEMA

Tribal Hazard Mitigation Planning Team

The Fort McDermitt Paiute-Shoshone Tribe's Hazard Mitigation Planning Team brought together the people who hold direct knowledge of the community's hazards, assets, and capabilities, in keeping with the collaborative approach recommended in FEMA's Tribal Mitigation Planning Handbook. The Environmental Department Head served as the Tribe's hazard mitigation planning lead, or "Champion," taking responsibility for coordinating the effort, maintaining momentum through plan approval, and connecting the Tribe with external planning partners, neighboring jurisdictions, and FEMA. Working alongside the lead were the Tribe's department heads, whose day-to-day responsibilities for housing, roads, health and wellness, tribal court, public safety, and emergency response gave them firsthand understanding of the exposure and vulnerabilities facing Tribal members and infrastructure. The Fort McDermitt Tribal Council, as the governing body vested with the sovereign authority to protect the health, safety, and welfare of the community and to adopt the plan, provided oversight and direction throughout the process. Council leadership invited planning experts to provide regular briefings as a

component of scheduled and special meetings, and committed at the December 2025 meeting to expand direct Council and public participation in the effort.

The core Tribal team was supported by regional and technical partners who contributed data, scientific analysis, and planning expertise. The Upper Snake River Tribes (USRT) Foundation, a nonprofit intertribal organization that initiated the planning effort as part of its ongoing environmental protection and climate resilience work with its four member Tribes, provided planning coordination through Executive Director Scott Hauser, Planning Lead and Environmental Specialist Lauren Noeker, and Fish and Wildlife Program Director Dennis Daw. Technical support was provided by Adaptation International, a consulting firm with a longstanding relationship with the USRT Tribes, whose team included Principal Sascha Petersen, Climate Resilience Specialist Cassandra Jean, and Mitigation Specialist Damon Coppola. Together, these partners helped the Tribe build the project timeline, develop the community engagement strategy, profile each hazard, and prepare a plan that reflects both the latest scientific research and the local and traditional knowledge of the Fort McDermitt community. This structure ensured that the plan was grounded in verified information specific to the Fort McDermitt Indian Reservation while drawing on the broader capabilities of its regional and federal partners.

Public Engagement: A Narrative Account

Laying the Foundation

Planning efforts were initiated by the Upper Snake River Tribes Foundation as an extension of ongoing sustainable development and environmental protection work with the four USRT Tribes. A regional THMP kickoff meeting held virtually on February 18, 2025 introduced planning staff from all four USRT Tribes to mitigation planning concepts, began building peer-to-peer support networks, and set expectations for the months of work ahead.

The initial Fort McDermitt project kickoff took place on April 15, 2025, with Duane Masters, then serving as the Tribe's Emergency Management lead. In late June 2025, the USRT technical assistance team met with Duane Masters to explain coordination needs and establish a working rhythm. The initial wildfire hazard profile was forwarded to the Tribe on July 23, 2025. In late August 2025 planning leadership was assumed by Clifton Smart, the Tribe's Environmental Department Director. Clifton brought a deep knowledge of the Reservation's environmental conditions and an openness to honest, frank discussion about what the community faced.

Birthday Celebration: Launching Public Engagement

On July 12, 2025, the planning team hosted an information booth at the Fort McDermitt Tribe's Annual Birthday Celebration on the Tribe's Powwow grounds. This is one of the community's most significant cultural gatherings, drawing more than half of all Reservation residents. The booth described the mitigation planning process in plain language and gave community members the chance to speak directly with Tribal leadership and USRT technical support staff. The community hazard survey was launched at this event, incentivized with gift card giveaways to encourage participation. Fourteen surveys were completed on that day. The decision to

launch at the Birthday Celebration was deliberate: it placed the planning team in a community space where people gather by choice, where cultural connection is strong, and where trust is built through presence rather than paperwork.

Community Survey

The survey was made available for completion both in person and electronically through the Tribe's Facebook page. A post describing the effort invited community participation stating: “The Fort McDermitt Tribe is wanting your voice! With the support of USRT, the Fort McDermitt Paiute Shoshone Tribe is actively working to reduce risks from natural and human-made hazards, prepare for climate change, and strengthen community resilience. This initiative integrates the latest scientific research with local and traditional knowledge to assess how changing conditions will impact Tribal members and vital Tribal resources that are essential to the community.”

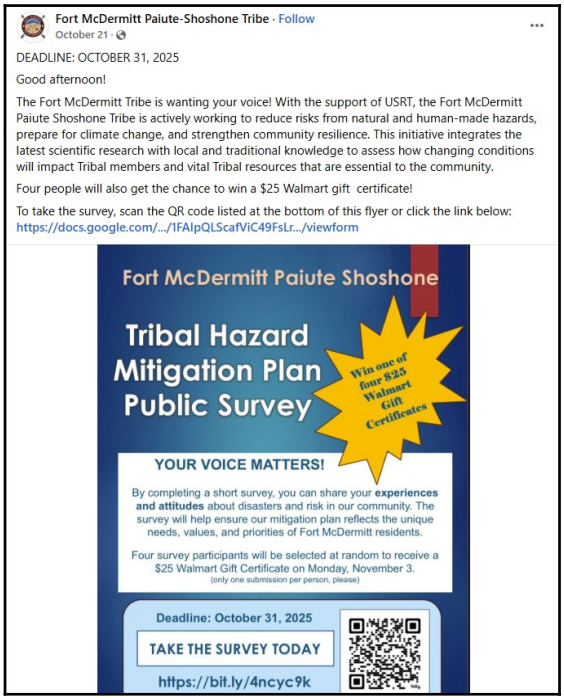


Figure 10: Screenshot of the Fort McDermitt Facebook Page showing promotion of the community survey.

Twenty-six community members ultimately completed the survey, representing approximately eight percent of the 326 on-Reservation residents. This is considered a meaningful sample for a community of this size. Nearly all respondents reported personal experience with at least one major hazard event. The top three hazards most commonly experienced at the individual level included Extreme Heat, Water Quality Issues, and Drought. Respondents ranked protection of human life and health as their top mitigation priority, followed closely by environmental protection and climate adaptation. Full survey results are included in Appendix B.

Site Visit: October 7, 2025

On October 7, 2025, Damon Coppola and Sascha Petersen from Adaptation International and Dennis Daw and Lauren Noeker from the USRT Foundation spent the full day at Fort McDermitt with Clifton Smart. The team met at the Tribal Administrative Building in the morning hours and set out immediately on a comprehensive tour of the Reservation. The visit provided significant value in advancing the mitigation planning process. Every major hazard in this plan was discussed in specific physical locations representing exposure rather than in an abstract or representative manner. Key observations by hazard, drawn directly from the site visit report, include:

Wildfire: This was described as the Tribe's most pressing hazard, with increasing frequency directly linked to invasive species (cheatgrass and medusahead) expanding across Tribal land. Several community members, including Clifton, have had or currently have hotshot or wildland

firefighting experience and would likely self-organize to the extent possible to protect Tribal land and property until outside resources arrive. The planning team was shown every working and non-working hydrant. After touring Tribal grounds, the team visited the McDermitt Fire District firehouse, where Arthur Cavanaugh (who coordinates with Chief Dale Hartley) gave a full facility and vehicle tour and discussed the Tribe's reliance on the District's resources. Mr. Cavanaugh recommended that the Tribe apply for grants to purchase a locally-owned apparatus, and raised the issue of arson being an increasing concern.

Dam, Flood, and Drainage: The team visited the site of the former dam at the head of the valley, built by the Cavalry and later expanded, which failed in the late 1990s. Water access is generally adequate given the numerous springs in the surrounding hills. However, three culverts along the Quinn River floodway are prone to sediment buildup from broken beaver dams. There is no organized maintenance schedule. When blocked, they cause significant flooding that overtops berms and renders roads impassable. A handful of homes in this low-lying area are directly vulnerable. Many Tribal members support rebuilding a dam with modest additional storage capacity.

Water Quality: Water quality was described as a major ongoing problem. The community periodically faces boil-water advisories, including during the time of the site visit. In that particular case, the episode was traced to a backflow incident (a resident left a hose in a livestock watering trough, horses contaminated the water with animal waste, and it was siphoned back into the distribution system when line pressure dropped). Asbestos concrete pipes throughout the system are aging and leaking. One older water storage tank is leaking at its base. There is no continuous automated treatment, and disinfection is managed by manual addition of solid chlorine tablets.

Workplace and School Violence: Violence was described as a significant and active problem, strongly linked to drug use and intergenerational family feuding. Youth fights at school frequently trace to family conflicts.

Drug Crisis: Illegal drugs, cannabis, and alcohol were described as significant and worsening threats. Youth cannabis use has increased markedly. Drug-related incidents are increasing and directly driving violence and public safety challenges.

Hazmat and Mining: Hazmat concerns were described to be significant in the context of proposed new mining operations, particularly a large-scale lithium extraction project to the southwest of the residential areas. Such operations are expected to increase water demands, generate contamination risk, decrease air quality through airborne dust and particulates, and threaten traditional plants. There is a particularly significant cultural threat to herbs used in sweat lodge, for respiratory health during COVID, and for spiritual cleansing. Many are being clearcut for mine infrastructure.

Extreme Cold and 'Wood for Elders': The Tribe's 'wood for elders' program provides two cords of heating wood to each elder household each winter. Some wood comes from clearing for the mines while other wood comes from felled trees and fire management. The team visited the wood storage and distribution site. Geographic isolation was noted as the dominant winter storm vulnerability.

Health / EMS: The technical team was shown the Tribe's working ambulance, which is currently unstaffed given there is no certified EMS crew. The Tribe's warehouse, which is contaminated with asbestos and limits occupancy to 15 minutes due to air quality concerns, was visited. BIA and county police locations were visited as well; it was confirmed that law enforcement is not available full time 24/7/365.

At the end of the site visit, the technical assistance team presented to the Tribal Business Council to provide a planning effort update and to gain additional support for survey and engagement needs. Clifton offered to go door-to-door to encourage additional survey responses and initiated the process for the planning team to present to the Business Council in the weeks to follow.

Tribal Council Presentations

October 14, 2025: The team presented the planning process overview and initial site visit findings to the then-current Council. The Council provided consent to expand the survey effort and gave direction on community priorities. This session built direct Council engagement in the plan.

December 9, 2025: The team returned to present the draft risk assessment to the newly elected Council. Survey results were presented. Council members asked pointed questions about specific hazard findings and expressed particular concern about the drug crisis and water quality. The Council committed to increasing direct participation in the development of mitigation actions.

Summer 2026

TBD

Coordination with Neighboring Jurisdictions

The planning team pursued meaningful coordination with five neighboring jurisdictions throughout the planning process. This is a practical necessity given that Fort McDermitt relies on county and state resources for a large extent of emergency response capability.

Date	Jurisdiction / Contact	Activity
Feb 18, 2025	All USRT Tribes	Regional THMP Kickoff (virtual): introduced planning framework to all four USRT Tribes
Apr 15, 2025	Fort McDermitt (Duane Masters)	Project Kickoff: scope, introductions, timeline established
Jun 26, 2025	Fort McDermitt (Duane Masters)	Coordination call: planning needs reviewed
Jul 23, 2025	NV OEM (Heather Lafferty, Aaron Thacker)	Outreach establishing coordination relationship
Jul 30, 2025	Malheur County OR (Lt. Harriman, Anna Murphy)	Joined county HMP Update Planning Call
Jul 31, 2025	Humboldt County NV (Carol Lynn)	Direct coordination meeting: mutual aid, county HMP annex confirmed
Aug 20, 2025	Fort McDermitt	Site visit coordination request to Tribal EM
Sep 11, 2025	NV OEM, FEMA R9	Project overview: NV offered data sharing, tribal liaison support, grant guidance
Sep 25, 2025	Malheur County OR	Joined county HMP risk assessment review call
Oct 7, 2025	Fort McDermitt (Clifton Smart), McDermitt Fire District (Dale Hartley)	Full-day site visit: comprehensive tour of all hazard-relevant Reservation sites
Oct 14, 2025	Fort McDermitt Tribal Council	THMP presentation: survey expansion approval, initial hazard findings
Oct 14, 2025	NV OEM (Heather Lafferty)	Follow-up on grant support opportunities for Tribal planning
Nov 25, 2025	NV OEM, FEMA R9	Coordination meeting: ongoing HMP progress and coordination review
Dec 9, 2025	Fort McDermitt Tribal Council (newly elected)	Draft risk assessment presentation: Council engagement on findings and priorities

Figure 11: Planning coordination with neighboring jurisdictions

Humboldt County, Nevada: Carol Lynn, Humboldt County's first formally designated Emergency Management Director, met directly with the planning team on July 31, 2025. She expressed genuine desire to rebuild the county-Tribe relationship, noted that she had attended a FEMA EOP course held at the Reservation in May 2025, and discussed her efforts to include Fort McDermitt in the county LEPC. She pledged to include a Fort McDermitt annex in the upcoming Tri-County Hazard Mitigation Plan update, provided information on Tribal firefighting capabilities, and recommended the Tribe apply for BLM equipment funding. She noted that the Winnemucca Tribe had reached out about building a shared shelter, a model she hoped could extend to Fort McDermitt.

Malheur County, Oregon: Lt. Richard Harriman, County Emergency Management Director, connected the planning team to Oregon DEM's Anna Murphy and invited Fort McDermitt to participate in the county's HMP update. Team members joined planning calls on July 30 and September 25, 2025. After the September meeting, the team confirmed with county GIS staff that no specific mapping was being conducted for the Reservation (a gap noted in this plan's risk assessment.)

Nevada Office of Emergency Management (NVOEM): SHMO Heather Lafferty, Assistant SHMO Zach McCullough, and Tribal Liaison Aaron Thacker provided the most substantive intergovernmental coordination in this planning process. They met with the planning team on September 11 and November 25, 2025, the latter with FEMA Region 9 staff. They offered significant data sharing, referrals to additional contacts including former FEMA Tribal Coordinator Crystal Harjoe (now at BIA) and Watch Officer Melissa Orodney, and guidance on grant support. NVOEM expressed strong commitment to the Tribe's planning effort.

Oregon Office of Emergency Management: Natural Hazards Mitigation Planner Anna Murphy was connected to the team on July 22, 2025 through Lt. Harriman. She pledged to keep the Tribe informed of state planning efforts affecting the Oregon portion of the Reservation.

McDermitt Fire District: Arthur Cavanaugh provided a full vehicle tour during the October 7 site visit, discussed the Tribe's dependence on his department, and strongly recommended the Tribe pursue its own apparatus through available grant programs.

Plan Maintenance

Monitoring and Evaluation

Each Tribal department with assigned mitigation actions will monitor implementation progress and report annually to the Tribal Council as part of the budgeting process. Tribal Administrator and Emergency Management lead will coordinate tracking across departments and maintain the plan as a living document.

Updating

The Tribe commits to a full plan update by 2031, with the planning process beginning no later than 2030. If a major disaster occurs during the planning period, the Tribe will review the relevant hazard profile and mitigation actions and update the plan at the next scheduled revision.

Ongoing Public Participation

Annual engagement through the Birthday Celebration, ongoing social media posts, and annual Tribal Council presentations will provide community members continuing opportunities to engage with the plan and contribute local knowledge that strengthens future updates.

SECTION 4: PLANNING AREA

Planning Area

Geographic and Environmental Setting

Location, Extent, and Relief

The Reservation straddles Humboldt County, Nevada and Malheur County, Oregon, approximately four miles southeast of McDermitt, NV. The valley floor sits at approximately 4,450 feet (1,355 m) elevation. Surrounding benches and foothills rise to nearly 5,300 feet (1,615 m) where they meet the Trout Creek and Pueblo Mountains. After the Nevada Native Nations Land Act of 2016 added 19,094 acres to the original trust holding, the total land base reached approximately 54,277 acres, or roughly 85 square miles. The Reservation is positioned on the southeastern rim of the McDermitt Caldera, a 25-mile-wide Miocene volcanic collapse structure that explains both the area's mercury and lithium mineral deposits and its seismic context.

Hydrology and Water Resources

Three water features supply most of the Reservation's needs. The East Fork Quinn River is perennial through the community, with mean annual runoff of approximately 20,000 acre-feet at the USGS gauge seven miles east of McDermitt; flows dissipate in downstream playa basins during drought years and can be reduced to isolated pools. McDermitt and Silver Creeks are intermittent tributaries providing stock water and limited riparian habitat. A shallow alluvial aquifer approximately 150 feet below the surface is the primary drinking water source, recharged by winter-spring snowmelt and accessed through community wells.

The water distribution system was observed during the October 2025 site visit to include: a newer blue storage tank (performing well); two older tanks (one leaking at the slab base; both potentially non-conforming); asbestos concrete distribution pipes that are aging and leaking in multiple locations; and fire hydrants of variable functionality. The system relies on manual chlorine addition for disinfection and has no automated treatment capability.

Ecosystems and Vegetation

The dominant ecosystem is the sagebrush steppe: basin big sagebrush, low sagebrush, and native bunchgrasses including bluebunch wheatgrass and Idaho fescue. Narrow riparian bands of willows, cottonwoods, and meadow sedges line the Quinn River. Pinyon-juniper and mountain mahogany occur on higher volcanic ridges. Greater Sage-Grouse habitats flank the Reservation.

Cheatgrass (Bromus tectorum) and medusahead (Taeniatherum caput-medusae) have expanded significantly across the Reservation as a result of overgrazing and post-fire succession. Both invasives increase fine fuel loads and directly drive wildfire risk. The Tribe maintains a noxious weed control program. Traditional plants integral to Tribal ceremony and medicine (sage, juniper, and riparian species used in basket weaving) are under pressure from invasive competition and mining-related habitat disturbance.

Land Use and Natural Resources

Livestock grazing is the dominant economic land use. Reservation grazing permits connect to BLM allotments covering approximately 20,000 acres. Mercury mine closures left calcine waste piles; EPA removals began in 2010, but residual arsenic and mercury hotspots persist in drainage sediments. Three EPA Brownfields sites are identified on the Reservation: a historic illegal dump site; the green warehouse building contaminated with lead paint and asbestos (occupancy limited to 15 minutes due to air quality concerns); and mine-adjacent areas. Proposed lithium extraction operations on adjacent BLM land represent an evolving hazmat and environmental degradation concern currently under NEPA review.

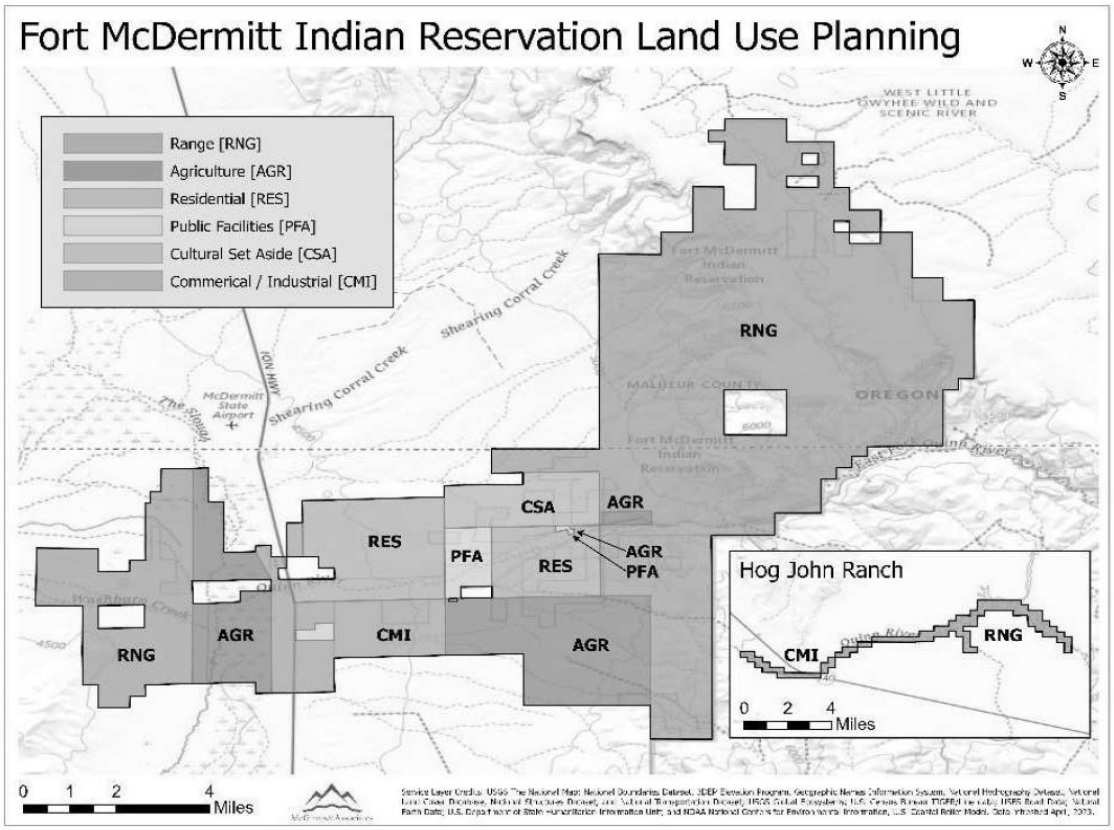


Figure 12: Land use zonation map of the Fort McDermitt Indian Reservation and Hog John Ranch.

Climate Profile

Fort McDermitt's climate is classified as cold semi-arid (BSk): hot, very dry summers and cold winters. Average annual precipitation is approximately nine inches (230 mm). Temperatures range from an average January low of 16°F to an average July high of 90°F. The record low of -32°F was set December 22, 1983; the record high of 107°F was reached July 11, 2002.

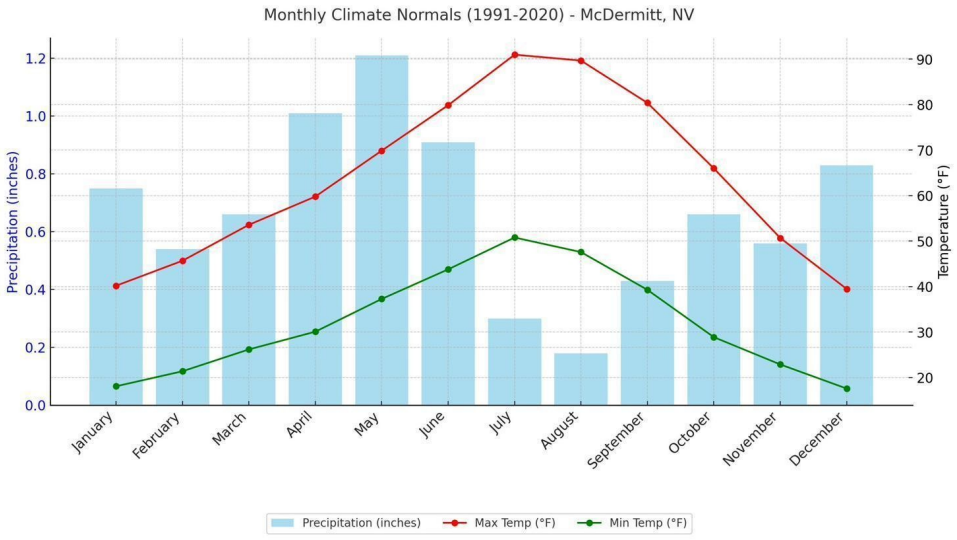


Figure 13: McDermitt Climate Normals 1991–2020. Source: Oregon State University PRISM Group, 2025.

Climate Change Projections

Future projections for the Fort McDermitt region depict a significantly warmer future at all elevations, with previously cooler areas beginning to see temperatures once only possible in the warmest parts of the Quinn River Valley by the 2041 to 2070 period. If current emissions trajectories continue, the region is projected to see increases of 3 °F or more by the 2050s period, and more than 4 °F by the 2080s. These hotter conditions will have significant consequences for wildlife, plant communities, and stream temperatures, especially in open areas where streams lack shade from intact riparian plant communities. Future precipitation projections suggest increased precipitation for the region, with a 10% to 12% increase throughout the century.

However, higher temperatures will reduce already scarce snowfall at low and middle elevations and reduce snowpack longevity at high elevation sites in the Quinn River headwaters. With the associated likely increase in stream temperatures, there will be higher water use by vegetation, cattle, and wildlife. Future water management – including the restoration of riparian ecosystems – will likely become increasingly important as already challenging water supply conditions become even more complex.

Figure 14: Climate Change Projections

Fort McDermitt Reservation	Average Temperature (°F)	Average Precipitation (in and % change)					
		Winter	Spring	Summer	Fall	Number of Days ≥= 90 °F Heat Index	Annual Frozen Precipitation (in and % change)
Historical climate (1991-2020)	48.3	3.4	3.0	1.5	2.3	30	3.6
Projected change from historical (2041 - 2070)	+3.3	+18%	+12%	+3%	+1%	+26	-7%
Projected change from historical (2071 - 2100)	+4.5	+19%	+10%	+16%	+2%	+36	-16%

Fort McDermitt Reservation modeled historical conditions and future change under the "Middle of the Road" or SSP2-4.5 Scenario, based on an eight-model ensemble average. Derived from the University of Montana Native Resilience CMIP6 datasets.

The reservation currently sits at the thin margin between a sage-steppe climate and a desert. Rising temperatures threaten to push the local climate more firmly towards hotter, drier conditions as would be typical of a desert. Water security, irrespective of total precipitation, will increasingly hinge on winter snowpack retention and efficient storage. There are multiple implications of such shifts on the Tribe's hazard portfolio, as described in the hazard profiles and detailed in the following table.

Figure 15: Hazard-Specific Climate Change Implications

Hazard	Climate Link	Community Impact
Drought / water scarcity	Higher temperatures increase evapotranspiration. Precipitation skews towards winter months.	Strains on stock watering, springs, and the Quinn-River aquifer; greater conflict over irrigation allocations
Extreme heat	Summer highs 6-9 °F hotter; more days over 95 °F	Heat stress for elders and outdoor workers; reduced rangeland productivity
Wildfire	Warmer, drier late summers; earlier snowmelt	Longer fire seasons threaten sage-brush steppe, grazing allotments, and cultural resources
Flash flooding	Intensified winter and spring rainfall events	Road washouts (e.g., US 95), damage to homes in low-lying ravines
Ecosystem change	Heat and aridity favor cheatgrass & medusahead growth; snowpack loss stresses aspen & riparian zones	Traditional food/medicine plants and wildlife habitats critical to cultural practices are stressed or otherwise altered

Population and Social Conditions

As of the 2023 American Community Survey (5-year estimate), 326 residents live on the Reservation in 125 occupied households. Most live along North and South Reservation Roads near the Quinn River. About 450 enrolled members report living off the Reservation, giving a total registered population of approximately 500 to 700.

The population profile reflects significant social vulnerability. The median age is 49, which is approximately 10 years above the U.S. median. Median household income is $23,182; roughly 80 percent of households earn less than $35,000. Approximately 10 percent lack health insurance; 58 percent rely on Medicaid. Approximately 13 percent have at least one disability. Only 4 percent of residents hold a bachelor's degree. These conditions compound every hazard; poverty limits the ability to harden homes, purchase insurance, stock emergency supplies, or self-evacuate.

Approximately 105 residents are in the labor force, of whom about 92 are employed. The largest employers are the Tribal Government and its departments, the Health and Social Services Clinic, and Tribal gaming, fuel, and recreation enterprises. Ranching and subsistence activities contribute to both economic and cultural life. A disaster that disrupts Tribal government operations can simultaneously reduce household incomes and community service capacity, making continuity of operations planning especially critical.

Age

The Reservation’s population is nearly divided by gender, males (49% male, 51% female). Age distributions are as follows:

Figure 16: Community Age Distribution

Age Group	County	Share of Population (%)
0-9	45	13.8
10-19	33	10.1
20-29	40	12.3
30-39	18	5.5
40-49	30	9.2
50-59	60	18.4
60-69	57	17.5
70-79	27	8.3
80 and older	16	4.9

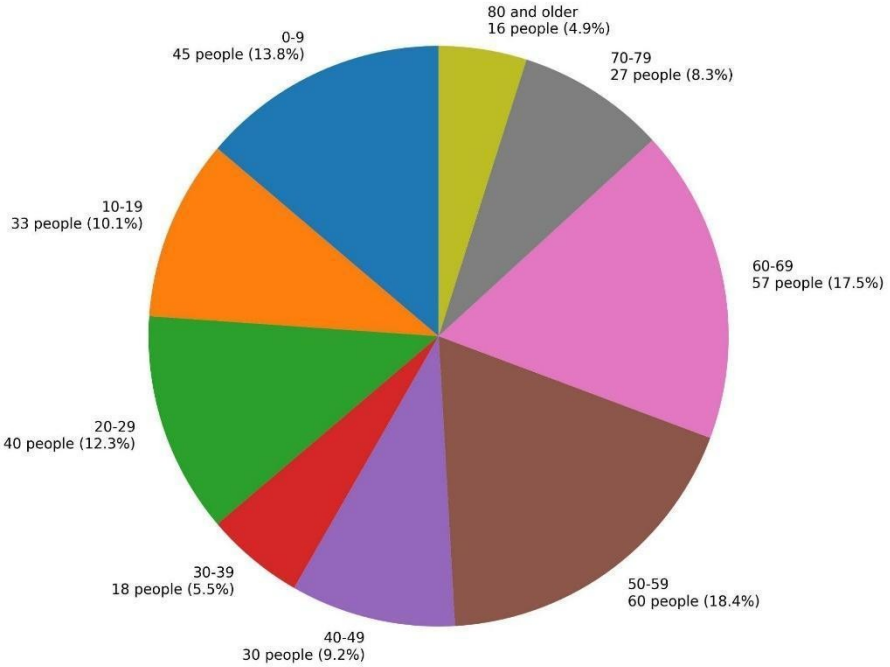


Figure 17: Chart of Community Age Distributions

The median age is 49 years, which is approximately 10 years older than the US median (39.1).

Race and Ethnicity

More than 90% of residents identify as American Indian/Alaska Native or as having 2 or more backgrounds. There are small White (2%) and Hispanic (7%) representations among the Tribe's members.

Poverty

Approximately 52% of residents live below the federal poverty line, constraining household resources for hazard-proofing homes and purchasing insurance. Housing values are likewise low, with the median home value at $52,500.

Functional Needs

A 2021 tribal mobility study estimated 61 people, or approximately 13% of the Tribe, have at least one disability potentially requiring functional-needs support (e.g., text/voice alerts, accessible vehicles, backup power for medical equipment.) Many elders report overlapping mobility and health limitations.

Education

Approximately 75 children aged 3-17 are enrolled in local or neighboring schools. The McDermitt Combined School System reports fewer than 40 K-12 students each year. Although 83% of residents report having earned a high school degree or higher, only 4% of residents hold a bachelor's degree or above.

Figure 18: McDermitt Combined School

SECTION 5: HAZARD IDENTIFICATION AND RISK ASSESSMENT (ELEMENT B)

Hazard Identification and Risk Assessment

Risk Assessment Methodology

A multi-factor quantitative risk ranking system was used to calculate the severity of identified hazard risks. The system was calibrated to reflect Fort McDermitt's specific community values and priorities, as expressed through the community survey, site visit, and Tribal Council engagement. While more sophisticated than a traditional likelihood-times-consequence matrix, the formula was specifically designed so that results reflect the Tribe's risk management and community resilience priorities. Hazards are presented throughout this plan in order of their calculated risk score from highest to lowest.

Assessment Factors

The following factors were scored for each hazard. The score definitions below are the exact criteria used in the Fort McDermitt Hazard Risk Prioritization Framework:

Factor	What It Measures	Score Definitions
Probability	Likelihood of future occurrence based on historical data and experience.	0=Not possible; 1=Rare (<1 event per 100 years); 2=Low (1 per 21–100 yrs); 3=Moderate (1 per 6–20 yrs); 4=High (1 per 1–5 yrs); 5=Severe (1+ per year)
Risk Trend	Whether hazard frequency or impact intensity is expected to change over time.	1=Frequency or impacts will likely decrease; 2=Frequency or impacts will likely stay the same; 3=Frequency or impacts will likely increase
Health & Public Safety	Number of people likely to be sickened, injured, killed, or suffering PTSD in a disaster-strength occurrence.	0=No health or safety impacts; 1=Low (1–3 sick/injured/PTSD and/or 1 dead); 2=Moderate (4–10 and/or 2–3 dead); 3=High (>10 and/or >3 dead)
Home & Property Damage	Percentage of homes and properties likely to be damaged or destroyed in an average occurrence.	0=No homes impacted; 1=Low (1–2 homes impacted); 2=Moderate (3–5 homes impacted); 3=High (>5 homes impacted)
Livelihood	Number of people	0=N/A; 1=Low (<5 people); 2=Moderate (6–15 people);

Factor	What It Measures	Score Definitions
Impacts	likely to lose household income as a result of the event.	3=High (>15 people)
Cultural Wellbeing	Potential loss of culturally important resources including sites, traditions, medicinal plants, and spiritual practices.	0=No impacts; 1=Low (limited, short-term losses); 2=Moderate (long-term losses); 3=High (broad-reaching and permanent losses)
Environmental Harm	Monetary and non-monetary impacts on natural systems including both short- and long-term effects.	0=No impacts; 1=Low (<$50,000 remediation); 2=Moderate ($50,000–$500,000 remediation); 3=High (>$500,000 or permanent environmental damage)
Damage to Infrastructure	Number of people affected by critical infrastructure loss and duration of outage.	0=N/A; 1=Low (<15 people affected; <1 day duration); 2=Moderate (16–50 people; 1–3 days); 3=High (>50 people; >3 days)
Recovery Costs	Uninsured public-sector losses associated with recovery, reconstruction, and rehabilitation.	0=N/A; 1=Low (<$50,000); 2=Moderate ($50,000–$500,000); 3=High (>$500,000)
Government Services	Potential extent of impacts to Tribal government services and operations including school closure.	0=No impacts; 1=Low (<1 day); 2=Moderate (1–5 days); 3=High (>5 days)
Risk Acceptability	Relative hazard importance as assigned by Tribal members and leaders through engagement. Once prioritized, hazards are grouped into terciles.	1=Low priority (lowest tercile); 2=Moderate priority (middle tercile); 3=High priority (highest tercile)
Mitigation Potential	Availability and cost-benefit potential of available mitigation actions for this hazard.	0=Little or no expected return on investments; 1=Standard return on investments; 2=High expected return on investments

Figure 19: Hazard Risk Assessment Factors

Assessment Formula

The risk scoring formula balances consequence categories, adjusts for probability and trend, and incorporates community priorities and mitigation feasibility. It produces a normalized score between 0 and 1.

> **Risk Scoring Formula**
>
> RISK = ([(2 × Health & Safety) + Home & Property + Livelihoods + ((Infrastructure + Recovery + Government) / 2) + Environmental Harm + Cultural Wellbeing] ÷ 22.5) × Probability-Trend Factor × Mitigation Potential Factor × Risk Acceptability Factor

The impact numerator is divided by 22.5 (maximum possible sum if all categories score at maximum), producing a normalized consequence value between 0 and 1. Three adjustment multipliers are then applied:

- Probability × Trend Factor: If the product equals 0, risk drops to 0. At product = 1, a factor of 0.8 applies; it rises toward 1.0 as the product increases, gently boosting risk for more likely or worsening hazards.
- Mitigation Potential Factor: 0.8 for low expected return on investment; 0.9 for moderate; 1.0 for high, which prioritizes hazards where investment is most effective.
- Risk Acceptability Factor: 0.75 for low community priority; 0.9 for moderate; 1.0 for high.

Score interpretation: 0 to 0.25 = Low; 0.26 to 0.50 = Moderate; 0.51 to 0.75 = High; above 0.75 = Very High.

Health and public safety impacts receive double weight (26.67% of impact score), reflecting the community's stated top priority. The three infrastructure-related categories (infrastructure damage, recovery costs, government services) are grouped and halved because they tend to move together.

Hazard Identification Process

The planning team began the hazard identification process by reviewing the following sources to compile a comprehensive initial hazard list:

- FEMA National Risk Index for Malheur County, Oregon and Humboldt County, Nevada
- Nevada Enhanced State Hazard Mitigation Plan (2023)
- Oregon State Natural Hazards Mitigation Plan (2025)
- Regional Tri-County Hazard Mitigation Plan (2021)
- Humboldt County Community Wildfire Protection Plan (2025)

- Fort McDermitt EPA Tribal Environmental Plan (ETEP) (2022)
- BOR Program Progress Report: Drought Management Infrastructure (2024–25)
- Fort McDermitt 2024 Annual Water Quality Report
- CMIP6 Climate Projections for the Fort McDermitt Indian Reservation
- Community hazard survey results (26 respondents, 2025)
- October 7, 2025 site visit and discussions with Clifton Smart, Tribal Environmental Director
- October 14 and December 9, 2025 Tribal Council presentations and discussions

This process yielded an initial list of more than 25 hazard types. The planning team then worked with the Tribal Council and the community survey results to confirm the relevance of each hazard and to assign risk acceptability ratings. Hazards with a Probability score of 0 (events considered not possible in the planning area based on geology, geography, or documented absence) were excluded from the assessment. In addition, three closely related hazards (water quality, hazardous materials, and environmental degradation) were consolidated into a single hazard because their causes, exposures, and mitigation solutions substantially overlap at Fort McDermitt. Hazardous materials and environmental degradation are therefore not carried as separate hazards in this plan; they are assessed, scored, ranked, and profiled once, together with water quality, as Hazard 2. Extreme cold, initially carried as its own candidate hazard, was likewise consolidated into Hazard 7, Severe Winter Storms and Extreme Cold, because the two hazards share the same exposures, the same vulnerable populations, and the same response capacity, and because most extreme cold events at Fort McDermitt arrive with or follow winter storms. These consolidations brought the list from 18 candidate hazards to a final assessed hazard list of 15 hazards, which is presented below.

Hazard Ranking Summary

All assessed hazards are listed below in order of calculated risk score, highest to lowest. This ordering is maintained throughout this plan. The specific factor scoring is detailed under each hazard profile that follows (see Appendix D for more detail on the specific scoring of hazard risk ranking factors).

Rank	Hazard	Score	Risk Level
1	Wildfire (Rangeland, Sagebrush Steppe, WUI)	0.915	Very High
2	Water Quality / Hazardous Materials / Environmental Degradation	0.867	Very High
3	Extreme Heat	0.667	High
4	Drought	0.578	High
5	Illegal Drug Crisis	0.556	High
6	Epidemic / Pandemic / Vector-Borne Disease	0.549	High
7	Severe Winter Storms and Extreme Cold	0.468	Moderate
8	Strong Wind / Derechos	0.418	Moderate

Figure 20: Hazard Risk Assessment Prioritization

Rank	Hazard	Score	Risk Level
9	Violent Attack / Workplace and School Violence	0.379	Moderate
10	Plant / Animal Epidemic / Invasive Species	0.367	Moderate
11	Flood (Flash, Riverine, Stormwater)	0.343	Moderate
12	Infrastructure / Supply Chain Failure	0.305	Low
13	Earthquake	0.281	Low
14	Mass Movement (Landslide, Rockslide)	0.179	Low
15	Dam Breach	0.120	Low

Hazards Addressed and Not Addressed

Hazards scoring above 0.25 receive full hazard profiles and dedicated mitigation action sets in this plan. Hazards scoring below 0.25, which include Mass Movement and Dam Breach, receive hazard profiles, but no mitigation strategies have been identified for them. Dam Breach receives a very low score because the dam whose failure created downstream exposure no longer exists (it has already failed and has not been replaced). Mass Movement is low because community structures are located on flat valley-floor ground away from steep slopes.

Hazard Profiles

The 15 assessed hazards are profiled below in order of risk score from highest to lowest. Each profile includes historical analysis, climate change considerations, vulnerability assessment, adaptive capacity, and risk assessment factor scores. Hazard 2 consolidates water quality, hazardous materials, and environmental degradation; its historical analysis, climate change

considerations, vulnerability assessment, and adaptive capacity are presented separately for each of the three components, and a single set of risk assessment factor scores applies to the consolidated hazard. Hazard 7 similarly presents severe winter storms and extreme cold together as a single consolidated hazard with one profile and one set of factor scores.

1. Wildfire

Hazard	Priority Rank	Score (0–1)	Risk Level
Wildfire (Rangeland, Sagebrush Steppe, Wildland-Urban Interface)	**1**	**0.915**	**Very High**

Wildfire is the most significant hazard facing the Fort McDermitt Indian Reservation. The USDA rates the Reservation's risk as 'Very High', which is more at-risk than 97 percent of all communities in the United States. All 194 structures on the Reservation face direct exposure, meaning any of them may be ignited by adjacent vegetation, flying embers, or nearby structures. The community is essentially an intermix Wildland-Urban Interface (WUI): homes and buildings are scattered among wildland fuels with little or no separation. A rangeland fire can reach structures within minutes.

Historical Analysis

The Fort McDermitt Reservation and its surroundings have a well-documented and active wildfire history. The community experiences an average of six wildland fires per year in and around its broader vicinity. Many are small, including lightning-ignited grass fires that are contained quickly. However, on occasion fires have grown to very large sizes and have had direct impacts on the community. In August 2005, the North Road Fire swept through part of the Reservation, impacting 10 buildings and requiring evacuations. Routes became enveloped in smoke and flame, complicating egress. This is an experience that still shapes community awareness. The 2018 Martin Fire burned more than 431,000 acres, Nevada's largest single fire in modern history, and came close enough to significantly affect air quality throughout the community.

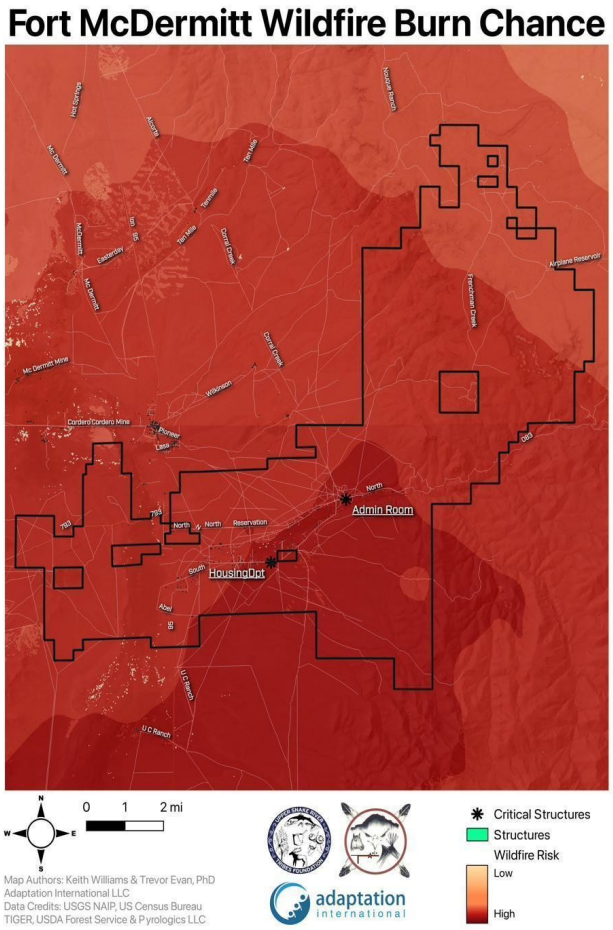


Figure 21: Wildfire risk map, Fort McDermitt Indian Reservation. Source: USDA Wildfire Risk to Homes

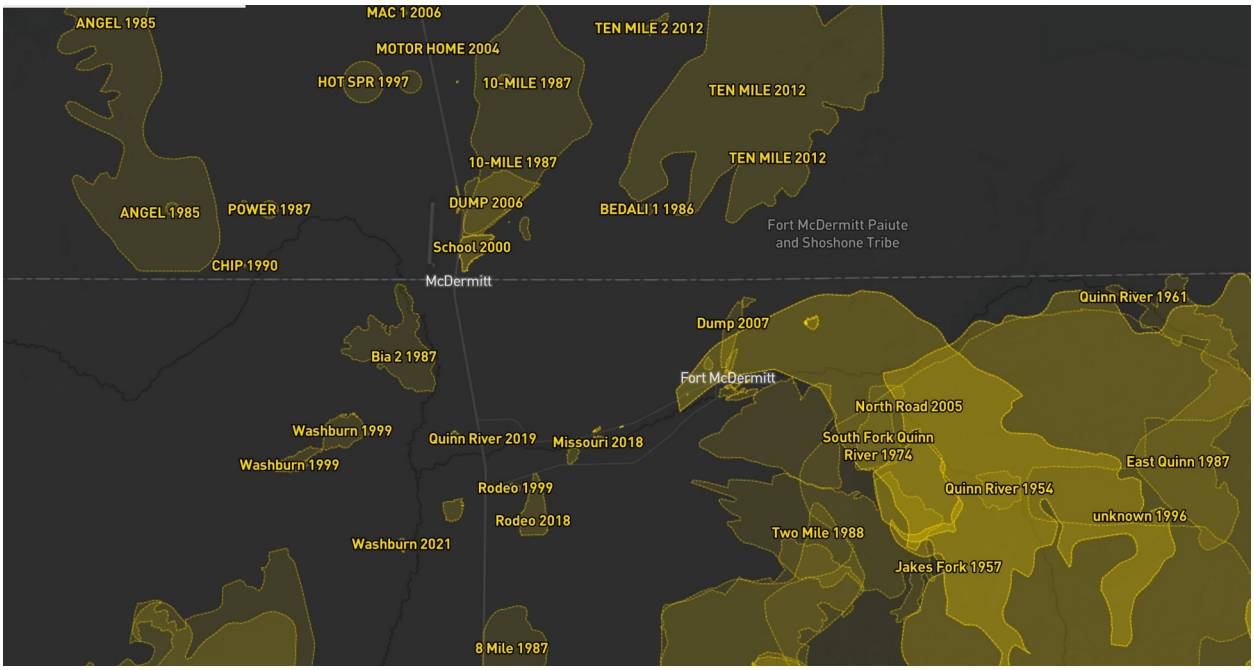
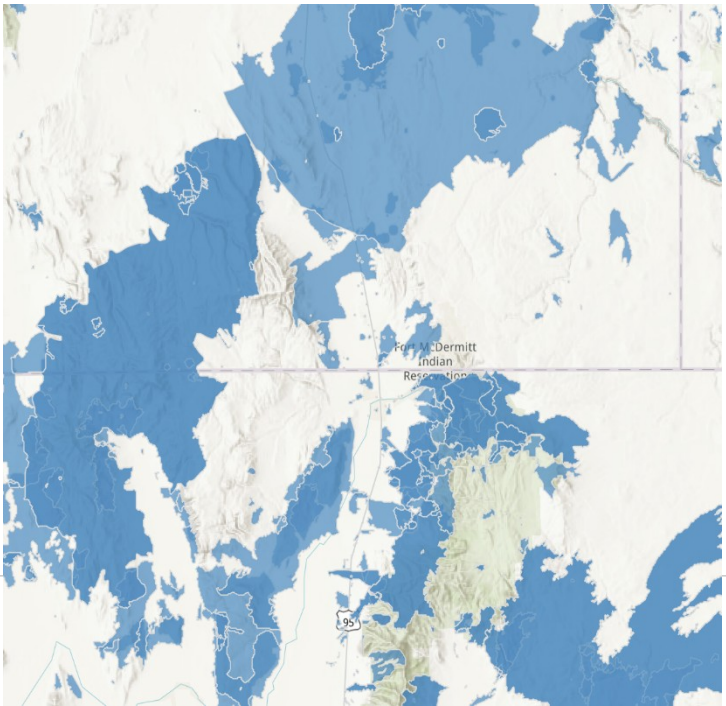


Figure 22: Historic Fires Close to the Fort McDermitt Reservation. Source: Defensible App, 2025. https://www.defensibleapp.com/#10.67/41.9915/-117.6764

Between 1986 and 2024, 29 wildfire events were tracked on or adjacent to the Reservation equating to a rate of nearly one per year, with multiple large events per decade. The 2003 Humboldt County wildfire hazard assessment classified the community as High Hazard, finding that 97 percent of structures lacked adequate defensible space and 78 percent had combustible wood siding. Notable wildland fires on and around the Reservation include:

- 1957: Jakes Fork (26,681 ac.)
- 1986: Bedali 1 Fire (19.91 ac.)
- 1987: BIA 2 Fire (917 acres)
- 1987: 8 Mile Fire (1,372 acres)
- 1988: Two Mile Fire (3,688 ac)
- 1996: Quinn Fire (56,116 acres)
- 1998: Norque Fire (35 acres)
- 1999: Rodeo Fire (13 acres)
- 1999: House 80 Fire (1,850 ac.)
- 2000: School Fire (156 acres)
- 2001: Clinic Fire (16 acres)
- 2001: Quinn River (1,259 acres)
- 2005: North Road (12,855 acres)
- 2006: Dump Fire (603 acres)
- 2007: Dump Fire (173 acres)
- 2012: Ten Mile Fire (10,063 ac.)
- 2013: Reservation Fire (28 acres)
- 2018: Red Mountain (23 acres)
- 2018: Missouri Fire (21 acres)
- 2018: Hearn Fire (72 acres)
- 2018: Rodeo Fire (232 acres)
- 2019: Mack Fire (29 acres)
- 2019: Quinn River (1.33 acres)
- 2020: Riverbed Fire (1.48 acres)
- 2020: North Fire (3 acres)
- 2020: Jack Fire (9 acres)
- 2021: Quinn Fire (49 acres)
- 2021: Washburn (11 acres)
- 2024: Quinn Fire (210 acres)



A critical coordination gap was identified during the October 7, 2025 site visit: responding McDermitt Fire District crews were unaware of Tribal incident command authority during recent fire events. The Tribal

Environmental Director had to make repeated contact attempts to reach already-responding crews on scene. This gap is directly addressed in the wildfire mitigation actions. Arson is also an increasing concern with personal and commercial property having been burned in past events.

Climate Change Considerations

Climate change is making wildfire conditions more frequent and more severe. Warmer temperatures, prolonged droughts, and earlier spring snowmelt extend the fire season. The combination of invasive grass expansion and climate stress has created a 'feast-and-flame' cycle: wet winters generate dense cheatgrass growth; hot dry summers ignite it; each successive fire eliminates native sagebrush and expands cheatgrass coverage. What might have been a moderate fire 30 years ago now burns more intensely and is harder to control because of increased evaporative demand, drier live fuels, and more critical fire weather (low humidity, high winds, extreme heat) days. Climate models also project more frequent dry thunderstorms (lightning with little rain) as a wildfire ignition mechanism.

Figure 23: Historic fire perimeters in and around the Fort McDermitt Indian Reservation. Source. National Interagency Fire Center, 2025.

Vulnerability and Risk Assessment

Physical layout is the primary vulnerability factor: 97 percent of structures lack adequate defensible space, and most homes have sagebrush and cheatgrass extending directly to walls. Most homes have combustible wood framing; even where roofs have been upgraded to Class B shingles, eaves, decks, and vents remain vulnerable to ember ignition.

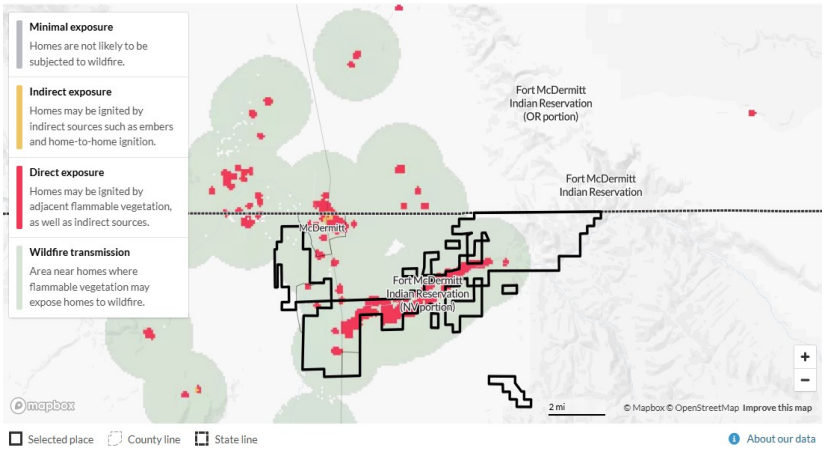


Figure 24: Building Risk by Exposure Zone. Source: USDA. https://wildfirerisk.org/explore/risk-reduction-zones/32/993201210/.

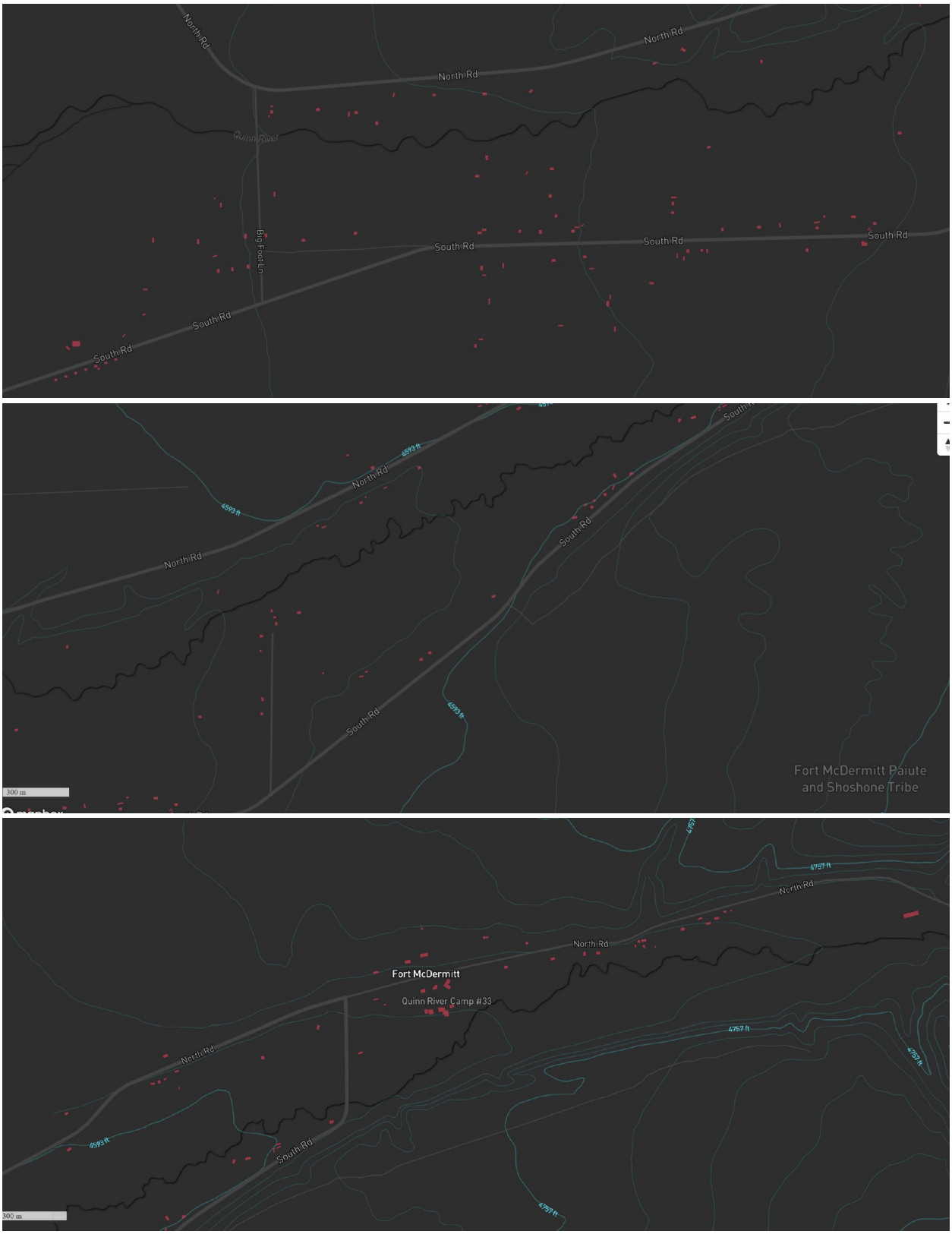


Figure 25: Map series showing wildfire risk to structures located in the Fort McDermitt Indian Reservation. Source: DefensibleApp. https://www.defensibleapp.com/#14.12/41.97131/-117.6196

Evacuation is severely constrained. Only North and South Reservation Roads feeding to Highway 95 provide egress; both can be cut off or smoke-obscured during a large fire. The 2005 North Road Fire documented this risk firsthand. Firefighting capacity is minimal: one aging 1973 Ford Structural tanker, partial hydrant functionality, and dependence on the McDermitt Fire District (14 volunteers, six vehicles) and BLM, both with response times measured in tens of minutes under ideal conditions.

Livelihoods are exposed through rangeland loss and fence destruction, with economic impacts persisting for multiple seasons. After the 2018 Martin Fire, local ranchers lost grazing allotments for multiple seasons. Culturally, wildfire threatens historic buildings including the former cavalry structures used as the Senior Center, sacred natural sites, and ceremonial plants including sage and juniper. Elderly residents and those without vehicles face the greatest evacuation challenges. Smoke from distant fires has blanketed the community for days, creating respiratory risks for the entire population.

Adaptive Capacity

The Tribe's most consistent wildfire mitigation activity is the use of heavy equipment to scrape firebreaks around vulnerable homes and along roadways. Community wildfire awareness is relatively high; the cultural memory of the 2005 North Road Fire maintains a realistic sense that major fire events happen here. Emergency evacuation gathering points have been identified; the Tribe coordinates with the Red Cross and county for shelter during extended evacuations. Post-fire rehabilitation work, including aerial seeding of native grasses to outcompete cheatgrass, is underway. Some structural hardening occurs incrementally as homes are repaired or rebuilt.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	4 – High	Nearly annual events; large fires approximately twice per decade (29 tracked events 1986–2024)
Risk Trend	3 – Increasing	Invasive species expansion plus climate warming driving increased frequency and intensity; clear upward trend
Health & Safety	3 – High	Direct life-safety risk; smoke inhalation community-wide; evacuation routes can be compromised; 2005 event trapped residents
Home & Property	3 – High	All 194 structures in direct exposure zone; 97% lack defensible space; fast-moving fire could consume multiple homes
Livelihoods	3 – High	Rangeland loss for multiple seasons; fence destruction; livestock losses; broad economic disruption
Cultural Wellbeing	3 – High	Historic buildings, sacred sites, and ceremonial plants directly exposed; cultural trauma from displacement
Environmental Harm	3 – High	Permanent ecosystem conversion to cheatgrass; erosion; long-term habitat loss well exceeds $500,000 in value

Factor	Score	Rationale
Infrastructure Damage	2 – Moderate	Power lines, water lines, roads vulnerable; repairable within days to weeks
Recovery Costs	3 – High	Millions of dollars in a major event; rangeland recovery costs persist for years
Government Services	2 – Moderate	Services disrupted during emergency; resume within days to weeks after containment
Risk Acceptability	3 – High	Highest-ranked hazard in community survey; top concern in site visit and Council presentations
Mitigation Potential	2 – High	Defensible space, fuel breaks, building hardening, and preparedness programs all cost-effective and proven

2. Water Quality, Hazardous Materials, and Environmental Degradation

Hazard	Priority Rank	Score (0–1)	Risk Level
Water Quality / Hazardous Materials / Environmental Degradation	**2**	**0.867**	**Very High**

These three related hazards are assessed together because their causes, exposures, and solutions substantially overlap at Fort McDermitt. The community faces persistent water quality challenges from aging infrastructure and naturally occurring arsenic, legacy hazardous mine contamination that has shaped the physical environment of the Reservation, and ongoing environmental degradation from invasive species, erosion, and habitat loss.

Water quality, hazardous materials, and environmental degradation were carried into the assessment as three candidate hazards and were initially profiled separately. Because the same contamination sources, the same land and water systems, the same vulnerable populations, and largely the same mitigation actions recur across all three, the planning team consolidated them into the single hazard profiled here. They are scored once, as one hazard, and are not ranked or profiled separately elsewhere in this plan. The subsections below preserve the distinctions among the three components, and the mitigation actions in the Mitigation Strategy section remain differentiated by component.

Water quality concerns include contamination of the community drinking water system and of the surface water and groundwater on which the community, its livestock, and its wildlife depend.

Hazardous materials (hazmat) concerns encompass accidents or events involving hazardous materials, including chemical spills, toxic gas releases, and contamination events. For Fort McDermitt, key hazmat concerns include: everyday risks from household and business chemical use; transportation accidents on Highway 95, which carries fuel and chemical trucks; legacy mercury and arsenic contamination from the Cordero-McDermitt mine; and domestic storage of

dangerous materials. The Tribe has a historical understanding of hazmat concerns related to EPA Superfund cleanup of toxic mine waste.

Environmental degradation is a broad-reaching hazard that includes soil erosion, loss or fouling of grazing and arable lands, pollution of freshwater resources, and fragmentation of otherwise healthy natural habitats. Degradation can occur as a primary event or as a secondary result of other hazards. Floods, fire, drought, and wind are all linked to topsoil loss, which can set off a chronic environmental crisis that is very difficult to reverse. Over time, environmental degradation leads to reduced biodiversity, diminished rangeland productivity, and harm to culturally important species.

Historical Analysis: Water Quality

Community wells were found to exceed the EPA arsenic standard of 10 parts per billion; an arsenic treatment system was installed in 2020, representing a major infrastructure milestone. However, recurring E. coli boil-water advisories have continued. The community was under a boil-water advisory at the time of the October 7, 2025 site visit. The episode was traced to a backflow incident at a livestock watering trough: a hose left in the trough allowed horse-contaminated water to be siphoned back into the distribution system when line pressure dropped. E. coli boil-water events have occurred on multiple previous occasions following similar contamination pathways.

The water distribution infrastructure includes aging asbestos concrete pipes that are actively leaking in multiple locations. One of the two older water storage tanks is leaking at its base and may not meet current standards. There is no continuous automated water treatment system; the Tribe manages disinfection through manual addition of solid chlorine tablets. The 2024 Annual Water Quality Report documents current conditions; the boil-water advisory documentation confirms a recent event.

Surface water quality in the Quinn River has been affected by upstream cattle grazing and mining runoff. Residents have noted periods of unusual coloration and fish kills. The Tribe has recently been expanding its water quality monitoring capabilities under a Bureau of Reclamation drought-management grant, including drafting a comprehensive Water Monitoring Plan and updated QAPP, mapping existing wells, and planning well rehabilitation.

Historical Analysis: Hazardous Materials

The Cordero-McDermitt mercury mine, which operated from 1933 to 1989, is the most consequential hazmat legacy in Fort McDermitt's history. Mine waste rock was used as fill in residential areas, including near the school. By 2000, studies found extremely high mercury and arsenic levels in mine tailings, in soils, and in groundwater; during this period, some residents had to switch to bottled water because of groundwater pollution. EPA assessed and secured the site by 2012 and completed a major effort to stabilize an 11-acre calcine pile of mercury-laden tailings in 2018. Three EPA Brownfields sites remain active on the Reservation: a historic illegal dump site; the 'Green Building' contaminated with lead paint and asbestos (occupancy limited to 15 minutes due to air quality hazards); and mine-adjacent areas.

Highway 95 transportation hazmat exposure is ongoing. Documented incidents include a diesel tanker spill approximately 10 miles south of McDermitt in the 1990s, a sulfuric acid leakage at a rest stop north of the Reservation in the mid-2000s, and the 2020 destruction of the Red Mountain Travel Plaza (the community's only fuel and grocery retailer, which stored gasoline, propane, food, and household chemicals) suspected to be arson but confirmed as a major acute hazmat event. Domestic incidents include two separate discoveries of illegally stored dynamite (12 sticks in one incident; approximately 35 pounds in another) and a heavy-metals incident involving liquid mercury and lead waste.

The proposed large-scale Lithium Americas extraction operations on adjacent BLM land represent a new and evolving hazmat concern, and add an industrial hazmat dimension not present in the Tribe's recent history. Operations are expected to significantly increase water demands, generate contamination risks from processing chemicals, clear traditional plant areas including juniper and other herbs and plants used in Tribal ceremonies, and bring industrial traffic and infrastructure into proximity with residential areas. The Tribal Council withdrew from a previous mining agreement in 2021 pending further study. NEPA review and Tribal consultation are ongoing.

Historical Analysis: Environmental Degradation

Over the last half-century, Fort McDermitt's environment has seen notable and largely negative changes. Cheatgrass and medusahead invasions, together with recurrent fires, have created a vicious cycle of environmental degradation across the Great Basin and have replaced much of the Reservation's once-diverse sagebrush-bunchgrass ecosystem. Compared to 50 years ago, large swaths of what were once diverse sagebrush-bunchgrass rangelands are now dominated by cheatgrass, a shallow-rooted annual that dies and leaves soils exposed much of the year. Tribal elders have documented springs silted up, streams that once ran clear now running muddy after storms, rangeland dominated by invasive monocultures where native grasses once grew, and wildlife species declining from areas where they were once common.

Humboldt County has lost close to half of its high-quality sage-steppe since the 1980s; Fort McDermitt's landscape reflects that regional trend. Sage-grouse, which require contiguous sagebrush habitat, have declined markedly, and elders recall seeing many in the 1970s that are now rarely observed. Historic overgrazing led to vegetation loss and compacted soils in the mid-to-late 20th century; range management improvements have since occurred, but recovery is slow. Soil erosion from overgrazing and fire is reducing rangeland productivity and increasing sediment loads. The mercury mine left barren tailings piles that remain essentially ecological wastelands and permanent landscape scars. Increased off-road vehicle use in recent decades has created new erosion tracks and disturbed wildlife habitats.

Climate Change Considerations: Water Quality

Drought-driven aquifer draw-down concentrates arsenic in groundwater. More intense rainfall events flush sediments and agricultural pollutants into surface water. Post-wildfire runoff carries ash and heavy metals into streams and shallow wells. Warmer water promotes microbial growth and algal blooms. Climate projections also indicate that lower base flows and higher storm-

runoff peaks will both intensify contaminant concentrations and flush additional sediment, nutrients, and metals into surface waters.

Climate Change Considerations: Hazardous Materials

Climate change itself does not directly cause hazmat incidents, but can influence them significantly. Higher temperatures affect the integrity of storage containers, which can expand, contract, and degrade faster. Prolonged heat makes chemicals more volatile. If wildfire risk is higher, there is greater risk of fire intersecting with stored hazardous materials. More extreme weather (floods, intense storms) can trigger hazmat situations by washing stockpiles of chemicals into waterways or mobilizing contaminants from mine areas and contaminated soils. Heavy rain or erosion might expose buried toxic materials or spread mercury-laden sediments to new areas. As water scarcity intensifies with drought, any contamination of already-limited water resources becomes even more critical because alternatives are not readily available. Increased mining activity driven by battery mineral demand adds a new industrial hazmat dimension.

Climate Change Considerations: Environmental Degradation

Climate change is likely to amplify environmental degradation processes. Heat and aridity favor invasive grasses over native vegetation, accelerating ecological degradation. Increased drought and heat will stress native vegetation further, leading to sparser plant cover and more bare ground, which are prime conditions for wind and rain erosion. More intense rainfall events can cause harsher erosion episodes even as drought weakens plant root systems. Wildfires, as a cause of environmental degradation, are expected to worsen as climate changes, with bigger, hotter fires burning off organic matter and creating hydrophobic soils that produce rapid runoff. Climate stress favors invasive species over native ones, making ecological recovery more difficult after any disturbance.

Vulnerability and Risk Assessment: Water Quality

Community vulnerability to water quality hazards is high because Fort McDermitt has limited alternatives. If the single community water system fails or is contaminated beyond treatable levels, there are no easily accessible alternate sources. Infants, pregnant women, elders, and immunocompromised individuals are most susceptible to both arsenic (a chronic carcinogen) and biological pathogens. The Tribe's small water utility has limited capacity to handle complex or simultaneous contamination events.

The ranching sector is vulnerable to contaminated stock water, which can cause health impacts in cattle and force costly workarounds. Water holds deep spiritual value; contamination of springs and rivers used in ceremony represents a profound cultural harm. If aquatic life dies or accumulates toxins, it eliminates a cultural and subsistence component. The community's dependence on external support for monitoring and response means that a sudden contamination might go undetected for some time.

Vulnerability and Risk Assessment: Hazardous Materials

The Reservation is bisected by Highway 95, so there is always exposure to transported hazardous materials. Many Tribal members live within a few hundred yards of the highway, meaning a toxic spill or gas release could impact people and homes immediately. The community still deals with exposure from contaminated mine areas; residual arsenic in groundwater requires the installation of a treatment system, and if that system fails, exposure resumes. Mercury in soils, if disturbed by construction or children playing, can expose individuals.

Response capacity is severely limited. The Reservation has no hazmat response unit. The nearest specialized hazmat team is in Winnemucca or Elko several hours away. Warning systems are minimal: a sudden highway release would rely on witnesses to call 911 and the tribe to issue alerts using available communications channels. A major hazmat event could damage power infrastructure, contaminate the water supply, and close the highway, compounding the community's isolation.

Vulnerability and Risk Assessment: Environmental Degradation

The community's vulnerability to environmental degradation is high because lifestyle, economy, and culture are all intimately tied to the land's health. Ranchers see reduced carrying capacity on degraded rangelands, translating directly to fewer cattle or costly supplemental feeding. Culturally, many practices rely on specific natural habitats: basket weaving materials from riparian plants, roots from stable meadow areas, game animals from intact sagebrush steppe. Fragmentation and erosion reduce these resources, eroding culture alongside the landscape. Increased dust from erosion causes respiratory illness. The loss of sage-grouse, a creature integral to the environmental identity of the Paiute-Shoshone, represents a cultural harm that transcends economic value.

Adaptive Capacity: Water Quality

The Tribe has built meaningful capacity over time. The Environmental Department conducts regular water quality monitoring and has secured grants for significant infrastructure work. The arsenic treatment system represents a major achievement. The BOR drought-management grant is generating new water infrastructure improvements. The Tribe tests private wells through community programs and informs owners of quality issues. The Tribe also maintains chlorine disinfection capabilities and has generators to keep the water system running during outages.

Adaptive Capacity: Hazardous Materials

Fort McDermitt's adaptive capacity for hazmat incidents is modest with some notable strengths. EPA Superfund and Brownfields programs have addressed the most acute contamination threats, and the Tribe's engagement with those programs on legacy contamination demonstrates experience navigating the federal hazmat response system. The Tribe is included in Humboldt County LEPC hazmat emergency plans, ensuring county hazmat resources are designated to respond. The Tribe's Environmental Department provides regular site monitoring. However, there is no on-Reservation hazmat response capability and no local hazmat emergency plan beyond general coordination with the county.

Adaptive Capacity: Environmental Degradation

The Tribe works with USDA NRCS and other agencies on rangeland management, implementing grazing rotations and set-aside rest areas; this coordination has improved grazing management. Post-fire rehabilitation efforts have included aerial seeding to outcompete cheatgrass and stabilize soil. The Tribe is engaged in sage-grouse conservation plans, which include habitat restoration. Traditional knowledge, including how and when to gather plants sustainably, and how to manage the land across generations, is a key adaptive asset. Tribal schools and programs teach land stewardship, fostering continuity.

Risk Assessment Factor Scores

The factor scores below apply to the consolidated hazard as a whole, covering all three components.

Factor	Score	Rationale
Probability	5 – Severe	Minor water quality events occur regularly; E. coli boil-water advisory confirmed during Oct 2025 site visit
Risk Trend	3 – Increasing	Climate stress, aging infrastructure, and increasing industrial activity all increasing risk; monitoring improvements partially offset
Health & Safety	3 – High	Contaminated water causes widespread illness and chronic health problems; entire population depends on same limited sources
Home & Property	3 – High	Contamination renders land unusable and severely depresses property value, even with structures intact; fear of contamination is difficult to remediate
Livelihoods	2 – Moderate	Ranching sector vulnerable to contaminated stock water; long-term issues could threaten livelihoods significantly
Cultural Wellbeing	3 – High	Water holds deep spiritual value; contamination of springs and rivers used in ceremony is a profound, lasting harm
Environmental Harm	3 – High	Arsenic and mercury contamination affects wildlife and ecosystems; complex remediation costs exceed $500,000
Infrastructure Damage	1 – Low	Contamination does not typically cause direct physical infrastructure damage
Recovery Costs	3 – High	Water system remediation is very expensive; aquifer treatment and pipe replacement well over $500,000
Government Services	3 – High	Safe water is a core government service; contamination forces crisis response and may require school and clinic closure
Risk Acceptability	3 – High	Ranked second in community survey; confirmed major concern in both site visit and December 2025 Council presentation
Mitigation Potential	2 – High	Water quality and hazmat risks are addressable with known technologies; high return on infrastructure investment

3. Extreme Heat

Hazard	Priority Rank	Score (0–1)	Risk Level
Extreme Heat	**3**	**0.667**	**High**

Extreme heat, classified as periods of temperatures 10 or more degrees above average persisting for several days, is the leading cause of weather-related death in the United States. Fort McDermitt's high-desert setting provides little natural shade, and summer days can become intensely hot despite relatively cool nights. Community members ranked extreme heat as the most commonly personally experienced hazard in the planning survey, more than any other hazard including wildfire. The community has no formally designated cooling center, and the nearest hospital is 70 miles away.

Historical Analysis

The Reservation's record high temperature is 107°F, reached on July 11, 2002. That year, a strong high-pressure system brought several days of triple-digit heat to northern Nevada, stressing water supplies and livestock. The late June 2021 Pacific Northwest heat dome event brought unprecedented temperatures across western Nevada; accounts from the site visit notes describe how outdoor work became nearly impossible by midday and how Tribal health workers noted that several elders required check-ins or transport to cooler buildings. Historical accounts from the 1930s Dust Bowl era document multi-year heat and drought cycles that affected the entire Great Basin, including the Fort McDermitt area. Major heat events have occurred in each decade since. The Administration Building had served informally as a cooling resource; a note in site visit materials describes a community event at which an elder experienced heat exhaustion.

Climate Change Considerations

Across Nevada, average temperatures have already been rising, with eight of the ten warmest years since 1895 occurring between 2000 and 2020. Climate projections indicate heat waves will become more common and severe, with more days exceeding 95°F and occasional spikes over 105°F. Nighttime temperatures are also increasing, reducing the overnight recovery window that has historically helped limit heat-related illness even during extreme daytime events. A warmer atmosphere holds more moisture, which can occasionally bring higher humidity during heat waves, compounding physiological stress. These changes have cascading effects: extreme heat contributes to drought intensity by increasing evapotranspiration, and increases wildfire risk by drying vegetation and raising fuel flammability.

Vulnerability and Risk Assessment

Fort McDermitt's vulnerability to extreme heat is shaped by both environmental and social factors. The high desert geography means little natural shade. Many homes are older and lack modern air conditioning; residents have historically relied on evaporative coolers or nighttime cooling. Low-income and elderly residents in older or mobile homes are particularly vulnerable,

as those without working air conditioning face high risks of heat illness during severe multi-day events.

The reservation's remote location magnifies risk: no large medical facility is on-site, so anyone suffering serious heat stroke must be transported over an hour to the nearest hospital. Electricity demand spikes during heat events, creating grid stress and the potential for outages that compound risk. Water infrastructure can be strained by increased demand and reduced well yields during peak heat. Outdoor workers (ranchers, road crews) are particularly exposed. The lack of a formal cooling center or emergency heat plan means the community relies on informal social networks that, while real and meaningful, have limits.

Adaptive Capacity

The community's small size and tight-knit social fabric provide inherent resilience: neighbors, relatives, and Tribal staff often keep an eye on each other during heat events. The Tribal health clinic and Senior Center have air conditioning and have served informally as cooling refuges. The local lifestyle supports informal adaptation: people schedule outdoor tasks in early morning or late evening during the hottest weeks, and ranchers adjust livestock routines. The Tribe has begun outreach on heat safety and, through the USRT Foundation, has built awareness of climate adaptation strategies including developing formal heat response plans. External support from Humboldt County emergency management and Nevada state programs can provide resources in a declared heat emergency.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	5 – Severe	Notable heat events occur nearly every summer; severe multi-day events approximately once per decade; smaller events annually
Risk Trend	3 – Increasing	Clear warming trend in Nevada; projections show more frequent and intense heat events
Health & Safety	3 – High	Extreme heat is the leading weather-related killer in the U.S.; no cooling center; hospital 70 miles away; elders at acute risk
Home & Property	2 – Moderate	Extreme heat stresses building materials, can cause structural damage if homes are not maintained; mobile homes especially vulnerable
Livelihoods	2 – Moderate	Outdoor workers lose work days; livestock stress requires extra management; economic impact is real but mostly temporary
Cultural Wellbeing	2 – Moderate	Heat forces cancellation or modification of outdoor cultural activities, gatherings, and traditional plant gathering
Environmental Harm	1 – Low	Contributes to drought and wildfire as secondary effects; direct remediation cost is typically low
Infrastructure Damage	2 – Moderate	Grid stress and water demand increase during heat events; whole-community impact in a failure scenario affecting >50

Factor	Score	Rationale
		people
Recovery Costs	1 – Low	Unlike flood or wildfire, heat typically does not require major rebuilding; recovery costs are primarily healthcare-related
Government Services	1 – Low	Offices may shorten hours briefly; essential services continue; school is typically on summer break during peak heat
Risk Acceptability	3 – High	Most commonly personally experienced hazard in community survey
Mitigation Potential	2 – High	Cooling centers, weatherization, and early warning systems are low-cost and proven highly effective

4. Drought

Hazard	Priority Rank	Score (0–1)	Risk Level
Drought	**4**	**0.578**	**High**

Drought is a recurrent hazard for Fort McDermitt, manifesting as extended periods of below-average precipitation that lead to water shortages, reduced agricultural productivity, air quality issues, and ecological stress. Nevada is the driest state in the nation, and multi-year droughts significantly impact the wellbeing of communities throughout the Great Basin. Community members ranked drought as the third most commonly personally experienced hazard in the planning survey.

Historical Analysis

Major drought periods in living memory include 1976–77, the late 1980s to early 1990s, the early 2000s, and the 2012–2015 drought which was one of the most severe in modern Nevada history. During 2012–2015, the Quinn River and several nearby springs went completely dry in stretches. Ranchers were forced to significantly cull herds. The Tribe hauled water to remote livestock troughs. The Nevada Drought Forum in 2015 noted Humboldt County as exceptionally impacted, with rangeland production down sharply. During earlier droughts, older residents recall creeks drying up, requiring drilling of new community wells.

The mid-1980s drought resulted in federal aid being provided to area ranchers and the Tribe to haul water for cattle. The 1976–77 drought was so intense throughout Nevada that the Governor declared a drought disaster. During the early 2000s drought, the pine nut harvest in traditional gathering areas was very poor, directly impacting traditional food availability and cultural practices. The socioeconomic toll of drought is less dramatic in the short term but severe over the long term: wells run dry, contaminants like arsenic concentrate in smaller water volumes, and ranching operations face existential strain.

Climate Change Considerations

Climate change is expected to exacerbate drought frequency and severity in the Great Basin. Warmer temperatures increase evapotranspiration, meaning that even if precipitation stays the same the land effectively becomes drier, creating what the Desert Research Institute has described as 'hot droughts,' more damaging than their historical counterparts. Precipitation patterns are also shifting toward more falling in intense storms and less in steady, usable amounts, leading to longer dry spells punctuated by occasional heavy events.

For Fort McDermitt, projections indicate more winter precipitation falling as rain rather than snow, reducing the slow-release snowpack that has historically sustained summer water availability. Future droughts may set in faster and hit harder; soil moisture could drop more quickly through spring and summer. Climate change can also cause more frequent drought-fire feedback loops: drought causes wildfires, which degrade watersheds and reduce infiltration when it does rain, further worsening water supply reliability. Increased competition for water rights in the region may also intensify during future drought periods.

Vulnerability and Risk Assessment

The Reservation's vulnerability to drought is high, particularly in terms of water supply and food security for livestock and for people relying on natural resources. Community wells are vulnerable when aquifer levels drop during extended drought; well output can decline drastically or pumps can burn out. Lower aquifer conditions also concentrate arsenic, so drought not only reduces water quantity but can degrade quality.

Agriculture and livestock are acutely exposed. Drought shrinks forage availability, forcing either herd reduction or expensive supplemental feeding. Many Tribal members' incomes and subsistence are tied to cattle. Drought years mean less calf crop, lower weights, and hence less income, putting severe strain on households. Traditional food gathering is directly impacted: yampa roots, chokecherries, wild turnips, and native berries yield poorly in drought years. Increased dust worsens respiratory health across the community. The emotional and spiritual toll of watching the land suffer, including seeing springs dry and fish die, is real and significant.

Adaptive Capacity

The Tribe has made efforts to improve water infrastructure, including digging additional wells, fixing system leaks, and issuing drought advisories. During the 2012–2015 drought, USDA and BIA provided emergency drought relief including subsidized hay deliveries. Traditional knowledge is an adaptive asset: elders know how to find alternative native foods when common ones fail, and how to manage the land to preserve what's available. Tribal ranchers have adapted by cross-fencing pastures to rotate grazing, and by using BLM grazing permits flexibly. The BOR drought-management grant is generating new well mapping and rehabilitation. The Tribe also participates in USRT regional climate adaptation planning.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	5 – Severe	Droughts are a regular part of Nevada's climate cycle; mild drought conditions occur more frequently than severe multi-year events
Risk Trend	3 – Increasing	Climate projections consistently indicate more frequent and severe droughts in the Great Basin; hotter droughts more damaging
Health & Safety	2 – Moderate	No direct injury risk; chronic impacts include water quality degradation, dust-related respiratory illness, food insecurity
Home & Property	0 – None	Drought does not typically cause physical damage to structures
Livelihoods	3 – High	Ranching community decimated by drought; forage loss, forced culling, traditional food gathering failure, prolonged economic harm
Cultural Wellbeing	2 – Moderate	Dry springs and reduced native plant yields harm practices tied to water and traditional food systems; spiritual distress from watching the land suffer
Environmental Harm	3 – High	Severe ecosystem stress: sagebrush die-off, invasive species spread, wildlife habitat loss; recovery is slow and repeated drought causes cumulative damage
Infrastructure Damage	0 – Negligible	No significant direct infrastructure damage; well function strain addressed under water quality
Recovery Costs	2 – Moderate	Well deepening, water hauling, rangeland restoration, and supplemental feed costs significant over multi-year drought
Government Services	0 – Negligible	Government operations not typically disrupted by drought alone
Risk Acceptability	3 – High	Third most commonly reported experienced hazard; strongly resonates with ranching community
Mitigation Potential	2 – High	Water conservation, drought planning, well rehabilitation, and drought-resilient grazing all reduce risk effectively

5. Illegal Drug Crisis

Hazard	Priority Rank	Score (0–1)	Risk Level
Illegal Drug Crisis	**5**	**0.556**	**High**

Opioid and methamphetamine misuse kills more Nevadans today than traffic-related incidents. The illegal drug crisis affects Fort McDermitt directly and acutely. The Tribe appears in the 2024 Tribal Opioid Abatement Trust use-of-funds report, confirming documented local overdose

burden. Synthetic opioids, particularly illicit fentanyl, methamphetamine, and expanding cannabis use, are causing overdose deaths, family disruption, harm to youth, and erosion of the cultural and social networks that are the community's primary resilience.

Historical Analysis

According to EMS logs for 2024, Fort McDermitt EMS averages two naloxone administrations per quarter. Between 2010 and 2023, there were 345 hospital encounters linked to substance abuse in Humboldt County (population 17,862), of which 30 involved poisoning. State data show Nevada was one of just two states whose overdose deaths rose in 2024 while national numbers fell. Fentanyl seizures in Nevada jumped 213 percent between 2021 and 2022, confirming pervasive availability along the U.S. 95 corridor that bisects Fort McDermitt. Humboldt County's retail opioid-dispensing rate was 11.6 scripts per 100 people in 2023, and the primary threat remains counterfeit 'blues' pressed with fentanyl and polysubstance mixes containing methamphetamine.

Youth cannabis use has increased markedly in recent years, believed to be linked to past theft of plants from the now-failed Reservation cannabis farming operation. There has likewise been an increase in drug use among adult Tribal members, sometimes leading to household, workplace, and school violence. Arson has likewise been linked to the drug trade, including of the community’s sole gas station and grocery store.

Climate Change Considerations

Climate change is not expected to have a direct measurable impact on the drug crisis. Some research indicates that drug use can increase as a secondary impact of extreme-heat shelter closures, wildfire-smoke 'stay-inside' days, and other climate-driven hazard conditions that increase social isolation and stress. However, the primary drivers of the crisis are structural: poverty, unemployment, the U.S. 95 trafficking corridor, limited behavioral health services, and the availability of cheap lethal synthetic opioids.

Vulnerability and Risk Assessment

Factors contributing to vulnerability include poverty, high unemployment rates, and proximity to the U.S. 95 corridor where trafficking is known to occur. Ready access to fentanyl-laced pills at $5 to $10 each makes lethal experimentation accessible, particularly for youth. The Tribal clinic's two-bed infirmary cannot manage a surge in overdoses; severe cases must be transported to Boise or Reno, straining the Tribe's small health budget. Stigma and historical distrust of institutions deter many from seeking help.

The impacts extend well beyond physical health. Families are torn apart by each case of addiction and each overdose. Parents struggling with substance-use disorder increasingly require children to be raised by relatives or in state foster care. Livelihoods are destroyed by addiction. Employers in ranching and maintenance report absenteeism and high turnover during critical seasons. Cultural impacts include family-role disruption and erosion of traditional

practices when caregivers struggle with addiction. Extended family caregiving networks, which have always been the Tribe's most essential resilience mechanism, are being actively eroded.

Adaptive Capacity

The Tribe has taken meaningful steps. Over 300 free naloxone kits have been distributed through the community health representative (CHR) program. A peer-recovery coach was hired in 2023. Nevada Opioid Abatement Trust settlement funds are earmarked for a part-time substance abuse counselor and tele-MAT (medication-assisted treatment) expansion via the forthcoming broadband network. Frontier Community Coalition conducts youth prevention workshops on the Reservation each semester. However, sustained treatment options remain 70 miles away, and stigma continues to deter many from accessing them.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	5 – Severe	Nevada overdose deaths rose in 2024 while national rates declined; fentanyl seizures up 213%; two naloxone administrations per quarter on Reservation
Risk Trend	3 – Increasing	Year-over-year increases in drug-related overdose fatalities; local metrics have not plateaued
Health & Safety	3 – High	Overdose deaths occurring; entire community affected; clinic cannot manage surge; nearest treatment 70 miles away
Home & Property	0 – Negligible	Drug crisis does not cause physical damage to structures as a primary effect
Livelihoods	2 – Moderate	Working-age adults sidelined from ranch and maintenance jobs; absenteeism and turnover during critical seasons
Cultural Wellbeing	3 – High	Addiction has fractured extended-family caregiving networks; funerals for overdose victims; absence of parents at cultural rites erodes continuity
Environmental Harm	0 – Negligible	No direct environmental impact as primary effect
Infrastructure Damage	0 – Negligible	No significant direct infrastructure impact
Recovery Costs	3 – High	Cost of responding to and treating overdoses, increased policing, and foster care expenses can easily exceed $50,000 annually
Government Services	0 – Negligible	Government operations not directly disrupted by drug crisis as primary effect
Risk Acceptability	3 – High	Strong community concern expressed in survey and confirmed in site visit discussions
Mitigation Potential	2 – High	Free naloxone distribution and tele-MAT show progress; sustained treatment options are constrained but achievable with investment

6. Epidemic, Pandemic, and Vector-Borne Disease

Hazard	Priority Rank	Score (0–1)	Risk Level
Epidemic / Pandemic / Vector-Borne Disease	**6**	**0.549**	**High**

This category encompasses infectious disease outbreaks affecting the human population, from local epidemics to global pandemics, and diseases transmitted by vectors such as mosquitoes and ticks. Tribal communities often have heightened vulnerability during pandemics due to limited healthcare access and higher prevalence of underlying conditions. Multi-generational household living which is common on the Fort McDermitt reservation can facilitate disease spread among elders and youth alike.

Historical Analysis

COVID-19 was the most significant human disease event to affect the Tribe in at least a generation. By early October 2020, the Tribe had documented 92 COVID-19 cases and one fatality. Tribal offices and the Wellness Center were heavily involved in testing and isolating cases. The community faced lockdowns and closure of facilities throughout much of 2020. The Tribe received FEMA Public Assistance, its first and only direct federal disaster assistance from FEMA, during the COVID-19 emergency.

Prior to COVID, H1N1 had a notable impact on the community and Humboldt County, though outcomes remained relatively mild. There have been periodic spikes in seasonal flu, including a severe 2017–18 flu season. West Nile virus first appeared in Nevada around 2003; Humboldt County recorded its first confirmed human West Nile infection by 2013 and another in 2017. Rabbit Hemorrhagic Disease (RHD) in wild rabbits has been documented in the Great Basin beginning in 2020, impacting the food chain. Hantavirus, a deadly respiratory disease carried by rodent droppings, has had isolated outbreaks in rural Nevada, though not yet in Fort McDermitt.

Climate Change Considerations

Climate change can influence patterns of infectious disease in several ways. Warming temperatures and changing precipitation can expand habitats for disease vectors. As summers warm and precipitation levels change, mosquito populations can increase and persist longer into fall, increasing West Nile virus transmission windows. Warmer winters may enable ticks at higher elevations, potentially introducing diseases like Rocky Mountain Spotted Fever into areas previously too cold. Extreme heat driving people into communal cooling spaces, if not managed carefully, can create disease transmission environments as occurred during some COVID-19 surges. Globally, climate change is contributing to the emergence of new pathogens and spread of diseases poleward; Fort McDermitt will likely encounter emerging disease dynamics over the planning period.

Vulnerability and Risk Assessment

Healthcare access is the primary vulnerability. The Wellness Center provides basic healthcare but has no hospital capacity. The nearest full-service hospital is in Winnemucca, approximately 70 miles away, meaning serious cases of illness must be transported out. This distance and limited local medical staff make handling a surge of patients in a fast-moving outbreak very challenging. During COVID-19, testing and initial care were handled at the Wellness Center but severe cases required transport to larger facilities.

Community structure accelerates disease spread. Many families live in multi-generational homes and gather at community events. Once a contagious disease enters, it can spread quickly unless gatherings are curtailed, which itself represents a cultural and economic hardship. Lack of dedicated quarantine space makes isolation difficult. Elders, who carry irreplaceable cultural knowledge, are disproportionately vulnerable to severe outcomes from respiratory pathogens. Communication and trust challenges can reduce compliance with health directives, as occurred in some communities during COVID-19.

Adaptive Capacity

COVID-19 resulted in a building of meaningful institutional capacity. The Tribe established coordinated relationships with IHS and county health officials for disease response, implemented testing clinics and vaccination drives in coordination with Humboldt County and the Nevada National Guard, and developed protocols for community-wide health alerts via social media and flyers. These capabilities are transferable to future outbreaks. The Wellness Center staff are better trained in epidemiological surveillance. The Tribe participates in multi-tribal emergency preparedness forums through the Inter-Tribal Council of Nevada. Improvements in internet and cellular connectivity will further strengthen telemedicine capacity going forward.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	3 – Moderate	Minor epidemics (flu, gastro) occur nearly annually; large-scale pandemics approximately once per decade
Risk Trend	3 – Increasing	Emerging infectious diseases globally are increasing; climate change is expanding vector habitats; COVID demonstrated scale of risk
Health & Safety	3 – High	Serious epidemics cause widespread illness and deaths; Wellness Center cannot handle a patient surge; elders at extreme risk
Home & Property	0 – None	Disease outbreaks do not cause physical damage to structures
Livelihoods	3 – High	COVID-19 demonstrated severe livelihood impacts: lockdowns, business closures, inability to work; economic ripple effects significant
Cultural Wellbeing	3 – High	Epidemics force cancellation of ceremonies and funerals; loss of elders is irreparable cultural harm; isolation strains communal bonds

Factor	Score	Rationale
Environmental Harm	0 – None	Human diseases generally do not harm the natural environment
Infrastructure Damage	0 – None	Infrastructure remains physically intact
Recovery Costs	3 – High	Medical treatment, public health interventions, economic relief, and long-term healthcare for survivors can be overwhelming for a small Tribe; COVID required Presidential major disaster declaration
Government Services	3 – High	Government services heavily impacted by staff illness; attention shifts to emergency response; education may move remote or halt
Risk Acceptability	2 – Moderate	Community awareness is high post-COVID but ranked lower than other daily-experienced hazards
Mitigation Potential	2 – High	Vaccination campaigns, public health protocols, PPE stockpiling, community education can significantly reduce epidemic impacts

7. Severe Winter Storms and Extreme Cold

Hazard	Priority Rank	Score (0–1)	Risk Level
Severe Winter Storms and Extreme Cold	**7**	**0.468**	**Moderate**

Severe winter storms at Fort McDermitt are complex events characterized by heavy snowfall, high winds, low temperatures, and ice. These storms can lead to snow accumulation that isolates the community, dangerous travel conditions, prolonged road and school closures, and stresses on power and heating infrastructure. They present particularly high danger because of the reservation's remote location; limited evacuation and access options can effectively trap residents until roads are cleared and prevent outside help from arriving. Extreme cold is assessed as part of this hazard. Winter nights on the Reservation’s high-desert plateau commonly drop below 20°F, and during episodes of extreme cold temperatures can hover near or fall below 0°F, often with severe wind chill. Most extreme cold events arrive with or follow winter storms, but dangerous cold can also settle in without significant snowfall.

Historical Analysis

Fort McDermitt regularly experiences winter storms of varying impacts. Years of remarkable snow accumulation include 1973–74, 1983–84, and 1992–93. During a 1973 event, the Reservation became accessible only by snowmobile for several days; ranchers had to distribute hay by hand. A January 2017 event labeled 'Snowmageddon' dropped more than a foot of

snow, closing Tribal offices and the school for more than a week; secondary roads were impassable and the community center served as an informal warming center.

In December 1990, a storm characterized by both heavy snow and extreme cold caused the Quinn River to freeze over and water lines to burst in Tribal facilities. A February 1986 storm brought sustained winds over 40 mph and drifts that stranded vehicles. An ice storm in January 2005 coated roads and power lines for more than a day. The Tribe has needed to request National Guard snowcat support for medical evacuations during past extreme events. Across the past 50 years, the Reservation has experienced at least one significant winter storm every one to three years, with truly severe multi-day blizzards or snowstorms dumping more than a foot of snow occurring approximately once per decade.

The Reservation’s winter hazard history also includes episodes of extreme cold. One of the most severe cold waves struck in January 1937, when an Arctic air mass drove temperatures to record lows across Nevada and eastern Oregon; Nevada’s all-time record low of -50°F was set on January 8, 1937, at San Jacinto in Elko County, not far from Fort McDermitt. During the winter of 1948–49, a series of blizzards and cold outbreaks paralyzed much of Nevada and the Great Basin; military airlifts dropped hay to stranded livestock and food to isolated families, and many cattle perished on Tribal ranch lands. A January 1989 cold snap broke historic low records across northern Nevada, with widespread frozen pipes, livestock deaths, and demand surges on heating systems, and a December 2013 polar vortex event brought a week of sub-zero nights to parts of Oregon and Nevada including the Fort McDermitt area. Extreme cold events of this severity, while relatively rare, have struck roughly a few times per generation.

Climate Change Considerations

Climate change's impact on winter storms is twofold. On one hand, overall warming is expected to shorten the winter season and reduce snowfall at lower elevations over the long run. On the other hand, when conditions do allow snowfall, a warmer atmosphere holds more moisture, so extreme single-storm events could become more intense. For Fort McDermitt, this could mean fewer total snow days but occasional very heavy snowfalls. Increased atmospheric moisture and polar vortex instability may also lead to burst events of intense cold and storminess despite average warming. More winter precipitation falling as rain rather than snow may increase ice storm risk as temperatures hover near freezing more often. For extreme cold specifically, the probability of a record-breaking cold winter is lower now than in the early twentieth century and the long-term trend is toward fewer record cold events, though the risk is not eliminated.

Vulnerability and Risk Assessment

Transportation vulnerability is high: Highway 95 is the one paved route in and out of the Reservation, with secondary roads primarily unpaved. When roads close, deliveries of food, fuel, and medical transport cease. Residents in outlying ranch homes can be completely isolated. The limited joint tribal and county plow fleet means remote roads may take significant time to clear. During that isolation, any emergency becomes harder to respond to.

Utility vulnerability is significant. If power goes out, most homes lose heat; water pumps on wells stop; communications can fail if cell towers lose power. Extended outages in winter are life-threatening. Housing vulnerability is high for older mobile homes that are not well insulated and rely on continuous heating. Residents with power-dependent medical equipment (oxygen concentrators, dialysis) face life-threatening situations during extended outages. Ranchers face livestock mortality risk, and the economic hit from a major winter storm can require seasons to recover from. Supply chains are vulnerable; a major storm can exhaust local food, fuel, and pharmaceutical supplies. Extreme cold compounds these exposures. Pipes in poorly insulated homes are prone to freezing and bursting when temperatures stay below zero for extended periods, and carbon monoxide poisoning is a risk when residents turn to improvised indoor heating. Dialysis patients can miss treatments when roads close, and the community clinic cannot manage serious hypothermia cases; any such patient requires transport to Winnemucca or beyond.

Adaptive Capacity

The community's adaptive capacity for winter storms reflects both traditional know-how and community solidarity. Residents closely track weather forecasts in winter; when a storm is forecast, many stock up on propane, diesel, groceries, and medicines. Ranchers move livestock to sheltered pastures and stage feed. Those with heavy equipment (tractors, snowmobiles, ATVs) often help clear critical pathways and transport neighbors. The community has a culture of checking on each other: residents open their homes to neighbors whose heat fails, and elders pass down traditional winter survival knowledge, including ways to insulate homes with available materials and how to read the signs of dangerous weather. Ranchers keep relatively cold-hardy livestock and shelter animals before extreme cold arrives.

The Tribe has a few heated public buildings that can serve as warming centers. Many households have wood stoves as heating redundancy. NDOT prioritizes plowing Highway 95 after storms, which helps keep the main route open. In dire situations, the Tribe can request National Guard snowcat support, and the Tribe coordinates snow clearing with the Humboldt County Road Department. The 'wood for elders' program, which provides two cords of heating wood to each elder household each winter, is an exemplary community adaptation that directly reduces cold-weather health risk. Key gaps remain: no formal emergency warming center with dedicated backup generator, and no formal winter storm communication protocol beyond word of mouth.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	4 – High	Significant winter storms occur once every one to three years; truly severe events approximately once per decade
Risk Trend	2 – Stable	Climate change may reduce storm frequency but increase extreme event potential; no clear net change in overall risk level
Health & Safety	2 – Moderate	Cumulative injuries across multiple incidents: traffic accidents,

Factor	Score	Rationale
		hypothermia, falls; community health resources are limited
Home & Property	2 – Moderate	Pipe bursts, roof collapse under heavy snow, frozen water lines; typically repairable but can be costly
Livelihoods	2 – Moderate	Ranchers face livestock losses; temporary income disruption; recovery mostly within one season
Cultural Wellbeing	1 – Low	Events may require rescheduling cultural gatherings; no permanent cultural harm typically results
Environmental Harm	0 – Negligible	Severe winter storms are part of the local ecosystem; no lasting negative environmental impact
Infrastructure Damage	3 – High	Roads closed; power lines felled; water lines frozen; past events have closed the community for more than three days
Recovery Costs	2 – Moderate	Snow removal, pipe repair, road restoration; significant in severe years but generally absorbed in annual budgets
Government Services	3 – High	Offices and school have closed for a week or more in major events; outside emergency services needed in extreme scenarios
Risk Acceptability	2 – Moderate	Community is accustomed to winter conditions; acknowledged as a meaningful hazard though not highest priority
Mitigation Potential	2 – High	Warming centers, weatherization, backup power, and early warning systems are all achievable and cost-effective

8. Strong Wind and Derechos

Hazard	Priority Rank	Score (0–1)	Risk Level
Strong Wind / Derechos	**8**	**0.418**	**Moderate**

Strong wind events include severe windstorms from thunderstorm outflows, cold front passages, and in rare cases widespread derechos (long-lived, straight-line windstorm systems). The Reservation sits in a broad, open high-desert valley with few natural or manufactured windbreaks, leaving it highly exposed to wind. Between 2012 and 2020, across Humboldt County, 18 high wind events were reported, making it the most wind-affected of the tri-county area. Sustained wind speeds during events typically peak at 70 mph, with gusts sometimes exceeding 80 mph.

Historical Analysis

Notable strong wind events near the Reservation include a March 30, 2010 event that brought sustained winds exceeding 39 mph with gusts over 70 mph, toppling trees and blowing over a semi-trailer on I-80 in Humboldt County. A June 10, 2013 dust storm caused by high winds led to a 27-car pileup on I-80 south of the Reservation. The February 1986 storm brought sustained winds over 40 mph with vehicle-stopping drifts. Wind events causing fence damage, roof damage, and power line failures are an annual feature of reservation life. High-wind warnings (for gusts exceeding 58 mph) are issued multiple times per decade in this area.

Climate Change Considerations

The link between climate change and wind hazards is complex and not fully resolved. Some projections suggest that storm tracks could shift and the intensity of individual thunderstorms might increase with more atmospheric energy, potentially leading to more severe downburst winds. However, there is not yet clear evidence that straight-line windstorms will increase significantly in frequency or intensity in this part of the Great Basin. Prolonged drought and heat can kill or weaken trees and vegetation, making them more likely to fail in moderate winds, effectively increasing wind damage potential even without increased wind speeds. Warmer, drier soils also mean strong winds will loft more dust, creating more frequent and severe dust storm conditions.

Vulnerability and Risk Assessment

Many homes on the Reservation are older or of lightweight construction, including mobile homes comprising approximately 22 percent of the housing stock. These structures can have roofs or siding peeled off when gusts exceed 60 to 70 mph. Outbuildings, barns, and fences are vulnerable; strong winds can flatten poorly secured sheds and knock down fencing, releasing livestock. Power and communications infrastructure (poles and above-ground lines) can be blown down, causing outages. With limited grid redundancy, a small number of downed poles can result in widespread and sustained power outages.

Reduced visibility on Highway 95 from blowing dust increases vehicle accident risk, which can isolate the Reservation when the primary roadway becomes blocked. All residents are at risk from wind-borne debris injuries; those with asthma and other respiratory conditions face heightened risk when events include airborne particulates. The primary compound risk is wildfire: wind during dry conditions can accelerate a rangeland fire from manageable to catastrophic in minutes.

Adaptive Capacity

Regularity of wind-driven events has led to a high degree of familiarity among residents with easily achievable mitigation interventions, including securing loose items in yards when wind advisories are issued. Some structural retrofitting has occurred after past wind events. Coordination between the Tribe, NV Energy, and state highway crews helps decrease restoration time after windstorms. Residents can receive National Weather Service high-wind alerts via phone or radio, providing several hours' notice. The tight-knit community provides effective informal warning dissemination among neighbors.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	3 – Moderate	High winds are a frequent annual occurrence; highly damaging events are less frequent, occurring once every 6 to 20 years
Risk Trend	2 – Stable	No clear upward or downward trend; possible slight increase with more energetic thunderstorms
Health & Safety	2 – Moderate	Flying debris, vehicular accidents, and movement of large objects can cause injuries; past events have blown over trucks
Home & Property	3 – High	Windstorms commonly cause roof damage, broken windows, and outbuilding destruction; light structures and mobile homes at significant risk above 70 mph
Livelihoods	1 – Low	Events are usually short-lived; temporary disruptions to ranch work; livelihoods bounce back quickly
Cultural Wellbeing	0 – None	Windstorms do not have a direct impact on cultural sites or practices beyond short-term inconvenience
Environmental Harm	1 – Low	Wind causes soil erosion and dust; minor land degradation; environment generally recovers
Infrastructure Damage	2 – Moderate	Power lines, communication towers, and roads commonly affected; power outages and road debris typical
Recovery Costs	3 – High	Repairing roofs, power lines, and cleaning up debris across large areas can result in high collective costs
Government Services	1 – Low	Minor disruptions possible; operations resume quickly
Risk Acceptability	2 – Moderate	Wind is accepted as a routine feature of life; not ranked highest but recognized as a recurring hazard
Mitigation Potential	2 – High	Better construction standards, timely warnings, and community preparedness (securing loose items, anchoring mobile homes) hold high risk reduction potential

9. Violent Attack, Workplace and School Violence

Hazard	Priority Rank	Score (0–1)	Risk Level
Violent Attack / Workplace and School Violence	**9**	**0.379**	**Moderate**

This hazard covers intentional acts of violence that could cause harm to community members, including scenarios such as an active shooter, domestic violence incidents spilling into public spaces, workplace assaults, or violence on school grounds. Fort McDermitt is a small, tight-knit community with relatively low day-to-day violent crime, but it is not immune. Risks include

interpersonal conflicts that escalate to deadly violence, particularly where drug use and intergenerational family disputes compound tensions.

Historical Analysis

A notable incident occurred in 2018: a double murder in which a Tribal member killed two Tribal members using a firearm. This domestic violence-related event required coordination with federal law enforcement and underscored how interpersonal disputes can escalate to deadly violence affecting multiple people. Earlier, the 1970s and 1980s saw violent incidents outside the old trading post and bar when intoxicated disputes turned into assaults. In 2017, the school prom was cancelled due to perceived threats, creating community tension.

Climate Change Considerations

Climate change is unlikely to have a direct measurable influence on this hazard. Some research has found indirect links between heat, economic stress, and social conflict, but this is not the primary driver of the workplace and school violence concern at Fort McDermitt. The drug crisis is the primary driver, and it is addressed in Hazard Profile 5.

Vulnerability and Risk Assessment

Fort McDermitt's vulnerability to violent attacks comes primarily from limited law enforcement and emergency response resources. The Reservation does not operate a Tribal police department. Response times for a serious violent incident depend on Humboldt County Sheriff or Nevada State Police resources, which are geographically distant. In an active threat scenario, considerable time could elapse before sufficient backup arrives. The local clinic is not equipped for major trauma; the nearest trauma hospital is an hour away.

The school represents a concentration of children and staff in a single location with minimal security. Tribal offices and community events similarly concentrate people in ways that could amplify an incident. Many households have firearms for hunting; if someone decides to misuse them, they already have access. The community's tight-knit nature, while generally a protective factor, can also mean that personal conflicts have roots and knowledge throughout the community, raising the potential for conflicts to become known and then escalate.

Adaptive Capacity

Adaptive capacity includes: lockdown and active shooter drills at the school and Tribal offices; community policing through tight-knit social networks where residents are often aware when someone is threatening violence; MOUs with county and federal law enforcement for rapid escalation response; and basic trauma training and equipment at the health clinic. The FBI would respond to major crimes. The Tribe's social service and health programs provide some capacity for de-escalation through behavioral health support.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	2 – Low	Serious violent events are rare; the 2018 double murder is the

Factor	Score	Rationale
		most significant in recent history; drug-related threats are increasing
Risk Trend	2 – Stable	No clear trend; drug-related conflicts could increase risk slightly, but community prevention work also ongoing
Health & Safety	3 – High	A violent attack can cause multiple fatalities or injuries at once; delayed trauma care dramatically worsens outcomes
Home & Property	1 – Low	Violence primarily targets people, not structures; some property destruction has occurred in conflict-related arson
Livelihoods	1 – Low	Temporary workplace closures possible; livelihoods generally resume quickly
Cultural Wellbeing	2 – Moderate	Violent events violate the sense of communal harmony; community mourning disrupts cultural continuity; fear affects daily community life
Environmental Harm	0 – Negligible	No environmental impact as primary effect
Infrastructure Damage	0 – Negligible	No significant direct infrastructure impact
Recovery Costs	3 – High	Community healing requires significant resources; in mass casualty incidents, facilities where attacks occurred may require demolition or extensive remediation for psychosocial recovery
Government Services	2 – Moderate	Emergency services and legal system fully focused on incident response; routine governance pauses; trust in institutions may be impacted
Risk Acceptability	2 – Moderate	Community is concerned; ranked in middle priority tier
Mitigation Potential	1 – Standard	Drills, security protocols, and behavioral health services can reduce risk; no silver-bullet prevention measure

10. Plant and Animal Epidemic / Invasive Species

Hazard	Priority Rank	Score (0–1)	Risk Level
Plant / Animal Epidemic / Invasive Species	**10**	**0.367**	**Moderate**

This hazard category covers outbreaks of diseases affecting plants or animals, and the spread of invasive species that can disrupt ecosystems. For Fort McDermitt, the main concerns include invasive plants like cheatgrass and medusahead, insect infestations such as Mormon cricket or grasshopper swarms, and diseases that affect wildlife or livestock. Invasive species are particularly relevant in the sagebrush-steppe environment: cheatgrass has proliferated across

rangelands, increasing wildfire risk and out-competing native plants. These biological hazards result in economic losses, ecological degradation, and harm to culturally important species.

Historical Analysis

Cheatgrass invasion accelerated after large fires and heavy grazing; today it is ubiquitous in many areas around Fort McDermitt. Nevada has lost nearly half of its healthy sagebrush habitat since the 1980s largely due to invasive grasses and wildfire. Tribal elders observe native bunchgrasses and wildflowers giving way to cheatgrass, especially after major fires.

In 2020, northern Nevada (including Humboldt County) experienced a major Mormon cricket and grasshopper outbreak severe enough to trigger a USDA APHIS response. Earlier outbreaks were recorded in the 1980s and late 1990s. West Nile virus reached Nevada in the early 2000s; Humboldt County recorded its first confirmed human West Nile infection by 2013 and a horse case in 2017. Rabbit Hemorrhagic Disease (RHD) was documented in the Great Basin beginning in 2020, potentially impacting the food chain and traditional hunting practices.

Clifton Smart described during the October 2025 site visit the active loss of juniper and other plants from clearcutting at mine sites adjacent to the Reservation, both of which are traditional plants integral to Tribal ceremonial practice now being physically removed from the landscape. Traditional plants used in ceremony and medicine are under sustained pressure from invasive competition and habitat disturbance.

Climate Change Considerations

Climate change is expected to exacerbate issues with invasives and biological epidemics. Warmer temperatures favor cheatgrass, which thrives after mild winters and early spring rain; as winters warm, cheatgrass can germinate more successfully and expand its range. Climate change drives more frequent fires that remove sagebrush and allow cheatgrass to fill in, leading to more fires, a self-reinforcing grass-fire cycle. Milder winters mean higher survival rates for overwintering grasshopper eggs or other pests. Warmer temperatures and shifting precipitation expand the range of vectors and pathogens, potentially introducing diseases that were previously limited by cold winters.

Vulnerability and Risk Assessment

The Reservation community is quite vulnerable to invasive species and plant/animal diseases because of its dependence on local land and ecosystems. Invasive weeds like cheatgrass and medusahead directly reduce edible forage on the range, threatening ranching livelihoods. When cheatgrass dominates and pushes out native grasses, cattle gain less nutrition and ranchers must buy supplemental feed, a direct economic impact.

Cultural practices are directly at risk. Native plants used for food or medicine may decline due to invasives or drought. Willow used for basket weaving, sage for ceremony, and traditional herbs and plants for respiratory health are all under active pressure. If invasive weeds overrun riparian

areas, traditionally gathered plants diminish. Large grasshopper infestations can denude fields that would otherwise support sage-grouse and other fauna the Tribe values for cultural and subsistence purposes. The community's capacity to manage invasives over a large Reservation is limited by funding and personnel, and seeds or diseased animals can continuously re-enter from surrounding BLM or private lands.

Adaptive Capacity

Fort McDermitt's adaptive capacity for this hazard is modest but developing. The Tribal Environmental Department manages a noxious weed control program, though resources limit its coverage. Post-fire rehabilitation efforts including aerial seeding demonstrate a commitment to native plant restoration. The Tribe engages with USDA NRCS on rangeland management and has interest in sage-grouse conservation plans that include habitat restoration. Traditional knowledge about sustainable plant gathering and land management is an important adaptive asset transmitted through elders and cultural programs.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	5 – Severe	Threat from invasive species is constant and ongoing; cheatgrass is present every year; pest infestations have occurred repeatedly
Risk Trend	3 – Increasing	Invasive spread has been rising for decades; climate change and continued disturbance suggest the problem will worsen
Health & Safety	0 – None	Most plant/animal invasions do not directly threaten human life or health in the short term
Home & Property	0 – None	Invasive species and animal diseases have little to no direct impact on buildings or property
Livelihoods	2 – Moderate	Ranching economy is vulnerable; invasives reduce grazing capacity; some family livelihoods from traditional plant and animal harvest also impacted
Cultural Wellbeing	3 – High	Loss of native plants and wildlife due to invasives is already markedly impacting cultural practices; juniper and other plants actively being destroyed
Environmental Harm	3 – High	This hazard, by definition, involves significant ecological disruption: biodiversity loss, habitat conversion, food web disruption; often irreversible
Infrastructure Damage	2 – Moderate	Invasive weeds can lead to increased erosion and wildfire risk that in turn damage infrastructure; indirect but real pathway
Recovery Costs	3 – High	Invasive species management, rangeland rehabilitation, pest control, and veterinary costs are cumulative and ongoing; threaten to strain budgets
Government Services	1 – Low	Services not usually interrupted; agencies get diverted to resource management responses
Risk Acceptability	1 – Low	Ranked in lowest priority tercile in community survey; seen as

Factor	Score	Rationale
		background condition rather than acute hazard
Mitigation Potential	2 – High	Established and effective strategies exist including weed control, biological controls, improved grazing practices, and livestock vaccination; high return on investment if sustained

11. Flood

Hazard	Priority Rank	Score (0–1)	Risk Level
Flood (Flash, Riverine, Stormwater)	**11**	**0.343**	**Moderate**

Flooding in the Fort McDermitt area can occur as flash floods, riverine floods along the Quinn River, or stormwater flooding in low-lying community areas. The Reservation's main settlement lies along the Quinn River valley. For much of the year the riverbed is dry or running as a small stream, but during heavy rains or rapid snowmelt it can swell and overflow. Flash flooding is a particular concern in this high-desert region: intense thunderstorms can send walls of water down normally dry washes with very little warning.

Historical Analysis

Major floods in the region occur intermittently. The winter of 1983–84 was extremely wet; heavy spring runoff caused the Quinn River to run high, resulting in near-record flooding in Humboldt County's river systems. Rural roads flooded and infrastructure was impacted. The 2016–17 winter was exceptionally wet, resulting in Nevada's wettest December to February in 123 years. The Quinn River flowed continuously for a rare extended period. Tribal members dealt with flooded fields and impassable dirt roads; ranchers couldn't plant on time or move cattle easily.

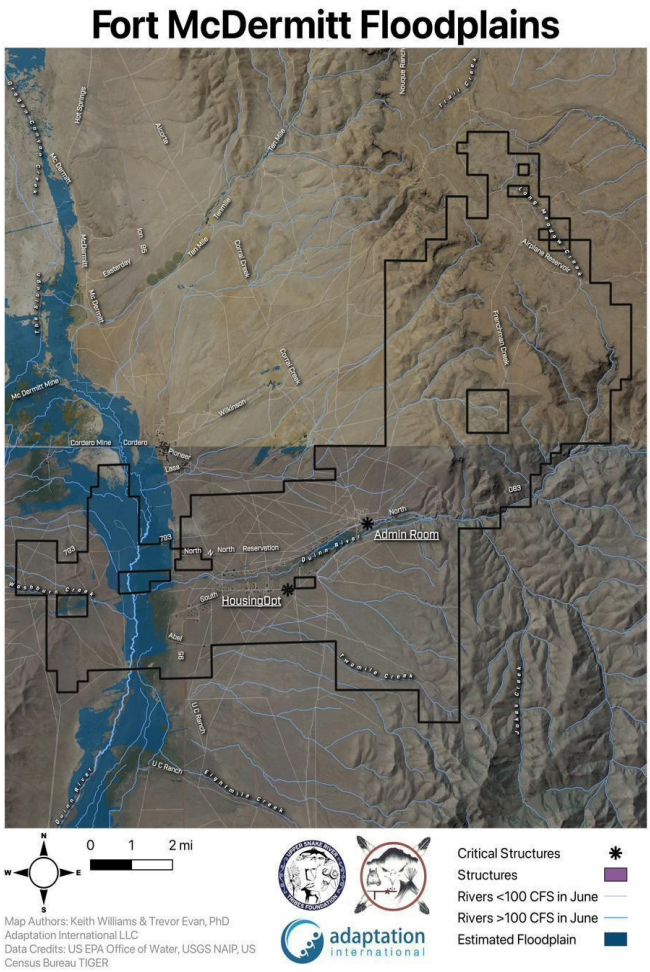


Figure 26: Floodplain Areas, Fort McDermitt Indian Reservation. Source: FEMA National Flood Hazard Layer.

Clifton Smart described the specific flood mechanism in detail during the October 2025 site visit. Three culverts along the Quinn River floodway have high capacity but are prone to sediment buildup from broken beaver dams. There is no organized program or maintenance schedule for clearing these culverts. When they become blocked, significant ponding occurs, the berm overtops, and the road becomes impassable. A handful of homes in this low-lying area are directly vulnerable. Many community members would like a new dam on the Quinn River, on the site of the former cavalry-era dam that failed years ago, to provide flood control, water storage, and irrigation support. That proposal is noted here as meaningful community context; it falls outside the scope of this planning period due to complexity, cost, and the need for independent downstream-exposure analysis before any decision can be made.

Climate Change Considerations

Climate projections suggest that while total precipitation may not drastically increase, the intensity of storms is likely to rise. A warmer atmosphere holds more moisture, so when storms occur they can dump more rain in a shorter period, raising flash flood risk. Longer dry spells followed by intense rainfall produce higher runoff because dry, compacted soil cannot absorb intense precipitation; paradoxically worsening flood risk even in an overall drier climate. More winter precipitation falling as rain rather than snow increases winter streamflow and flood risk in place of slow spring snowmelt. Warmer springs could cause snowpack to melt earlier and more rapidly. Climate-change-driven wildfires remove vegetation; after large fires, the land is far more prone to flash flooding and debris flows, meaning that escalating wildfire frequency above Fort McDermitt will increase post-fire flood risk downstream.

Vulnerability and Risk Assessment

The main residential and administrative area lies on a relatively flat valley floor along the Quinn River drainage. Many homes are built near washes or low spots that could act as flood channels in extreme events. There is limited flood control infrastructure: no levees or floodwalls protect the community. Small culverts exist under roads but can be overwhelmed or clogged in a flash flood.

Transportation infrastructure is particularly vulnerable. The two main Reservation roads cross washes and the Quinn River channel. In a flood, these roads could be washed out or eroded, cutting off people's ability to evacuate or receive emergency assistance. Past minor floods have rendered dirt roads impassable, stranding ranch families until waters receded. There are no USGS stream gauges on the Quinn River near the community that feed into emergency alert systems, meaning floods may arrive with only visual observation or weather forecast warning.

Many homes may not carry flood insurance (the area is mapped in the FEMA NFIP as 'undetermined risk'), making financial recovery after a flood challenging for families. Culturally significant sites including the Powwow grounds are located on flood-prone land. Floods could stir up mercury or arsenic in mine soils, creating lingering health hazards even after waters recede.

Adaptive Capacity

Adaptive capacity for flooding is relatively limited but with high potential for improvement. The Tribal government coordinates with Humboldt County for emergency response. County road crews can provide heavy equipment to clear debris or rebuild washed-out road sections. Some newer culverts have been installed to better divert runoff. The community's small population could be evacuated more easily than a large urban area given sufficient warning. Many ranching families read natural signs and informally know that if the Quinn River 'comes alive' in spring, they keep livestock away from lowest pastures. This traditional awareness helps reduce losses.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	3 – Moderate	Flash floods from thunderstorms or significant runoff events likely occur every few years; damaging flood directly impacting community is less frequent
Risk Trend	3 – Increasing	More intense precipitation events expected; more frequent wildfires increase post-fire flood susceptibility of watersheds
Health & Safety	1 – Low	Floods can be dangerous, causing drowning, debris injuries, and vehicle sweeps, but direct life-safety risk across the broader population is relatively low
Home & Property	2 – Moderate	Significant flooding could damage multiple homes in low-lying areas; water damage to structures, fencing, outbuildings
Livelihoods	1 – Low	Livelihoods drivers are not highly exposed; temporary disruption of ranching operations during flooding
Cultural Wellbeing	2 – Moderate	Culturally important sites including Powwow grounds are on flood-prone land; culturally significant riparian plants and fishing areas can be damaged
Environmental Harm	2 – Moderate	Erosion, water quality degradation, potential mobilization of mine contaminants; riparian zone disruption; moderate and localized
Infrastructure Damage	2 – Moderate	Multiple road segments cross flood-prone washes; culverts can block and cause inundation; utility lines vulnerable in flood corridors
Recovery Costs	3 – High	Debris removal, infrastructure repair, and home repairs can be significant for a small community; flood recovery costs are potentially devastating
Government Services	2 – Moderate	Services may be temporarily disrupted; school and clinic may be inaccessible if roads are out; basic governance resumes within days to a week with outside help
Risk Acceptability	1 – Low	Community is aware of flood risk but ranked in lowest priority tier; other hazards seen as more pressing
Mitigation Potential	1 – Standard	Most cost-effective measures are preventive: culvert maintenance, elevation of vulnerable structures, warning and evacuation systems; larger flood control infrastructure is expensive

12. Infrastructure and Supply Chain Failure

Hazard	Priority Rank	Score (0–1)	Risk Level
Infrastructure / Supply Chain Failure	**12**	**0.305**	**Low**

Fort McDermitt sits in a high-desert basin with a single all-weather arterial, U.S. 95, linking the community to Winnemucca, 73 miles to the south. All gas, food, household supplies, medicine, and networked infrastructure (communications, data, energy) must arrive by that single corridor. Failure of any part of this system has an immediate impact on life and community function. Power arrives over long NV Energy distribution lines traversing open rangeland. Broadband and cellular service remain limited; Red Mountain Communications has recently begun providing fixed-wireless service under an NTIA Tribal Broadband Connectivity grant.

Historical Analysis

The September 2020 destruction of the Red Mountain Travel Plaza by fire (Fort McDermott's only on-reservation gas station and grocery store) eliminated the local source of fuel and groceries, forcing residents to drive out of town for provisions and causing 13 Tribal employees to lose their jobs. Power outages have occurred periodically, including a 2013 summer outage when a transformer failure during a heat wave cut power for 14 hours, leaving residents without cooling or water. A 2018 regional transmission disruption caused outages throughout Humboldt County. A 2019 microwave link failure disrupted cell service for a full day. An October 2023 cyber-attack caused a 48-hour loss of fixed-wireless service with no VOIP-911 backup. A series of severe winter storms in December 2022 through January 2023 snapped distribution lines, causing multi-day outages; the school closed for two days and Tribal administration ran on generators.

Road closures have repeatedly disrupted access, spurred by a range of natural hazards including wildfires, landslides, mudslides, and snow. More frequently, transportation accidents cause road closures. Other infrastructure systems that support the supply chain are likewise vulnerable to disruption, including the April 2024 severing of a fiber trunk in Kansas City that resulted in the loss of 911 and cellular routing for much of rural Nevada for 2.5 hours, including at Fort McDermitt. These incidents demonstrate both the frequency and variety of infrastructure disruptions.

Climate Change Considerations

Climate projections for north-central Nevada show warmer winters with heavier snow bursts and more volatile freeze-thaw cycles, accelerating pavement heave on U.S. 95 and increasing icing on above-ground distribution lines. Hotter summers lengthen wildfire season; smoke has already forced proactive power shutoffs. More extreme weather will challenge infrastructure: heatwaves can cause brownouts; wildfires can burn utility poles; floods can wash out roads. The

community, at the geographic 'end of the line,' would feel supply shortages acutely if climate-driven disasters disrupted regional supply chains.

Vulnerability and Risk Assessment

Remoteness means the Tribe cannot easily pivot to infrastructure or supply chain alternatives. There is no nearby alternate route if U.S. 95 is closed. The community relies entirely on the Nevada Energy grid; if the substation or line goes out, only those with personal generators have electricity. Many cannot afford generators. The water system relies on electric pumps. A power outage of any duration eventually means no running water. Medical care transport requires functional roads and communications. Without the on-reservation convenience store (burned in 2020), residents must drive to McDermitt or Winnemucca for fuel and supplies, making them vulnerable to road conditions.

Cascading failures are a primary concern: a power outage causes water pumps to fail and communications towers to die if backup power runs out, leading to simultaneous loss of multiple services. Economic vulnerability is pronounced: supply chain failures raise costs most acutely for the poorest community members, who cannot absorb price increases or travel costs to obtain supplies from distant locations.

Adaptive Capacity

Community self-reliance is high. Many families keep emergency food stores, extra fuel, and backup heating because they know help is far away. Strong social cohesion enables mutual aid sharing of resources in crises. The Tribe's public works coordinates under mutual-aid agreements with the Nevada and Oregon Departments of Transportation to ensure roads are plowed, cleared, or detoured within 12 hours of a disruption. Red Mountain Communications, which was founded to provide broadband internet and cellular network services to the Fort McDermitt Reservation, is adding microwave redundancy to backhaul links under the NTIA grant, with standby generators at new tower sites. A 75-kW diesel generator now powers the clinic and emergency operations center. However, bulk fuel storage is limited to approximately three days.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	3 – Moderate	Minor interruptions (short power outages, brief road closures) are common; major prolonged failures of a day or longer occur every few years
Risk Trend	3 – Increasing	Aging infrastructure, more extreme weather, and growing cyber threats all increase risk if investments don't keep pace
Health & Safety	1 – Low	Loss of power and communications can quickly become a health hazard for vulnerable individuals but direct community-wide life-safety risk is lower than acute hazards
Home & Property	1 – Low	Function loss rather than physical destruction; spoilage of food and frozen pipes are primary property effects
Livelihoods	2 – Moderate	Local businesses lose revenue during supply failures; ranching

Factor	Score	Rationale
		affected if wells or pumps fail; elevated costs strain lower-income households
Cultural Wellbeing	0 – Negligible	Short-term infrastructure issues are not likely to deeply affect culture; events may be postponed
Environmental Harm	0 – None	No significant environmental impact from infrastructure failure itself
Infrastructure Damage	3 – High	This hazard is, by definition, failure of infrastructure systems or components; events may physically damage transformers, bridges, or road surfaces requiring costly repairs
Recovery Costs	2 – Moderate	Repairing infrastructure and covering emergency costs is significant for a small community; not on scale of a major natural disaster but locally meaningful
Government Services	3 – High	Government operations immediately hampered; crisis mode during supply failures; prolonged failures occupy local government fully
Risk Acceptability	3 – High	Community is highly aware of infrastructure vulnerability given single-corridor access and documented recent incidents
Mitigation Potential	2 – High	Backup generators, redundant communications, emergency supply stockpiles, and diversified supply routes are all feasible and known solutions

13. Earthquake

Hazard	Priority Rank	Score (0–1)	Risk Level
Earthquake	**13**	**0.281**	**Low**

Fort McDermitt sits on the northern edge of Nevada's Basin-and-Range province, an actively extending crustal block. Two Quaternary fault systems bracket the Reservation: the Santa Rosa Range/Orovada fault zone to the west and the Sheep Creek Range faults to the east. These structures show late-Quaternary displacement capable of producing moments of approximately magnitude 6.5 to 7 and peak ground accelerations around 0.20g at the Reservation. Ground shaking, surface rupture along range-front faults, rockfall on steep canyon walls, and secondary effects such as disruption of Highway 95 are the principal hazards.

Historical Analysis

Dozens of very small events (magnitude 3 to 4) have occurred within 100 miles of the Reservation since 1975, giving residents periodic reminders but causing little structural damage. The largest earthquake within 30 miles of Fort McDermitt was a magnitude 3.5 event in April 2020. The USGS database has assessed a 22.15 percent chance of a major earthquake (magnitude 5.0 or greater) occurring within 50 km of Fort McDermitt within 50 years. No surface-rupturing quake has occurred directly beneath the Reservation in the instrumental era; paleoseismic evidence indicates late-Holocene rupture on nearby range-front faults with estimated recurrence intervals of 4,000 to 10,000 years.

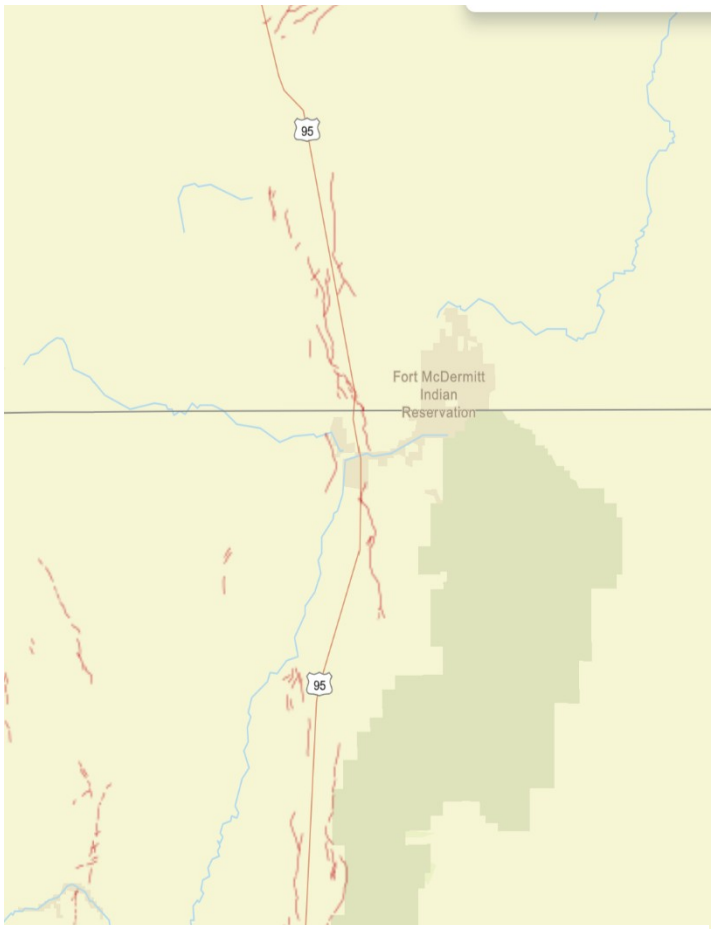


Figure 27: Seismic faults in and around the Fort McDermitt reservation. Source. Earthquake.USGS.Gov.

Climate Change Considerations

Climate change does not directly influence seismicity or earthquake probability. This is one of the few hazards where climate change plays no meaningful role.

Vulnerability and Risk Assessment

Wood-frame construction from the 1960s to 1980s and mobile homes dominate the housing stock. While these predate the 2021 IBC seismic standards, they are not highly vulnerable to the level of shaking expected in a moderate earthquake. Several unreinforced masonry (URM) structures exist around homesteads and the historic fort museum, and these are more vulnerable to wall collapse and chimney failure. The Tribal clinic, Senior Center, Head Start facility, and generator plant are exposed to earthquake risk but are not anticipated to suffer catastrophic damage in a moderate event.

Adaptive Capacity

The community currently has no specific earthquake preparedness program, but existing all-hazards preparedness activities provide some capacity. If an earthquake were to damage Highway 95, the community's broader emergency management protocols, including the Emergency Operations Plan being developed under Action CC-01, would guide response. Seismic retrofitting of identified URM structures would significantly reduce the primary vulnerability in this hazard.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	2 – Low	USGS estimates 22.15% chance of M5.0 or greater within 50 km of Fort McDermitt within 50 years; very small events are periodic
Risk Trend	2 – Stable	No evidence of increasing or decreasing seismic risk in and around the Reservation
Health & Safety	1 – Low	Low likelihood of building collapse given the building stock; falling objects and chimney failures are primary risks
Home & Property	2 – Moderate	Several homes may experience damage in a moderate to large earthquake; URM structures more vulnerable; complete collapse unlikely for wood-frame housing
Livelihoods	0 – Negligible	Livelihoods unlikely to be impacted by an earthquake event even at M5.0, beyond temporary disruption
Cultural Wellbeing	2 – Moderate	Several culturally significant URM structures, including the old cavalry building used as the Senior Center, are vulnerable to earthquake damage
Environmental Harm	1 – Low	Small risk of direct ecological damage from hazardous materials release; limited scope given small quantity of hazmat on Reservation
Infrastructure Damage	1 – Low	Roads and bridges unlikely to be damaged to the extent of being unusable; disruptions should resolve within one day for typical events
Recovery Costs	3 – High	Recovery costs for historic buildings may exceed $50,000; URM structure repair or replacement is expensive
Government Services	2 – Moderate	Tribal offices may close for several days for inspections and support activities after a moderately sized earthquake
Risk Acceptability	1 – Low	Ranked in lowest priority tier; not a daily-experienced or culturally prominent hazard
Mitigation Potential	2 – Standard	Cost-effective measures available: bolt-on retrofits, brace-and-anchor systems, chimney securing, and URM stabilization all have good return on investment

14. Mass Movement

Hazard	Priority Rank	Score (0–1)	Risk Level
Mass Movement (Landslide, Rockslide, Mudslide)	**14**	**0.179**	**Low**

Mass movement hazards include landslides, rockslides, mudslides, and debris flows. Fort McDermitt's terrain is a mix of valley floors and surrounding hills. While not a very wet region,

steep slopes and unconsolidated geologic materials in the surrounding hills could fail under certain conditions, particularly after intense rainfall or wildfire-related vegetation removal. Most community structures are on relatively flat valley-floor ground, limiting direct exposure.

Historical Analysis

There have been few recorded landslides in the immediate Fort McDermitt area in modern times. The aridity of the climate makes large slope failures rare. Occasional small rockfalls are noted after heavy thunderstorms on unpaved roads in the foothills. In 1986, an unusually wet spring caused a small landslide on a steep cut slope along a dirt road leading into the Reservation from the east; a bulldozer cleared it without incident. During the wet 2016–17 winter, minor mudslides were noted along slopes near Paradise Valley and King's River Valley, south of Fort McDermitt. After a 2020 range fire in Oregon just north of McDermitt, rainstorms caused ash-laden mud to wash down draws in a pattern consistent with post-fire debris flows. The historical pattern shows small, infrequent events (rockfalls and sloughing) that residents handle by clearing debris.

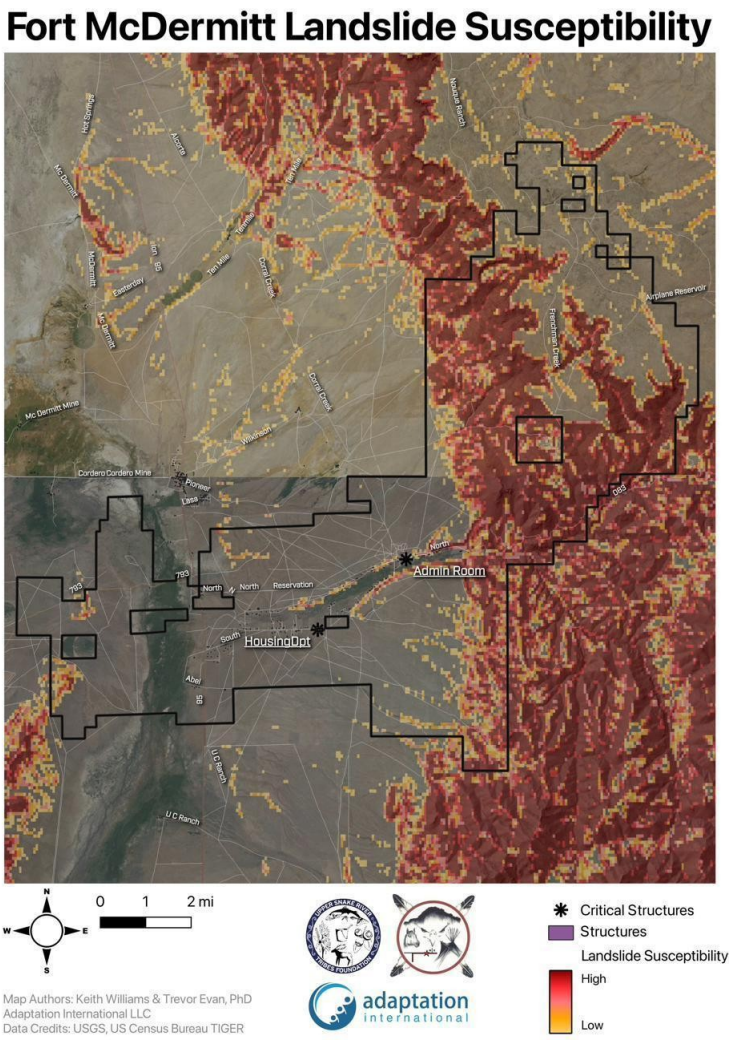


Figure 28: Mass movement hazard map, Fort McDermitt Indian Reservation. Risk is generally low.

Climate Change Considerations

With climate change potentially bringing more intense rainfall episodes, the likelihood of landslide triggers could increase. The combination of wildfire and intense rainfall is the most credible scenario: as wildfires increase, burned slopes lose vegetation root systems, making them prone to mudslides or debris flows when heavy rain arrives. For Fort McDermitt, a large fire in the nearby hills followed by a summer thunderstorm could send muddy flows toward the valley. While the baseline landslide risk is low, this potential interaction with the escalating wildfire hazard means the risk is not static.

Vulnerability and Risk Assessment

Direct vulnerability of populated areas of Fort McDermitt to landslides is relatively low; most homes and buildings are on flat ground well away from steep slopes. Where the community is vulnerable is in transportation and access: Highway 95 and various access roads pass near bluffs or through hilly stretches. A rockslide onto U.S. 95 in a canyon section could isolate the community by blocking the road. Safety vulnerability exists for individuals traveling or working in the hills: people who ride ATVs, herd cattle, or hunt in mountain areas could be caught in a sudden rockfall. Infrastructure including water pipelines or tanks on hillsides could also be at risk.

Adaptive Capacity

Given landslides have been a minor historical issue, there is no robust dedicated adaptive system in place. However, the local road maintenance crew is accustomed to clearing smaller rockfalls and debris after storms, and routinely checks known trouble spots when heavy rains occur. This basic adaptive response prevents minor issues from becoming larger ones. There is minimal capacity to monitor slope stability remotely, but the community can manually assess known risk factors (e.g., an ongoing heavy rainstorm in a recent burn area) and issue local advisories.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	1 – Low	Destructive landslides or mudslides are quite rare given the semi-arid climate and geology; small rockfalls occur occasionally
Risk Trend	3 – Slightly Increasing	Increasing wildfire frequency creates post-fire landslide conditions; intense rainfall events may also increase; baseline remains low
Health & Safety	1 – Low	Threat to life is relatively small as people can generally avoid areas when conditions favor slides; rockfall on roads is primary risk
Home & Property	1 – Low	Most homes are away from landslide risk zones; damage more likely to remote property or fencing than to community structures
Livelihoods	0 – Negligible	Cleanup from a mass movement event is typically completed quickly with little lasting impact on livelihoods
Cultural Wellbeing	0 – Negligible	Unlikely that a landslide would destroy a cultural site given most are not on steep slopes
Environmental Harm	0 – Low	Localized hillside scarring and potential waterway siltation; generally recovers naturally
Infrastructure Damage	1 – Low	Roads are primary concern; a landslide could block or damage a road section; impact is localized and repairable
Recovery Costs	1 – Low	Clearing a landslide and repairing minor damage is manageable; unlikely to require major outside financial assistance

Factor	Score	Rationale
Government Services	1 – Low	Government operations might see minor disruption if a road closure prevents access; normal services resume quickly
Risk Acceptability	1 – Low	Ranked in lowest priority tier; not a recognized daily concern for community members
Mitigation Potential	1 – Standard	Slope stabilization, drainage improvements, and post-wildfire erosion control can reduce risk; low baseline means limited mitigation investment has occurred

15. Dam Breach

Hazard	Priority Rank	Score (0–1)	Risk Level
Dam Breach	**15**	**0.120**	**Low**

Dam breach risk at Fort McDermitt is rated very low because the dam that previously retained water above the community has already failed and has not been replaced. The former cavalry-era dam at the head of the Quinn River valley was originally built by the U.S. Cavalry and later expanded. It failed some years ago. There is no current retention structure to breach. The downstream exposure that dam failure once posed no longer exists in its previous form.

Historical Analysis

Failure of the former Fort McDermitt community dam virtually eliminated the threat from this hazard. The site now shows the remnant earthworks from the original dam. Many community members, and the planning team itself, noted that rebuilding a dam on this site, with modest additional capacity for flood control, water storage, and irrigation support, would be a significant and valued community infrastructure investment. Until that occurs, there is no risk of dam breach in the community.

Climate Change Considerations

If a new dam were to be built in the future, climate change considerations would be highly relevant: increased rainfall intensity, more frequent post-wildfire debris flows in the upstream watershed, and expanded snowmelt variability would all need to be factored into dam design and Emergency Action Plan development. However, as no dam currently exists, climate change is not relevant to current dam breach risk.

Vulnerability and Risk Assessment

Because no dam currently exists, there is no current dam-related vulnerability for downstream residential areas. Any future decision to rebuild a dam would create new downstream exposure that would need to be assessed independently, with a new Emergency Action Plan and inundation mapping developed before construction. The planning team notes that the area

downstream of the former dam site includes portions of the residential community along North and South Reservation Roads.

Adaptive Capacity

Without a dam, no current adaptive capacity is needed for this specific hazard. The Tribe would need to build new emergency planning capacity if a dam is rebuilt, including inundation mapping, dam safety monitoring, and community notification protocols.

Risk Assessment Factor Scores

Factor	Score	Rationale
Probability	1 – Low	The only dam in the planning area has already failed; no current retention structure exists to breach
Risk Trend	2 – Stable	Risk is not increasing or decreasing; dam does not exist
Health & Safety	1 – Low	A future dam, if built without adequate downstream warning systems, would create risk; currently no exposure
Home & Property	2 – Low-Moderate	Historical failure affected some infrastructure; future dam breach would threaten downstream structures
Livelihoods	1 – Low	Current breach risk to livelihoods is minimal; would become significant if a new dam is built and fails
Cultural Wellbeing	1 – Low	Some cultural disruption from historical failure; current risk is low
Environmental Harm	2 – Moderate	A future dam breach could release contaminants from upstream areas; the historical failure had some environmental effect
Infrastructure Damage	1 – Low	No current dam means no current infrastructure failure pathway
Recovery Costs	2 – Moderate	Historical dam failure required infrastructure response; future event costs would depend on dam size and breach conditions
Government Services	1 – Low	No current disruption anticipated from this hazard
Risk Acceptability	2 – Moderate	Community interest in rebuilding a dam means this hazard will likely become more relevant in the future planning period
Mitigation Potential	1 – Standard	If a dam is rebuilt, standard dam safety measures, Emergency Action Plans, and inundation mapping are well-established mitigation tools

SECTION 6: MITIGATION STRATEGY (ELEMENT C)

Mitigation Strategy

FEMA Element C (strategy and action plan): *Establishes mitigation goals, identifies and analyzes a comprehensive range of specific mitigation actions, describes how actions will be prioritized, implemented, and administered, and identifies funding sources. Satisfies 44 C.F.R. Section 201.7(c)(3)(i), (ii), (iii), and (v).*

This section presents the Tribe's mitigation actions for the 2026–2031 planning period, organized by hazard in priority order. Each action has been evaluated using the STAPLEE framework described below.

Mitigation Goals

The mitigation strategy is built on the five mitigation goals established in Section 1, which the planning team identified following outreach with community members and discussions with Tribal leaders and department heads. They are restated here, with their supporting objectives, because they are the basis on which the actions in this section were identified, evaluated, and prioritized.

Goal	Title	Key Objectives
Goal 1	Protect the Health, Safety, and Welfare of Tribal Members	Improve hazard mapping; reduce risk to people and property; ensure vulnerable populations (elders, children, those with medical dependencies) are protected; maintain emergency access; build psychosocial support capabilities.
Goal 2	Protect the Environment and Natural Ecosystems	Advance climate adaptation; promote water conservation, energy efficiency, and sustainable land use; conserve ecosystems that serve as natural hazard buffers; integrate traditional ecological knowledge.
Goal 3	Safeguard Housing, Critical Infrastructure, and Key Facilities	Ensure disaster-resistant housing; identify and retrofit at-risk infrastructure; improve drainage and erosion control; establish redundancy; support continuity of essential Tribal services.
Goal 4	Preserve Cultural and Natural Resources	Protect culturally significant sites, burial grounds, and traditional use areas; build cultural practice resilience; preserve traditional plants and ecological relationships used in ceremony and subsistence.
Goal 5	Strengthen Government Continuity and Emergency Management Capacity	Expand community education; train staff and volunteers; foster intergovernmental coordination; advance continuity planning; build emergency services capacity through funding, training, and equipment.

Action Prioritization Methodology

Mitigation actions are prioritized using a two-step approach. First, each candidate action is evaluated against the STAPLEE criteria (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) described below, consistent with FEMA guidance. Each criterion is scored on a 1-to-5 scale, and the seven criterion scores sum to a STAPLEE total out of 35 that supports comparison across actions. A higher total indicates higher implementation priority.

Second, each action is weighed against the hazard priority order established by the risk assessment in Section 5, so that actions addressing higher-ranked hazards are sequenced earlier. That ranking already reflects the Tribe's hierarchy of protection: in the risk scoring formula, health and public safety impacts carry double weight, reflecting the community's stated top priority, followed by homes and property, livelihoods, environmental harm, and cultural wellbeing, with infrastructure damage, recovery costs, and government services grouped and halved because they tend to move together. The formula also applies a mitigation potential factor and a risk acceptability factor, so hazards where investment is most effective and where community concern is highest carry forward into the ordering of actions here.

Cost-benefit considerations are weighted explicitly. Each action carries an estimated cost and a cost band, defined below. For grant-funded actions, a detailed Benefit-Cost Analysis will accompany each application consistent with FEMA Hazard Mitigation Assistance program requirements.

Cost and Level-of-Effort Definitions

Band	Cost Range	Typical Description
Band A	Under $10,000	Plan updates, single-staff studies, small training events, outreach materials, and equipment under $10,000.
Band B	$10,000 to $50,000	Small construction projects, equipment purchases, training programs, and modest mapping or assessment studies.
Band C	$50,000 to $150,000	Mid-sized capital projects, multi-staff studies, multi-year programs, vehicle or system upgrades, and staffed positions.
Band D	$150,000 to $500,000	Larger capital projects, facility upgrades, multi-phase restoration, and significant equipment acquisition.
Band E	$500,000 to $1 million	Major capital projects and facility construction or replacement at moderate scale.
Band F	Over $1 million	Major facility construction or replacement, multi-mile linear infrastructure, and watershed-scale programs.

Cost estimates are planning-level. Actual project costs will be refined during scoping and grant-application preparation.

STAPLEE Prioritization Framework

STAPLEE is a FEMA-recognized framework for assessing the overall suitability and feasibility of hazard mitigation actions. Each criterion is scored 1 (poor fit / low feasibility) to 5 (excellent fit / high feasibility). Higher total STAPLEE scores indicate higher implementation priority.

Criterion	What It Measures	Scoring Guidance
Social (S)	Acceptability to the community; equity; cultural values.	1=Community opposition or inequity; 5=Broad support, culturally appropriate
Technical (T)	Technical soundness and effectiveness at reducing risk.	1=Technically uncertain or ineffective; 5=Well-proven, high effectiveness
Administrative (A)	Tribe's capacity to implement and maintain the action.	1=No current capacity, high burden; 5=Existing staff and processes can absorb it
Political (P)	Support from Tribal leadership and partner agencies.	1=Strong opposition expected; 5=Broad support across Tribe, county, and federal partners
Legal (L)	Legal authority to implement exists or can be established.	1=Significant legal barriers; 5=Clear authority, no obstacles
Economic (E)	Benefits justify cost; funding is available.	1=Very costly, unclear benefit; 5=Cost-effective, funding sources identified
Environmental (Env)	Avoids negative impacts on ecosystems, water, or cultural landscapes.	1=Potential to cause environmental harm; 5=Environmentally beneficial or neutral

Mitigation Actions by Hazard

Actions are presented below in the priority order of the profiled hazards (Section 5), followed by cross-cutting capacity and emergency management actions. Each action carries a unique code that combines a hazard prefix with a sequential number. Hazard prefixes are as follows:

- WF = Wildfire
- WQ = Water Quality and Hazardous Materials
- ED = Environmental Degradation
- EH = Extreme Heat
- DR = Drought
- DC = Illegal Drug Crisis
- EP = Epidemic, Pandemic, and Vector-Borne Disease
- WS = Severe Winter Storms and Extreme Cold

- SW = Strong Wind and Derechos
- VA = Violent Attack and Workplace or School Violence
- IS = Plant and Animal Epidemic and Invasive Species
- FL = Flood
- IN = Infrastructure and Supply Chain Failure
- EQ = Earthquake
- CC = Cross-cutting capacity and emergency management

Timeframes are as follows:

- Immediate (Year 1)
- Short-term (Years 1 to 3)
- Medium-term (Years 2 to 5)

Each action shows its STAPLEE total out of 35, with the seven criterion scores that produced it shown directly below the action so the basis for the total is clear. Cost bands are defined above. This plan is the Tribe's first FEMA-approved Tribal Hazard Mitigation Plan, so no actions carry forward from a prior plan.

Mitigation actions have been developed for 13 of the 15 assessed hazards. Extreme cold is consolidated with severe winter storms as Hazard 7, and the severe winter storm and extreme cold actions (WS) cover both conditions. Two profiled hazards do not carry their own action sets: mass movement (Hazard 14) and dam breach (Hazard 15) scored below the 0.25 threshold described in Section 5 and therefore receive hazard profiles but no dedicated mitigation actions.

Summary of Mitigation Strategies

Hazard	Code	Mitigation Strategy
Wildfire (WF)	**WF-01**	Community Defensible Space and Home Hardening Program
	WF-02	Wildfire Emergency Response Protocols and Mutual Aid Formalization
	WF-03	Wildfire Apparatus and Equipment Acquisition
	WF-04	Fuels Management and Invasive Species Control for Wildfire Reduction
Water Quality, Hazardous Materials, and Environmental Degradation (WQ, ED)	**WQ-01**	Water Distribution System Assessment and Phased Rehabilitation
	WQ-02	Continuous Automated Water Treatment System
	WQ-03	Brownfields Phase II Assessment and Remediation Planning

Hazard	Code	Mitigation Strategy
	ED-01	Post-Fire Rehabilitation and Native Seed Restoration Program
	ED-02	Soil Erosion Assessment and Targeted Erosion Control Program
	ED-03	Traditional Plant Preservation and Cultural Landscape Stewardship Program
Extreme Heat (EH)	**EH-01**	Cooling Center Designation and Heat Emergency Response Plan
	EH-02	Home Weatherization and Cooling Assistance for Vulnerable Households
	EH-03	Heat Awareness and Early Warning Communications
Drought (DR)	**DR-01**	Water Conservation and Drought Response Plan
	DR-02	Well Rehabilitation and Groundwater Monitoring Enhancement
	DR-03	Drought-Resilient Rangeland Management Program
Illegal Drug Crisis (DC)	**DC-01**	Expanded Substance Abuse Treatment and Peer Recovery Support
	DC-02	Youth Prevention and Cultural Reconnection Program
	DC-03	Naloxone Distribution and Overdose Response Capacity
Epidemic, Pandemic, and Vector-Borne Disease (EP)	**EP-01**	Infectious Disease Surveillance and Response Protocols
	EP-02	Pandemic Supplies Stockpile and Wellness Center Surge Plan
	EP-03	Vector-Borne Disease Monitoring and Education
Severe Winter Storms and Extreme Cold (WS)	**WS-01**	Emergency Warming Center Designation and Backup Power
	WS-02	Home Heating Weatherization and Pipe Protection
	WS-03	Winter Storm Early Warning and Road Coordination
Strong Wind and Derechos (SW)	**SW-01**	Wind-Resistant Building Retrofits and Mobile Home Anchoring Program
	SW-02	Wind Event Early Warning and Community Communication Protocol
	SW-03	Power Line and Critical Infrastructure Wind Hardening Assessment
Violent Attack, Workplace and School Violence (VA)	**VA-01**	Active Threat Response Training and Drills Program
	VA-02	Behavioral Health and Crisis Intervention Services Expansion
	VA-03	Physical Security Upgrades at Tribal Administrative and School Facilities
Plant and Animal Epidemic / Invasive Species (IS)	**IS-01**	Cheatgrass and Noxious Weed Control Program: Targeted Annual Treatment
	IS-02	Livestock Disease Monitoring and Vaccination Coordination Program

Hazard	Code	Mitigation Strategy
	IS-03	Grasshopper and Mormon Cricket Outbreak Preparedness and Response Plan
Flood (FL)	FL-01	Culvert Maintenance and Drainage Management Program
	FL-02	Floodplain Mapping and Low-Lying Structure Assessment
	FL-03	Flood Early Warning and Rapid Evacuation Protocol
Infrastructure and Supply Chain Failure (IN)	IN-01	Emergency Supply Stockpile and Bulk Fuel Reserve Program
	IN-02	Backup Generator Program for Critical Facilities
	IN-03	Communications Redundancy and Emergency Notification System
Earthquake (EQ)	EQ-01	Unreinforced Masonry (URM) Structure Assessment and Seismic Retrofitting
	EQ-02	Household Earthquake Safety and Contents Anchoring Program
	EQ-03	Critical Infrastructure Seismic Vulnerability Review
Cross-Cutting Capacity and Emergency Management (CC)	CC-01	All-Hazards Emergency Operations Plan (EOP)
	CC-02	Formalized Emergency Management Function and Training
	CC-03	Broadband and Emergency Communications Infrastructure

Wildfire Mitigation Actions

Action Code	WF-01
Action Title	Community Defensible Space and Home Hardening Program
Description	Annual clearing of vegetation within 30 feet of all structures; plain-language guidance including Paiute-Shoshone language materials where possible; voluntary home hardening targeting ember-resistant vents, Class A roofing, and combustible deck replacement. Cross-references 2003 Humboldt County Wildfire Assessment (97% of structures lack defensible space) and 2025 CWPP.
Lead Department	Environmental Department / Housing Department
Supporting Departments	Roads and Maintenance; BLM; USDA Forest Service; Nevada Division of Forestry
Timing	Year 1–2 (Immediate to Short-Term)
Estimated Cost	$40,000–$80,000 per year | Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces structure ignition risk across all 194 at-risk structures. Most cost-effective single wildfire action. Directly addresses the 2003 finding that 97% of structures lacked defensible space.
Potential Funding	FEMA BRIC; FEMA HMGP; USDA Forest Service Community Wood Grant;

	BLM Fuels Management; Nevada Division of Forestry
STAPLEE Total Score	31

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	High community acceptance; culturally appropriate; protects elders and families.	**5**
Technical (T)	Defensible space is the most evidence-supported structure-protection measure available.	**5**
Administrative (A)	Manageable within Environmental Dept capacity with modest augmentation.	**4**
Political (P)	Broad Tribal Council support; state and county partners endorse.	**5**
Legal (L)	Fully within Tribal authority; no legal barriers.	**5**
Economic (E)	High benefit-to-cost ratio; BRIC, HMGP, USDA, and BLM cost-share funding available.	**4**
Environmental (Env)	Beneficial; reduces post-fire erosion and invasive species spread.	**3**

Action Code	WF-02
Action Title	Wildfire Emergency Response Protocols and Mutual Aid Formalization
Description	Develop formal wildfire emergency response protocols: Tribal incident command structure; pre-established communication channels with McDermitt Fire District and BLM; evacuation route mapping and signage; community fire notification system. Formalize mutual aid MOUs with the McDermitt Fire District and Humboldt County OES. Directly addresses the command-authority gap documented in the October 7, 2025 site visit in which responding crews were unaware of Tribal incident command.
Lead Department	Tribal Administrator (Emergency Management Lead)
Supporting Departments	Tribal Council; McDermitt Fire District; BLM; Humboldt County OES
Timing	Year 1 (Immediate; highest priority wildfire action)
Estimated Cost	$5,000–$20,000 | Cost Band B: $10,000–$50,000
Benefit to Tribe	Reduces response confusion; accelerates mutual aid activation; improves evacuation coordination. Prevents the command-authority gap that has occurred during recent fire events from recurring.
Potential Funding	FEMA EMPG; FEMA BRIC; EPA GAP; Tribal operating budget

STAPLEE Total Score	32

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community broadly supports improved emergency coordination.	**5**
Technical (T)	Incident command protocols are well established; straightforward to implement.	**5**
Administrative (A)	Requires time from Tribal Administrator; no new positions needed.	**4**
Political (P)	Strong support from Council, Fire District, and county EM directors.	**5**
Legal (L)	Tribal authority is clear; MOUs with external agencies are standard practice.	**5**
Economic (E)	Very low cost with potentially life-saving return.	**5**
Environmental (Env)	No environmental impact.	**3**

Action Code	WF-03
Action Title	Wildfire Apparatus and Equipment Acquisition
Description	Priority would be a wildland-interface fire tanker or Type 6 engine suited to the Reservation's terrain. Also include PPE for community members with wildland firefighting experience who would respond until outside resources arrive.
Lead Department	Tribal Administrator; Environmental Department
Supporting Departments	USRT Foundation; Humboldt County OES; BLM; NV Division of Forestry
Timing	Year 1–3 (Short-Term)
Estimated Cost	$75,000–$200,000 | Cost Band D: $150,000–$500,000
Benefit to Tribe	Provides first-response capability before outside resources arrive. Reduces structure loss risk in the first 30–60 minutes. Enables the Tribe to participate in regional mutual aid as a provider.
Potential Funding	BLM Rural Volunteer Fire Assistance; USDA Fire Assistance for Rural Volunteer Fire Departments; FEMA Assistance to Firefighters Grant (AFG); DHS Tribal Homeland Security Grant
STAPLEE Total Score	28

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Strong community and Council support; endorsed by Fire Chief.	**5**
Technical (T)	Standard equipment acquisition; well-proven solution.	**5**
Administrative (A)	Requires grant writing and procurement; ongoing maintenance commitment needed.	**3**
Political (P)	Supported by Council and Fire District.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Higher capital cost; strong grant pathways through BLM and FEMA.	**3**
Environmental (Env)	Neutral.	**3**

Action Code	WF-04
Action Title	Fuels Management and Invasive Species Control for Wildfire Reduction
Description	Develop and implement a coordinated fuels management program targeting cheatgrass and medusahead in the wildland-urban interface around the community core. Activities: mechanical or herbicide treatment in priority zones; native seed restoration following treatment; coordination with BLM fuels management on adjacent federal land. Cross-references 2003 Humboldt County Fire Plan fuel hazard mapping and USRT Adaptation Strategy Database.
Lead Department	Environmental Department
Supporting Departments	USDA NRCS; BLM; Nevada Division of Forestry; USRT Foundation
Timing	Year 2–5 (Medium-Term: ongoing program)
Estimated Cost	$50,000–$150,000 annually | Cost Band D: $150,000–$500,000
Benefit to Tribe	Breaks the invasive grass-fire cycle driving increasing fire frequency. Long-term benefit to rangeland productivity, cultural resources, and fire suppression costs. Also reduces the environmental degradation hazard.
Potential Funding	USDA NRCS EQIP; BLM Fuels Management; Great Basin Fire Science Exchange; Nevada Division of Forestry
STAPLEE Total Score	26

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Aligned with Tribal land stewardship values; community interest in protecting rangeland.	**4**
Technical (T)	Established techniques; high effectiveness with sustained commitment.	**4**
Administrative (A)	Requires ongoing multi-agency coordination; Tribal capacity currently limited.	**3**
Political (P)	Supported across federal, state, and Tribal partners.	**5**
Legal (L)	No barriers; BLM and USDA have established cooperative frameworks.	**5**
Economic (E)	Higher ongoing cost; NRCS EQIP and BLM cost-share available.	**3**
Environmental (Env)	Highly beneficial; restores native plant communities and reduces fire.	**4**

Water Quality, Hazardous Materials, and Environmental Degradation Mitigation Actions

Hazard 2 consolidates water quality, hazardous materials, and environmental degradation into a single hazard. Mitigation actions remain differentiated by component and are presented below in the same order in which the components appear in the hazard profile.

Water Quality Actions

Action Code	WQ-01
Action Title	Water Distribution System Assessment and Phased Rehabilitation
Description	Commission a comprehensive condition assessment of the Reservation's water distribution system: evaluate aging asbestos concrete pipes; assess both older water storage tanks (one currently leaking at the base); inspect and map all hydrants; map groundwater wells. Develop a prioritized rehabilitation plan with cost estimates. Begin implementation in Year 1 with highest-priority repairs (the leaking tank and the most deteriorated pipe segments).
Lead Department	Environmental Department
Supporting Departments	IHS Division of Sanitation Facilities; BOR; EPA GAP Program
Timing	Year 1 (assessment); Year 2–5 (phased rehabilitation)
Estimated Cost	$15,000–$30,000 (assessment); $200,000–$1M+ (rehabilitation) | Cost Band F: Over $1 million

Benefit to Tribe	Addresses the root cause of recurring E. coli boil-water advisories. Critical for public health and SDWA compliance. Directly responsive to October 2025 site visit findings.
Potential Funding	IHS Sanitation Facilities Construction Program; BOR WaterSMART; EPA Tribal Clean Water Act §106; USDA Rural Development Water and Waste Disposal
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Water quality is a top community concern; very high social support.	**5**
Technical (T)	Assessment and rehabilitation are well-understood; IHS has extensive expertise.	**5**
Administrative (A)	Assessment manageable within EPA GAP program; rehabilitation requires grant management.	**4**
Political (P)	Strong Council priority; federal agency partners aligned.	**5**
Legal (L)	No barriers; may be legally required for SDWA compliance.	**5**
Economic (E)	High cost but strong benefit; IHS and BOR funding is purpose-built for this.	**3**
Environmental (Env)	Beneficial: reducing leaks and contamination protects downstream environment.	**3**

Action Code	WQ-02
Action Title	Continuous Automated Water Treatment System
Description	Design and install a continuous automated water treatment system to replace manual solid-chlorine addition. System to include continuous chlorination or UV disinfection, real-time water quality monitoring sensors, and automatic notification when parameters are exceeded. Directly addresses the documented absence of continuous treatment and the recurring E. coli boil-water advisories.
Lead Department	Environmental Department
Supporting Departments	IHS; EPA; BOR; Tribal Council
Timing	Year 1–3 (Short-Term)
Estimated Cost	$80,000–$250,000	Cost Band E: $500,000–$1 million

Benefit to Tribe	Eliminates the primary mechanism of E. coli contamination events. Provides real-time detection before illness occurs. Ensures Safe Drinking Water Act compliance.
Potential Funding	IHS Sanitation Facilities; EPA Tribal Drinking Water Grant; BOR WaterSMART; USDA Rural Development
STAPLEE Total Score	28

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects health; community has lived with recurring boil-water conditions.	**5**
Technical (T)	Proven technology; IHS and EPA have implemented many such systems.	**5**
Administrative (A)	Requires ongoing maintenance and calibration; training needed.	**4**
Political (P)	Strong Council support.	**4**
Legal (L)	No barriers; likely legally required for SDWA compliance.	**5**
Economic (E)	Moderate cost; strong IHS and EPA funding pathway.	**3**
Environmental (Env)	Beneficial: protects downstream water quality.	**3**

Hazardous Materials Actions

Action Code	WQ-03
Action Title	Brownfields Phase II Assessment and Remediation Planning
Description	Complete Phase II environmental assessments on all three identified EPA Brownfields sites: the historic illegal dump site; the 'Green Building' contaminated with lead paint and asbestos (occupancy limited to 15 minutes due to air quality); and mine-adjacent areas. Develop remediation plans in coordination with EPA Region 9. Prioritize the Green Building given proximity to housing and its limitation as emergency storage.
Lead Department	Environmental Department
Supporting Departments	EPA Region 9 Brownfields Program; BIA; Tribal Council
Timing	Year 1–2 (Short-Term)
Estimated Cost	$50,000–$300,000 (assessment and planning) | Cost Band E: $500,000–$1 million

Benefit to Tribe	Protects community health by eliminating known toxic exposure points. Enables use of the contaminated warehouse for emergency storage (a critical resilience gap identified in the site visit).
Potential Funding	EPA Brownfields Assessment Grant; EPA Brownfields Cleanup Grant; BIA Environmental Compliance
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Addresses a known health risk near residential areas.	**5**
Technical (T)	Standard environmental assessment and remediation; EPA has deep expertise.	**5**
Administrative (A)	Primarily EPA-led with Tribal coordination; manageable burden.	**4**
Political (P)	Strong Tribal and EPA support.	**5**
Legal (L)	EPA Brownfields program provides legal and technical framework.	**5**
Economic (E)	Moderate cost; EPA Brownfields grants cover most or all assessment costs.	**4**
Environmental (Env)	Highly beneficial: removes toxic contamination from the landscape.	**3**

Environmental Degradation Actions

Action Code	ED-01
Action Title	Post-Fire Rehabilitation and Native Seed Restoration Program
Description	Develop and implement a sustained post-fire rehabilitation program that deploys native seed mixes to burned areas on Tribal land within the first growing season after a wildfire, before cheatgrass can establish dominance. In coordination with USDA NRCS and BLM, develop pre-positioned seed stockpiles of locally-sourced native grass and forb mixes, establish protocols for rapid post-fire deployment, and conduct monitoring of vegetation recovery for three years after each major fire. Also address erosion control on road cuts and bare soil areas identified during site visits.
Lead Department	Environmental Department
Supporting Departments	USDA NRCS; BLM; Nevada Division of Forestry; USRT Foundation
Timing	Year 1–2 (planning and seed procurement); ongoing post-fire response

Estimated Cost	$20,000–$80,000 per major fire event; $10,000–$20,000 per year for ongoing monitoring | Cost Band C: $50,000–$150,000
Benefit to Tribe	Breaks the cheatgrass-fire cycle by displacing invasives before they can establish after fire. Native plant restoration directly supports cultural practices including traditional gathering, medicinal plant use, and sage-grouse habitat. Also reduces soil erosion and watershed degradation.
Potential Funding	USDA NRCS EQIP; BLM Burned Area Rehabilitation; USDA Forest Service; Great Basin Landscape Conservation Cooperative
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Restoration of native plants supports cultural gathering and traditional practices; high community resonance.	**5**
Technical (T)	Native seed rehabilitation after fire is well established; locally sourced seed mixes are most effective.	**5**
Administrative (A)	Requires advance planning and seed stockpiling; Environmental Dept can manage with NRCS technical support.	**3**
Political (P)	Supported by USDA, BLM, and Tribal Council.	**5**
Legal (L)	No barriers; BLM and NRCS have cooperative agreement frameworks.	**5**
Economic (E)	Moderate cost per event; strong federal funding through burned area emergency programs.	**3**
Environmental (Env)	Highly beneficial; restores native ecosystems, reduces erosion, improves water quality.	**4**

Action Code	ED-02
Action Title	Soil Erosion Assessment and Targeted Erosion Control Program
Description	Conduct a Reservation-wide soil erosion assessment to identify the highest-priority erosion sites, including overused road cuts, overgrazed areas, stream banks, and post-fire bare soil zones, and develop a prioritized erosion control action plan. Implement structural and vegetative erosion control measures including: riparian replanting along the Quinn River and its tributaries; installation of rock check dams in high-erosion swales; and road surface improvements on the most erosion-prone dirt roads. Cross-references the Nonpoint Source Pollution Management Plan (2025).
Lead Department	Environmental Department

Supporting Departments	USDA NRCS; BLM; Roads and Maintenance; USRT Foundation
Timing	Year 1–2 (assessment); Year 2–5 (implementation)
Estimated Cost	$15,000–$25,000 (assessment); $30,000–$150,000 (implementation) | Cost Band D: $150,000–$500,000
Benefit to Tribe	Reduces sediment loading into Quinn River and tributary waterways, improving water quality. Protects rangeland productivity. Preserves riparian habitat used for traditional plant gathering. Reduces flood risk by improving drainage function.
Potential Funding	USDA NRCS EQIP; BLM Range Improvement; EPA Nonpoint Source §319 Tribal Grants; USDA Rural Development
STAPLEE Total Score	26

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly supports ranching livelihoods and traditional plant access; high community benefit.	**4**
Technical (T)	Standard erosion control techniques; well established and proven.	**5**
Administrative (A)	Requires coordination with NRCS and road maintenance; Environmental Dept can lead.	**3**
Political (P)	BLM, NRCS, and Tribal Council are all supportive.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; NRCS EQIP and EPA §319 funds purpose-built for this.	**3**
Environmental (Env)	Highly beneficial: reduces sediment loading, improves water and habitat quality.	**4**

Action Code	ED-03
Action Title	Traditional Plant Preservation and Cultural Landscape Stewardship Program
Description	In coordination with the Language Preservation Department and Tribal elders, develop and implement a traditional plant preservation program that maps the locations of culturally important plant communities on Tribal land (juniper, sage, willows, yampa, and others), documents traditional ecological knowledge related to their use and management, and establishes protected zones or sustainable harvesting protocols for at-risk species. Engage with the ongoing NEPA review for adjacent lithium mining

	operations to formally document Tribal cultural plant resources and assert Tribal interests in their protection.
Lead Department	Environmental Department / Language Preservation Department
Supporting Departments	Tribal Council; USRT Foundation; BLM; BIA; THPO (Tribal Historic Preservation Office)
Timing	Year 1–3 (Short-Term)
Estimated Cost	$20,000–$60,000 | Cost Band C: $50,000–$150,000
Benefit to Tribe	Preserves cultural plant resources that are integral to Tribal ceremonies, medicine, and subsistence. Provides documentary record of cultural resources for NEPA review of adjacent mining operations. Protects and transmits traditional ecological knowledge.
Potential Funding	EPA Indian Environmental GAP; USDA NRCS; BIA Cultural Resources; NEH Preservation Assistance; Nevada Humanities
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly supports cultural continuity; described as a priority during the October 2025 site visit.	**5**
Technical (T)	Ethnobotanical mapping and TEK documentation are well-established methods.	**5**
Administrative (A)	Requires coordination with Language Preservation Dept and elders; manageable.	**4**
Political (P)	Strong Tribal Council support; cultural preservation is a core goal.	**5**
Legal (L)	No barriers; NHPA Section 106 and NEPA review process provides formal legal pathway.	**5**
Economic (E)	Low to moderate cost; EPA GAP and NEH grants support this type of work.	**4**
Environmental (Env)	Highly beneficial: directly protects culturally important plants and ecosystems.	**4**

Extreme Heat Mitigation Actions

Action Code	EH-01
Action Title	Cooling Center Designation and Heat Emergency Response Plan
Description	Formally designate and equip at least two community cooling centers.

	Develop and disseminate a Community Heat Emergency Response Plan with activation criteria, notification procedures, elder transportation, and Wellness Center medical monitoring coordination. Establish protocols for proactive welfare checks on vulnerable residents. Note: Administration Building previously served informally as a cooling space; there are records of community members experienced heat exhaustion at community events, confirming the need for a formal designation.
Lead Department	Tribal Administrator / Human Services
Supporting Departments	Wellness Center; Tribal Council; Housing Department
Timing	Year 1 (Immediate)
Estimated Cost	$10,000–$30,000 (setup plus backup generator) | Cost Band B: $10,000–$50,000
Benefit to Tribe	Directly reduces heat illness and death risk for elders and vulnerable community members. Community survey found extreme heat to be the most commonly personally experienced hazard.
Potential Funding	LIHEAP; FEMA BRIC; BIA Community Development; Nevada Aging and Disability Services
STAPLEE Total Score	32

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects most vulnerable members; very high social support.	**5**
Technical (T)	Standard cooling center implementation; proven effective.	**5**
Administrative (A)	Requires staff coordination and activation protocol; operationally manageable.	**4**
Political (P)	Strong Council and community support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Low cost with high life-safety benefit; LIHEAP and FEMA funds available.	**5**
Environmental (Env)	No negative impact.	**3**

Action Code	EH-02
Action Title	Home Weatherization and Cooling Assistance for Vulnerable Households
Description	Partner with LIHEAP and HUD IHBG to provide insulation, window

	improvements, and air conditioning or high-efficiency evaporative coolers to the most vulnerable households, prioritizing elders, households with young children, and residents with chronic medical conditions. Conduct a needs assessment to identify the approximately 30–50 households most at risk.
Lead Department	Housing Department
Supporting Departments	Environmental Department; Human Services; Nevada Energy; IHS
Timing	Year 1–3 (Short-Term)
Estimated Cost	$2,000–$5,000 per household; total $60,000–$250,000 | Cost Band E: $500,000–$1 million
Benefit to Tribe	Reduces heat illness risk in most vulnerable households. Also improves winter heating efficiency, representing a dual-season benefit addressing both extreme heat and extreme cold.
Potential Funding	LIHEAP Weatherization Assistance Program; HUD IHBG; IHS Sanitation Facilities; USDA Rural Energy for America
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Very high: directly targets most vulnerable households.	**5**
Technical (T)	Standard weatherization; well established.	**5**
Administrative (A)	Housing Dept capacity adequate; LIHEAP has program infrastructure.	**4**
Political (P)	Strong support.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; strong LIHEAP and IHBG funding pathways.	**3**
Environmental (Env)	Energy efficiency benefit.	**3**

Action Code	EH-03
Action Title	Heat Awareness and Early Warning Communications
Description	Develop a community heat awareness program: social media heat advisory posts during forecast heat events; phone/text notification for registered vulnerable residents; annual outreach at Birthday Celebration. Partner with NV DEM and National Weather Service to ensure Fort McDermitt is included in heat advisory notification networks.

Lead Department	Environmental Department
Supporting Departments	Tribal Council; NV DEM; National Weather Service; IHS
Timing	Year 1 (Immediate)
Estimated Cost	Under $5,000	Cost Band A: Under $10,000
Benefit to Tribe	Enables advance protective action during heat events. Very low cost with meaningful community-wide protective value.
Potential Funding	EPA Indian Environmental GAP; Tribal operating budget
STAPLEE Total Score	33

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Uses existing social media channels the community already engages with.	**5**
Technical (T)	Straightforward communications program.	**5**
Administrative (A)	Minimal staff time once protocols are established.	**5**
Political (P)	Strong support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**5**
Environmental (Env)	No impact.	**3**

Drought Mitigation Actions

Action Code	DR-01
Action Title	Water Conservation and Drought Response Plan
Description	Develop a Tribal Water Conservation and Drought Response Plan with tiered drought response protocols (Stage 1/2/3), water use restrictions by activity type, livestock watering contingency plans, and procedures for requesting federal drought assistance. Incorporate findings from BOR-funded Water Monitoring Plan and QAPP currently in development.
Lead Department	Environmental Department
Supporting Departments	Tribal Council; BOR; USDA; BIA; ranching community

Timing	Year 1–2 (Short-Term)
Estimated Cost	$20,000–$50,000 | Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces economic and public health impacts of drought through structured early response. Enables faster access to federal drought relief programs.
Potential Funding	BOR WaterSMART; USDA Farm Service Agency Emergency Livestock Assistance; EPA Tribal Water Program
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community broadly supports water conservation in a desert context.	**5**
Technical (T)	Standard drought planning framework; USDA and BOR have templates.	**4**
Administrative (A)	Environmental Dept lead with ranching community input; manageable.	**4**
Political (P)	Strong Tribal Council and partner agency support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; federal drought planning assistance available.	**3**
Environmental (Env)	Beneficial: reduces groundwater depletion and ecosystem stress.	**3**

Action Code	DR-02
Action Title	Well Rehabilitation and Groundwater Monitoring Enhancement
Description	Rehabilitate existing community wells to maximize drought-period yield and water quality. Expand groundwater monitoring with real-time water level sensors in key production wells providing early warning of drought-related aquifer depletion. Builds on well mapping and QAPP work already underway under BOR drought management grant.
Lead Department	Environmental Department
Supporting Departments	BOR; IHS; EPA; USDA NRCS
Timing	Year 1–3 (Short-Term)
Estimated Cost	$50,000–$200,000 | Cost Band D: $150,000–$500,000
Benefit to Tribe	Increases domestic water supply resilience during multi-year droughts.

	Early warning enables conservation action before a crisis develops.
Potential Funding	BOR WaterSMART; IHS Sanitation Facilities; EPA §106 Tribal Water Program; USDA Rural Development
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Water supply security is a top community priority.	**5**
Technical (T)	Well rehabilitation and monitoring are standard techniques.	**5**
Administrative (A)	Technical support available through BOR and IHS.	**4**
Political (P)	Strong interagency support.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; strong federal funding pathways.	**3**
Environmental (Env)	Beneficial: maintains sustainable aquifer use.	**3**

Action Code	DR-03
Action Title	Drought-Resilient Rangeland Management Program
Description	Develop and implement a drought-resilient rangeland management strategy with BLM and USDA NRCS: adjustable grazing allotments that scale back in drought years before forage is exhausted; livestock water storage improvements; post-drought native grass restoration. Cross-references USRT Adaptation Strategy Database for climate-adaptive grazing practices.
Lead Department	Environmental Department
Supporting Departments	BLM; USDA NRCS; ranching community; USRT Foundation
Timing	Year 2–5 (Medium-Term)
Estimated Cost	$30,000–$100,000 | Cost Band D: $150,000–$500,000
Benefit to Tribe	Reduces long-term rangeland degradation from overgrazing during drought. Protects livelihoods and ecosystems across drought cycles.
Potential Funding	USDA NRCS EQIP; BLM Range Improvement; USDA Livestock Assistance Programs
STAPLEE Total Score	26

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Ranching families support drought-resilient grazing practices.	**4**
Technical (T)	Adaptive grazing management is well established.	**4**
Administrative (A)	Coordination with BLM and ranchers adds complexity.	**3**
Political (P)	BLM and NRCS support.	**4**
Legal (L)	Requires coordination on existing grazing permits.	**4**
Economic (E)	Moderate cost; NRCS EQIP provides direct financial assistance.	**4**
Environmental (Env)	Highly beneficial, reduces overgrazing and soil erosion.	**4**

Illegal Drug Crisis Mitigation Actions

Action Code	DC-01
Action Title	Expanded Substance Abuse Treatment and Peer Recovery Support
Description	Use Nevada Opioid Abatement Trust settlement funds and additional grants to expand on-Reservation substance abuse counseling: increase the part-time substance abuse counselor to full-time; expand tele-MAT access via forthcoming broadband network; establish a peer recovery coach network. Coordinate with IHS for clinical support.
Lead Department	Wellness Center / Human Services
Supporting Departments	IHS; Nevada Division of Public and Behavioral Health; USRT Foundation
Timing	Year 1–2 (Short-Term)
Estimated Cost	$80,000–$150,000 per year | Cost Band D: $150,000–$500,000
Benefit to Tribe	Directly reduces overdose deaths and addiction burden. Protects family stability and cultural continuity. Reduces downstream costs to health, law enforcement, and child welfare.
Potential Funding	Nevada Opioid Abatement Trust; SAMHSA Tribal Opioid Response Grant; IHS Behavioral Health; HRSA Rural Health
STAPLEE Total Score	28

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community-wide support; drug crisis is felt in nearly every family.	**5**
Technical (T)	Peer recovery and tele-MAT are evidence-based interventions.	**5**
Administrative (A)	Wellness Center capacity limited; may require new hire.	**3**
Political (P)	Strong Tribal Council and partner support.	**4**
Legal (L)	No barriers; operates within IHS framework.	**5**
Economic (E)	Moderate cost; Opioid Trust, SAMHSA, and IHS funding available.	**3**
Environmental (Env)	No environmental impact.	**3**

Action Code	DC-02
Action Title	Youth Prevention and Cultural Reconnection Program
Description	Develop a culturally grounded youth prevention program connecting young people with traditional knowledge, language, and land-based activities as protective factors against drug use. Partner with Language Preservation Department. Coordinate with Fort McDermitt Combined School on curricula. Build on Frontier Community Coalition prevention workshops already occurring on the Reservation.
Lead Department	Human Services / Language Preservation Department
Supporting Departments	Wellness Center; Fort McDermitt Combined School; USRT Foundation; Frontier Community Coalition
Timing	Year 1–3 (Short-Term)
Estimated Cost	$30,000–$80,000 per year	Cost Band C: $50,000–$150,000
Benefit to Tribe	Cultural connection is among the most effective protective factors against substance abuse in Indigenous communities. Also directly supports Language Preservation goals.
Potential Funding	SAMHSA Tribal Youth Program; BIA Tribal Youth Program; Title IV/VII Indian Education; Nevada Department of Education
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Culturally appropriate and directly responsive to community values.	**5**
Technical (T)	Evidence base for cultural reconnection as prevention is strong.	**5**
Administrative (A)	Requires coordination across departments and school.	**4**
Political (P)	Strong Tribal Council support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; SAMHSA, BIA, and education funding available.	**3**
Environmental (Env)	Culturally and environmentally beneficial; land-based activities.	**4**

Action Code	DC-03
Action Title	Naloxone Distribution and Overdose Response Capacity
Description	Maintain and expand the community naloxone distribution program (currently over 300 kits distributed). Ensure all Tribal staff with emergency contact responsibilities are trained in naloxone administration. Coordinate with IHS and NV DEM for state naloxone distribution program inclusion. Develop a formal overdose response protocol for the Wellness Center.
Lead Department	Wellness Center
Supporting Departments	Environmental Department; Human Services; IHS; NV DEM
Timing	Year 1 (Immediate)
Estimated Cost	Under $10,000 per year	Cost Band A: Under $10,000
Benefit to Tribe	Life-saving at very low cost. The Tribe has already distributed over 300 kits; this action sustains and expands a proven, documented program.
Potential Funding	Nevada Opioid Abatement Trust; SAMHSA; IHS; NV Division of Public and Behavioral Health
STAPLEE Total Score	34

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	High community acceptance; naloxone saves lives with no controversy.	**5**

Criterion	Assessment	Score (1–5)
Technical (T)	Proven, effective, simple to administer.	**5**
Administrative (A)	Minimal; existing program infrastructure in place.	**5**
Political (P)	Broad support.	**5**
Legal (L)	Nevada Good Samaritan law protects naloxone users.	**5**
Economic (E)	Very low cost; state and federal programs provide supply.	**5**
Environmental (Env)	No impact.	**4**

Epidemic / Pandemic Mitigation Actions

Action Code	EP-01
Action Title	Infectious Disease Surveillance and Response Protocols
Description	Develop formal infectious disease surveillance protocols for the Wellness Center: reportable disease procedures; contact tracing; community notification system. Coordinate with IHS, Nevada Division of Public and Behavioral Health, and Humboldt County Health for inclusion in outbreak notification systems and access to regional response resources.
Lead Department	Wellness Center
Supporting Departments	IHS; NV Division of Public and Behavioral Health; Humboldt County Health; Environmental Department
Timing	Year 1–2 (Short-Term)
Estimated Cost	$5,000–$20,000 | Cost Band B: $10,000–$50,000
Benefit to Tribe	Enables faster detection and response to disease outbreaks. Reduces delay between onset and containment. Critical given the 70-mile distance to the nearest hospital.
Potential Funding	IHS; EPA Indian Environmental GAP; CDC Tribal Public Health Capacity
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protective; COVID experience built community acceptance.	**5**
Technical (T)	Standard public health protocols are well established.	**5**

Criterion	Assessment	Score (1–5)
Administrative (A)	Wellness Center staff time; IHS provides technical support.	**4**
Political (P)	Strong support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Low cost with high protection value.	**4**
Environmental (Env)	No impact.	**3**

Action Code	EP-02
Action Title	Pandemic Supplies Stockpile and Wellness Center Surge Plan
Description	Establish and maintain a community pandemic preparedness stockpile: PPE (masks, gloves, gowns), rapid test kits, and basic medical supplies. Develop a Wellness Center surge capacity plan defining maximum patient volumes and protocols for escalation to higher-level care.
Lead Department	Wellness Center / Environmental Department
Supporting Departments	IHS; Nevada DHHS; FEMA; Tribal Council
Timing	Year 1–2 (Short-Term)
Estimated Cost	$15,000–$40,000 | Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces delay in activating protective measures. Stockpile cannot be ordered fast enough during a rapidly developing outbreak. COVID experience demonstrated the value of pre-positioned materials.
Potential Funding	FEMA BRIC; HHS/ASPR SNS Tribal Allocations; IHS; CDC
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community supports COVID-era preparedness based on direct experience.	**5**
Technical (T)	Stockpile management is straightforward.	**5**
Administrative (A)	Requires storage coordination and rotation schedule.	**4**
Political (P)	Strong support.	**4**
Legal (L)	No barriers.	**5**

Criterion	Assessment	Score (1–5)
Economic (E)	Moderate cost; SNS and FEMA supply programs available.	**3**
Environmental (Env)	No impact.	**3**

Action Code	EP-03
Action Title	Vector-Borne Disease Monitoring and Education
Description	Establish seasonal vector monitoring: West Nile virus mosquito surveillance near the Quinn River and stock ponds; Hantavirus rodent population monitoring in residential areas. Annual public health education on tick and mosquito protection, rodent exclusion, and early symptom recognition.
Lead Department	Environmental Department
Supporting Departments	Wellness Center; NV Division of Public and Behavioral Health; IHS
Timing	Year 2–3 (Short-Term)
Estimated Cost	$5,000–$15,000 per year	Cost Band B: $10,000–$50,000
Benefit to Tribe	Early warning for vector-borne disease risk. Climate change is expanding mosquito activity windows, making this increasingly relevant.
Potential Funding	EPA Indian Environmental GAP; IHS; CDC Vector Control
STAPLEE Total Score	31

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Protective and well received; community is aware of rodent and mosquito risks.	**5**
Technical (T)	Standard vector surveillance.	**5**
Administrative (A)	Environmental Dept can integrate with existing monitoring.	**5**
Political (P)	Strong support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**5**
Environmental (Env)	Contributes to ecological monitoring; no negative impact.	**3**

Severe Winter Storm and Extreme Cold Mitigation Actions

Action Code	WS-01
Action Title	Emergency Warming Center Designation and Backup Power
Description	Formally designate the Senior Center or other appropriate facility as the primary emergency warming center. Install a generator capable of maintaining heat and lighting during power outages. Develop a Winter Emergency Response Plan with activation criteria, elder transportation protocols, and coordination with NV NDOT and Humboldt County OES for priority road clearing. Build on the 'wood for elders' program model of community care.
Lead Department	Tribal Administrator / Human Services
Supporting Departments	Tribal Council; Housing; Roads and Maintenance; NV NDOT; Humboldt County OES
Timing	Year 1–2 (Short-Term)
Estimated Cost	$20,000–$60,000 | Cost Band C: $50,000–$150,000
Benefit to Tribe	Provides safe refuge during power outages and extreme cold. The 'wood for elders' program demonstrates the community's already-established commitment to this type of protective action.
Potential Funding	FEMA BRIC; LIHEAP; HUD IHBG; BIA Community Development; FEMA EMPG
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Very high support; builds on existing community care practices.	**5**
Technical (T)	Standard warming center and generator installation; well proven.	**5**
Administrative (A)	Manageable with existing staff.	**4**
Political (P)	Strong support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; FEMA BRIC and LIHEAP funding available.	**3**
Environmental (Env)	No negative impact.	**3**

Action Code	WS-02
Action Title	Home Heating Weatherization and Pipe Protection
Description	Expand weatherization assistance to prioritize homes most at risk of heating failure: older mobile homes and residences with single-source electric heating. Provide heat tape for water pipes, door and window sealing, roof insulation, and backup heating sources for the most vulnerable households. Build on the 'wood for elders' model.
Lead Department	Housing Department
Supporting Departments	Environmental Department; LIHEAP program; Nevada Energy; BIA
Timing	Year 1–3 (Short-Term)
Estimated Cost	$1,500–$4,000 per household; total $45,000–$200,000 | Cost Band D: $150,000–$500,000
Benefit to Tribe	Prevents pipe bursts, structural water damage, and hypothermia. Dual-season benefit addressing both winter and summer temperature extremes.
Potential Funding	LIHEAP Weatherization; HUD IHBG; BIA Community Development; USDA Rural Development
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects vulnerable households.	**5**
Technical (T)	Standard weatherization techniques.	**5**
Administrative (A)	Housing Dept capacity adequate with LIHEAP support.	**4**
Political (P)	Strong support.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; LIHEAP is purpose-built for this.	**3**
Environmental (Env)	Energy efficiency benefit.	**3**

Action Code	WS-03
Action Title	Winter Storm Early Warning and Road Coordination
Description	Develop a winter storm early warning and community communication

	system using the Tribe's Facebook channel, phone/text notification for registered vulnerable residents, and coordination with NWS Elko for Fort McDermitt-specific advisories. Establish road condition reporting protocols and coordination with NV NDOT for priority Reservation road clearing.
Lead Department	Environmental Department
Supporting Departments	Tribal Council; NV NDOT; NWS Elko; Humboldt County OES
Timing	Year 1 (Immediate)
Estimated Cost	Under $5,000	Cost Band A: Under $10,000
Benefit to Tribe	Enables advance preparation before storm events. Reduces risk of residents being caught without adequate supplies or shelter preparation.
Potential Funding	EPA Indian Environmental GAP; FEMA EMPG
STAPLEE Total Score	33

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Uses existing community channels.	**5**
Technical (T)	Standard communications approach.	**5**
Administrative (A)	Minimal staff time.	**5**
Political (P)	Broad support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**5**
Environmental (Env)	No impact.	**3**

Strong Wind and Derechos Mitigation Actions

Action Code	SW-01
Action Title	Wind-Resistant Building Retrofits and Mobile Home Anchoring Program
Description	Develop and implement a program to improve wind resistance of the most vulnerable structures on the Reservation, beginning with mobile homes. Mobile homes comprise approximately 22 percent of the housing stock and are at significant risk of roof and siding loss in gusts exceeding 70 mph. Actions include installation of tie-down anchor systems for mobile homes, roof-to-wall strap retrofits for older wood-frame homes, and replacement of

	worn roofing materials with wind-rated products. Cross-references structural findings from the 2003 Humboldt County wildfire hazard assessment.
Lead Department	Housing Department
Supporting Departments	Roads and Maintenance; FEMA BRIC; Humboldt County Building Department
Timing	Year 1–3 (Short-Term)
Estimated Cost	$2,000–$6,000 per unit; total $60,000–$200,000 | Cost Band D: $150,000–$500,000
Benefit to Tribe	Reduces structure damage and associated displacement risk during high-wind events. Mobile homes at 22 percent of housing stock are the single largest vulnerability; anchoring systems are proven and cost-effective. Dual benefit: improved wind resistance also reduces wildfire ember risk.
Potential Funding	FEMA BRIC; FEMA HMGP; HUD Indian Housing Block Grant; BIA Community Development
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects households; mobile home residents are among the most economically vulnerable.	**5**
Technical (T)	Tie-down and strap systems are standard, proven technology.	**5**
Administrative (A)	Housing Dept can manage with existing capacity; unit-level work is straightforward.	**4**
Political (P)	Strong Council support for housing protection.	**4**
Legal (L)	No barriers; within Tribal authority for housing programs.	**5**
Economic (E)	Moderate cost; strong HUD and FEMA funding pathways.	**3**
Environmental (Env)	No negative environmental impact.	**3**

Action Code	SW-02
Action Title	Wind Event Early Warning and Community Communication Protocol
Description	Develop and implement a wind early warning and community communication protocol. Using the National Weather Service high-wind watch and warning system for the Elko and Winnemucca forecast offices (which cover Humboldt County), establish a standard process for

	disseminating high-wind advisories through the Tribe's Facebook social media channel, phone/text alerts for vulnerable residents, and direct outreach to ranchers and outdoor workers. Include guidance on securing loose objects, checking on livestock, and shelter-in-place protocols during severe events.
Lead Department	Environmental Department
Supporting Departments	Tribal Council; NV DEM; National Weather Service Elko; Humboldt County OES
Timing	Year 1 (Immediate)
Estimated Cost	Under $5,000 | Cost Band A: Under $10,000
Benefit to Tribe	Enables community members to take protective action before wind events strike. Very low cost relative to benefit; uses already-functioning social media and NWS warning infrastructure.
Potential Funding	EPA Indian Environmental GAP; FEMA EMPG; Tribal operating budget
STAPLEE Total Score	33

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Uses existing community communications channels; high acceptance.	**5**
Technical (T)	Standard weather communication; NWS provides the core infrastructure.	**5**
Administrative (A)	Minimal ongoing staff time once protocols are established.	**5**
Political (P)	Strong support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**5**
Environmental (Env)	No impact.	**3**

Action Code	SW-03
Action Title	Power Line and Critical Infrastructure Wind Hardening Assessment
Description	Conduct an assessment of wind-related vulnerabilities in the Reservation's above-ground power distribution lines, communication towers, and water storage infrastructure. Work with NV Energy to identify the most vulnerable pole sections and transmission points and develop a prioritized hardening plan. Coordinate with NV Energy on backup power provisions and priority

	restoration protocols for the Reservation during and after major wind events. Explore feasibility of underground distribution for the most critical community service segments.
Lead Department	Environmental Department / Tribal Administration
Supporting Departments	NV Energy; Red Mountain Communications; Humboldt County OES; BIA
Timing	Year 1–2 (Short-Term; assessment); Year 2–5 (implementation)
Estimated Cost	$10,000–$30,000 (assessment); $100,000–$500,000+ (hardening, depending on scope) | Cost Band E: $500,000–$1 million
Benefit to Tribe	Reduces the duration and frequency of power outages during wind events, which compound risk for heating-dependent elders, medical equipment users, and the community water system.
Potential Funding	FEMA BRIC; FEMA HMGP; BIA Community Infrastructure; USDA ReConnect; Nevada Energy Department
STAPLEE Total Score	24

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Power reliability is a high-priority community concern; supports vulnerable populations.	**5**
Technical (T)	Power line hardening and underground distribution are well-established engineering solutions.	**4**
Administrative (A)	Requires coordination with NV Energy as a private utility; moderately complex.	**3**
Political (P)	NV Energy and state utility regulators must support; generally aligned on rural resilience.	**3**
Legal (L)	Utility easements and rights-of-way may require legal coordination.	**3**
Economic (E)	Higher cost for underground distribution; strong benefit-to-cost for community resilience.	**3**
Environmental (Env)	Underground distribution has minimal environmental impact after installation.	**4**

Violent Attack and Workplace / School Violence Mitigation Actions

Action Code	VA-01
Action Title	Active Threat Response Training and Drills Program

Description	Establish an annual active threat response training and drill program for all Tribal staff and school personnel. Training should be delivered in coordination with BIA law enforcement, Humboldt County Sheriff, and the school administration and should cover: lockdown procedures; communication protocols during an active threat; triage and first aid for traumatic injuries; and coordination with incoming law enforcement. Ensure consistency between Tribal government and school procedures so that a unified response occurs during any incident.
Lead Department	Tribal Administrator (Emergency Management Lead)
Supporting Departments	BIA Law Enforcement; Humboldt County Sheriff; Fort McDermitt Combined School; Wellness Center
Timing	Year 1–2 (Short-Term)
Estimated Cost	$5,000–$15,000 per year | Cost Band B: $10,000–$50,000
Benefit to Tribe	Reduces fatalities and injuries in the event of an active threat. Training is the single most impactful action available for this hazard given the response time limitations of outside law enforcement. Also builds all-hazards preparedness capacity.
Potential Funding	FEMA BRIC; DHS Tribal Homeland Security Grant Program; BIA Emergency Management; USDA Rural Development Community Facilities Grant
STAPLEE Total Score	28

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community supports improved safety at workplaces and school; staff acceptance is high.	**5**
Technical (T)	Standard active threat training programs (ALICE, ALERRT) are proven and widely used.	**5**
Administrative (A)	Requires annual coordination with law enforcement and school; manageable.	**4**
Political (P)	Strong Council and school board support.	**4**
Legal (L)	No barriers; MOUs with BIA and county law enforcement support this.	**5**
Economic (E)	Low annual cost; DHS and FEMA fund this type of training for Tribal communities.	**3**
Environmental (Env)	No environmental impact.	**3**

Action Code	VA-02
Action Title	Behavioral Health and Crisis Intervention Services Expansion
Description	Expand on-Reservation behavioral health services to include a crisis intervention component, such as a mental health professional or trained community crisis counselor who can respond to escalating situations before they become violent incidents. This action directly addresses the link between untreated mental health conditions, substance abuse, family conflict, and workplace and school violence identified by Tribal staff. Coordinate with IHS and Nevada Division of Public and Behavioral Health for service delivery support. This action cross-references to drug crisis mitigation actions DC-01 and DC-02.
Lead Department	Wellness Center / Human Services
Supporting Departments	IHS; Nevada Division of Public and Behavioral Health; Tribal Council; Fort McDermitt Combined School
Timing	Year 1–3 (Short-Term)
Estimated Cost	$40,000–$80,000 per year	Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces the escalation of interpersonal conflicts to violent incidents by providing a professional intervention pathway. The planning process identified links between drug use, family feuding, and both school and workplace violence; behavioral health intervention addresses root causes rather than symptoms.
Potential Funding	SAMHSA; IHS Behavioral Health; Nevada Opioid Abatement Trust; BIA Social Services; HRSA Rural Health
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community broadly supports improved behavioral health services; stigma is a barrier but growing awareness helps.	**4**
Technical (T)	Crisis intervention is an evidence-based approach to preventing escalation to violence.	**5**
Administrative (A)	Wellness Center capacity is limited; coordination with IHS is required.	**3**
Political (P)	Council and IHS support is strong.	**5**
Legal (L)	No barriers; operates within established IHS framework.	**5**
Economic (E)	Moderate cost; SAMHSA, IHS, and Nevada Opioid Trust funding available.	**4**
Environmental (Env)	No environmental impact.	**3**

Action Code	VA-03
Action Title	Physical Security Upgrades at Tribal Administrative and School Facilities
Description	Conduct a physical security assessment of the Tribal Administrative Building, the Wellness Center, the school, and other facilities that concentrate people. Implement priority security upgrades including: controlled-access entry systems; interior safe rooms or secure areas for staff; improved exterior lighting; and clear sightlines around building entrances. Formalize a Threat Assessment Team drawn from Tribal leadership, BIA law enforcement, and the school principal to review and respond to threat reports.
Lead Department	Tribal Administration
Supporting Departments	BIA Law Enforcement; Humboldt County Sheriff; Fort McDermitt Combined School; Environmental Department
Timing	Year 1–3 (Short-Term)
Estimated Cost	$15,000–$60,000	Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces vulnerability at locations where staff, children, and community members are most concentrated. The administrative building has been documented as having already been reorganized to reduce front-entrance risk, and this action formalizes and extends that approach.
Potential Funding	DHS Tribal Homeland Security Grant Program; BIA Community Development; FEMA BRIC
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Visible security improvements increase staff and community confidence.	**4**
Technical (T)	Access control systems and lighting improvements are standard, proven security measures.	**5**
Administrative (A)	Requires facilities coordination; manageable within existing administrative capacity.	**4**
Political (P)	Strong Council support; school administration supportive.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; DHS Tribal Homeland Security Grant specifically covers this type of work.	**3**
Environmental (Env)	No significant environmental impact.	**3**

Plant and Animal Epidemic / Invasive Species Mitigation Actions

Action Code	IS-01
Action Title	Cheatgrass and Noxious Weed Control Program: Targeted Annual Treatment
Description	Expand the Tribe's existing noxious weed control program into a systematic, annually-funded treatment program for cheatgrass and medusahead across Tribal trust lands. Develop a multi-year treatment plan that prioritizes the wildland-urban interface, riparian corridors, and post-fire areas. Use an integrated approach combining herbicide application, mechanical treatment, and native seed follow-up. Coordinate with BLM for treatment of adjacent federal land to avoid re-invasion. Cross-references WF-04 (fuels management) for combined wildfire-invasive species co-benefits.
Lead Department	Environmental Department
Supporting Departments	USDA NRCS; BLM; Nevada Department of Agriculture; USRT Foundation
Timing	Year 1–3 (planning and initial treatment); ongoing annually
Estimated Cost	$30,000–$100,000 per year | Cost Band D: $150,000–$500,000
Benefit to Tribe	Reduces cheatgrass fuel loads, directly lowering wildfire risk. Preserves native forage for ranching. Protects native plants used for cultural and medicinal purposes. The primary driver of environmental degradation on the Reservation; control has compounding benefits across multiple hazards.
Potential Funding	USDA NRCS EQIP; BLM Invasive Species Control; Nevada Department of Agriculture Noxious Weed Cooperative Program; USDA Forest Service
STAPLEE Total Score	25

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects rangelands and cultural plants; high community benefit.	**4**
Technical (T)	Integrated weed management is well established; requires sustained commitment.	**4**
Administrative (A)	Requires ongoing program management and multi-agency coordination.	**3**
Political (P)	USDA, BLM, and Tribal Council all supportive.	**5**
Legal (L)	No barriers; existing cooperative frameworks with NRCS	**5**

Criterion	Assessment	Score (1–5)
	and BLM.	
Economic (E)	Moderate to high ongoing cost; strong federal cost-share programs available.	**3**
Environmental (Env)	Highly Beneficial: reduces invasive species and restores native plant communities.	**4**

Action Code	IS-02
Action Title	Livestock Disease Monitoring and Vaccination Coordination Program
Description	Develop a coordinated livestock disease monitoring and vaccination program for Tribal ranchers that addresses the most relevant disease risks in the region including brucellosis, bovine trichomoniasis, West Nile virus in horses, and blue-tongue virus. Coordinate with USDA APHIS, the Nevada Department of Agriculture, and University of Nevada Cooperative Extension to provide annual herd health assessments and subsidized vaccination clinics. Establish an early warning protocol for disease alerts affecting the Reservation.
Lead Department	Environmental Department
Supporting Departments	USDA APHIS; Nevada Department of Agriculture; UNR Cooperative Extension; ranching community
Timing	Year 1–2 (Short-Term)
Estimated Cost	$10,000–$30,000 per year	Cost Band B: $10,000–$50,000
Benefit to Tribe	Reduces economic losses from livestock disease outbreaks. Ranching is the primary private livelihood on the Reservation; a livestock epidemic can destroy a family's income for multiple seasons. Early warning also enables faster response to limit spread.
Potential Funding	USDA APHIS Veterinary Services; Nevada Department of Agriculture; BIA Agricultural Assistance; USDA FSA Emergency Livestock Assistance
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly supports ranching families who are the economic backbone of the community.	**5**
Technical (T)	Standard veterinary disease management; USDA APHIS has established protocols.	**5**
Administrative (A)	Requires coordination with ranchers and external agencies; manageable.	**4**

Criterion	Assessment	Score (1–5)
Political (P)	Supported by ranching community and Tribal Council.	**4**
Legal (L)	No barriers; USDA Cooperative Extension has existing Tribal program frameworks.	**5**
Economic (E)	Low to moderate cost; USDA APHIS and Nevada Dept of Agriculture provide subsidized services.	**3**
Environmental (Env)	Neutral to beneficial: healthy livestock contribute to well-managed rangeland.	**3**

Action Code	IS-03
Action Title	Grasshopper and Mormon Cricket Outbreak Preparedness and Response Plan
Description	Develop a Tribal preparedness and response plan for grasshopper and Mormon cricket infestations, which occurred at severe levels in Humboldt County in 1980s, late 1990s, and 2020. The plan should establish threshold monitoring protocols (grasshopper egg surveys in spring), a rapid reporting pathway to USDA APHIS for federal response programs, and emergency livestock feeding assistance protocols for ranchers whose forage is stripped during an outbreak. Cross-reference the USDA APHIS grasshopper response program, which was activated in Humboldt County in 2020.
Lead Department	Environmental Department
Supporting Departments	USDA APHIS; Nevada Department of Agriculture; BLM; ranching community; BIA
Timing	Year 1–2 (Short-Term)
Estimated Cost	$5,000–$15,000 (planning); variable (response, largely federally funded) | Cost Band B: $10,000–$50,000
Benefit to Tribe	Reduces economic losses from rangeland defoliation. Preparedness accelerates federal APHIS response, which requires local reporting to activate. Protects forage resources that support both ranching livelihoods and wildlife habitat.
Potential Funding	USDA APHIS Rangeland Grasshopper Program; Nevada Department of Agriculture; BIA Agricultural Assistance; USDA FSA Emergency Livestock Assistance
STAPLEE Total Score	26

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Ranchers and ranching families directly benefit; community awareness of this hazard is high given 2020 outbreak.	**5**

Criterion	Assessment	Score (1–5)
Technical (T)	USDA APHIS has a well-established grasshopper response program; Tribal preparedness accelerates activation.	**5**
Administrative (A)	Simple plan development; reporting pathway is the key deliverable.	**4**
Political (P)	USDA, Nevada, and Tribal support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Low planning cost; federal programs cover most response costs.	**4**
Environmental (Env)	Neutral; federal APHIS response uses targeted and environmentally reviewed control methods.	**3**

Flood Mitigation Actions

Action Code	FL-01
Action Title	Culvert Maintenance and Drainage Management Program
Description	Establish a formal culvert maintenance and drainage management program for the three primary culverts along the Quinn River floodway that are prone to sediment buildup from broken beaver dams. The program should include: a twice-annual inspection schedule (pre-spring runoff and pre-monsoon season); clear responsibility assignment and equipment availability for sediment clearing; a maintenance log and reporting structure; and a rapid-response protocol for clearing blockages when significant precipitation is forecast. The planning process identified several blocked culverts that served as periodic major flood mechanism but there may be additional point sources of flooding that arise or that have not been documented.
Lead Department	Roads and Maintenance Department
Supporting Departments	Environmental Department; Tribal Administrator
Timing	Year 1 (Immediate; low cost, high impact)
Estimated Cost	Under $10,000 per year (staff time and equipment use) | Cost Band A: Under $10,000
Benefit to Tribe	Directly addresses the primary mechanism of flooding in the residential area. No organized maintenance schedule was identified in the planning process; blocked culverts have caused road overtopping and isolated homes on multiple occasions. This is among the highest-benefit-to-cost actions in this plan.

Potential Funding	Tribal Roads Program (BIA); FEMA BRIC; Tribal operating budget
STAPLEE Total Score	32

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protects homes and roads at very low cost; community benefit is clear.	**5**
Technical (T)	Culvert clearing is a basic maintenance operation; no technical complexity.	**5**
Administrative (A)	Roads and Maintenance Dept already has the equipment; scheduling is the only gap.	**5**
Political (P)	Strong Council support.	**5**
Legal (L)	No barriers; within Tribal road maintenance authority.	**5**
Economic (E)	Very low annual cost with high protective value; no special funding required.	**5**
Environmental (Env)	Beneficial: proper drainage reduces erosion and sediment loading in Quinn River.	**3**

Action Code	FL-02
Action Title	Floodplain Mapping and Low-Lying Structure Assessment
Description	Commission a floodplain mapping update for the Reservation, working with FEMA Region 9 to address the current 'undetermined risk' designation of portions of the planning area in the National Flood Insurance Program. Identify all structures within the 100-year floodplain and assess their flood vulnerability. Develop a prioritized list of structures that should be considered for elevation, acquisition, or relocation over the long term. Also establish whether any structures currently lack access to federal flood insurance under the NFIP.
Lead Department	Environmental Department
Supporting Departments	FEMA Region 9; Humboldt County OES; BIA; NV DEM
Timing	Year 1–3 (Short-Term)
Estimated Cost	$20,000–$60,000 (mapping and assessment) | Cost Band C: $50,000–$150,000
Benefit to Tribe	Establishes the factual basis for informed flood risk management decisions. NFIP participation enables flood insurance access for Tribal members, reducing the financial burden of recovery after flood events. Accurate floodplain mapping is a prerequisite for FEMA mitigation grant eligibility for

	flood-related actions.
Potential Funding	FEMA Hazard Mitigation Grant Program; FEMA BRIC; BIA Community Development
STAPLEE Total Score	25

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Better flood information enables informed housing and land use decisions.	**4**
Technical (T)	FEMA floodplain mapping is well established; FEMA R9 has Tribal technical assistance.	**5**
Administrative (A)	Requires FEMA coordination; Environmental Dept leads with FEMA technical support.	**3**
Political (P)	FEMA and Tribal Council support.	**4**
Legal (L)	No barriers; FEMA has Tribal mapping assistance programs.	**5**
Economic (E)	Moderate cost; FEMA provides Tribal mapping cost share.	**3**
Environmental (Env)	Better floodplain management benefits riparian ecosystems.	**3**

Action Code	FL-03
Action Title	Flood Early Warning and Rapid Evacuation Protocol
Description	Develop a flood early warning and rapid evacuation protocol for the Reservation, including: identification of specific triggers for issuing flood watches and warnings based on rainfall intensity forecasts from the National Weather Service; a community notification process using social media and phone/text alerts; clearly designated evacuation routes from the flood-prone areas north of the Quinn River; and a designated evacuation assembly point on higher ground. Coordinate with Humboldt County OES for inclusion of Fort McDermitt in regional flood warning systems.
Lead Department	Tribal Administrator (Emergency Management Lead)
Supporting Departments	Environmental Department; Roads and Maintenance; Humboldt County OES; NWS Elko
Timing	Year 1–2 (Short-Term)
Estimated Cost	$5,000–$15,000	Cost Band B: $10,000–$50,000
Benefit to Tribe	Enables residents and ranchers in flood-prone areas to take protective

	action before floodwaters arrive. The absence of real-time stream gauges on the Quinn River near the community means weather-forecast-based warning is the primary feasible system. Low cost relative to protective value.
Potential Funding	FEMA BRIC; FEMA EMPG; EPA Indian Environmental GAP
STAPLEE Total Score	30

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protective for residents in flood-vulnerable areas.	**5**
Technical (T)	Weather-forecast-based flood warning is standard and proven.	**5**
Administrative (A)	Can be integrated with other early warning programs (heat, winter storm); minimal additional burden.	**4**
Political (P)	Strong Council support; Humboldt County OES is aligned.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**4**
Environmental (Env)	No negative impact.	**3**

Infrastructure and Supply Chain Failure Mitigation Actions

Action Code	IN-01
Action Title	Emergency Supply Stockpile and Bulk Fuel Reserve Program
Description	Establish and maintain a community emergency supply stockpile at a secure, accessible Tribal facility. Stockpile to include: a minimum 7-day supply of bottled water; shelf-stable food supplies sufficient for the Wellness Center and emergency operations; essential medicines and medical supplies identified by the Wellness Center; and bulk fuel reserve sufficient for at least 7 days of critical facility generator operation (the current capacity is approximately 3 days). Develop and maintain a supply inventory and rotation schedule. Update annually. This action directly addresses the 2020 travel plaza loss that left the community without local fuel and food for weeks.
Lead Department	Environmental Department / Tribal Administration
Supporting Departments	Wellness Center; Humboldt County OES; NV DEM; FEMA
Timing	Year 1 (Immediate)

Estimated Cost	$20,000–$60,000 (initial stockpile); $5,000–$15,000 per year (rotation) | Cost Band C: $50,000–$150,000
Benefit to Tribe	Reduces community vulnerability to supply chain disruptions caused by road closures, extreme weather, or loss of commercial services. The 2020 travel plaza fire demonstrated acute community dependence on a single commercial node that, when lost, created an immediate supply crisis.
Potential Funding	FEMA BRIC; FEMA EMPG; BIA Community Development; HHS/ASPR Strategic National Stockpile
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community broadly supports emergency preparedness given documented supply disruptions.	**5**
Technical (T)	Emergency stockpiling is standard and well understood; no technical complexity.	**5**
Administrative (A)	Requires storage facility and annual rotation management; manageable.	**4**
Political (P)	Strong Tribal Council support.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate upfront cost; low ongoing cost; FEMA EMPG provides direct funding pathway.	**3**
Environmental (Env)	No significant environmental impact; fuel storage requires secondary containment.	**3**

Action Code	IN-02
Action Title	Backup Generator Program for Critical Facilities
Description	Assess generator capacity and needs at all critical Tribal facilities and implement a backup power program. Facilities requiring generator coverage include: the Wellness Center and clinic; the Tribal Administration Building (emergency operations); the water system pump station; the Senior Center (warming/cooling center); and the school. The clinic already has a 75-kW generator; assess whether capacity is adequate for simultaneous critical operations. Address gap facilities. Ensure generators are fueled, tested monthly, and maintained annually. Also assess feasibility of a solar-plus-storage microgrid to provide longer-duration backup power resilience for the most critical facilities.

Lead Department	Environmental Department / Tribal Administration
Supporting Departments	NV Energy; BIA; USDA Rural Energy for America; Tribal Roads and Maintenance
Timing	Year 1–3 (Short-Term)
Estimated Cost	$10,000–$30,000 per facility; total $50,000–$200,000 for full program | Cost Band D: $150,000–$500,000
Benefit to Tribe	Maintains critical services during power outages caused by wind, winter storms, wildfire, or grid failure. Power outages are among the most common infrastructure disruptions at Fort McDermitt, with multiple documented multi-day events. Generator backup is the foundational resilience measure for remote communities.
Potential Funding	FEMA BRIC; BIA Community Development; USDA Rural Energy for America Program; EPA Tribal Clean Energy; IHS Sanitation Facilities (for water pump)
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Protects all critical services that the community depends on; high social value.	**5**
Technical (T)	Generator installation is standard; solar-plus-storage feasibility study adds value.	**4**
Administrative (A)	Requires ongoing maintenance schedule; manageable.	**4**
Political (P)	Strong support.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate cost; multiple federal programs support Tribal backup power.	**3**
Environmental (Env)	Solar-plus-storage option has significant environmental benefit; generators are carbon-emitting.	**3**

Action Code	IN-03
Action Title	Communications Redundancy and Emergency Notification System
Description	Improve communications redundancy for the Reservation to address the documented vulnerability of the single microwave backhaul system. Actions include: (1) coordinate with Red Mountain Communications on the NTIA-funded tower-and-fiber build-out to accelerate completion; (2) acquire and maintain satellite phone capability at the Tribal Administration Building and

	Wellness Center as backup when internet and cellular service fail; (3) establish a community Citizen Band (CB) or GMRS radio network for emergency communication when all commercial systems fail; and (4) develop a community notification protocol that works across all three communication pathways (internet/social media, cellular/text, and radio). Cross-references CC-03 (Broadband Infrastructure).
Lead Department	Tribal Administration
Supporting Departments	Red Mountain Communications; USRT Foundation; NV DEM; Humboldt County OES
Timing	Year 1–2 (Short-Term)
Estimated Cost	$10,000–$40,000 (satellite phones, radios, and protocols) | Cost Band C: $50,000–$150,000
Benefit to Tribe	Ensures the Tribe can communicate with residents and with external agencies during infrastructure failures. The April 2024 fiber trunk failure eliminated 911 capability for 2.5 hours; the 2023 cyber-attack eliminated fixed-wireless service for 48 hours with no VOIP-911 backup. Redundancy is a life-safety necessity.
Potential Funding	FEMA EMPG; FCC Tribal Priority Window; NTIA Broadband; BIA Emergency Management; EPA Indian Environmental GAP
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community-wide safety benefit; documented vulnerability to communications loss.	**5**
Technical (T)	Satellite phones and radio networks are proven redundancy solutions for remote areas.	**5**
Administrative (A)	Requires ongoing maintenance and training; manageable within existing EM function.	**4**
Political (P)	NV DEM and Humboldt County OES strongly support redundant Tribal communications.	**5**
Legal (L)	FCC licensing required for some radio frequencies; straightforward process.	**4**
Economic (E)	Moderate cost; FEMA EMPG and FCC Tribal programs provide strong funding pathway.	**3**
Environmental (Env)	No significant environmental impact.	**4**

Earthquake Mitigation Actions

Action Code	EQ-01
Action Title	Unreinforced Masonry (URM) Structure Assessment and Seismic Retrofitting
Description	Commission a structural engineering assessment of the Reservation's unreinforced masonry (URM) structures, focusing on the historic cavalry-era buildings currently used as the Senior Center and for storage. These structures are the most seismically vulnerable on the Reservation. Based on the assessment, develop a retrofitting plan that may include wall anchoring, roof-to-wall connections, chimney bracing, and parapet stabilization. Prioritize the Senior Center given its use as an occupied gathering space and its designated role as an emergency warming center.
Lead Department	Tribal Administration / Environmental Department
Supporting Departments	BIA Historic Preservation; THPO; NV State Historic Preservation Office; FEMA Region 9
Timing	Year 1–3 (Short-Term)
Estimated Cost	$15,000–$30,000 (assessment); $50,000–$200,000 (retrofit, depending on scope) | Cost Band D: $150,000–$500,000
Benefit to Tribe	Reduces the primary structural vulnerability to earthquake damage on the Reservation. URM structures can fail suddenly and with little warning in a moderate earthquake; the Senior Center houses both regular gatherings and serves as an emergency shelter. Historic preservation funding can support retrofits that maintain the cultural character of these buildings.
Potential Funding	FEMA BRIC; FEMA HMGP; BIA Historic Preservation; NHPA Section 106 compliance funding; NV State Historic Preservation Office
STAPLEE Total Score	24

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Protects culturally significant historic buildings that also serve as emergency gathering spaces.	**5**
Technical (T)	URM retrofitting is well established; engineering solutions are proven.	**4**
Administrative (A)	Requires engineering assessment and historic preservation coordination.	**3**
Political (P)	Council and BIA historic preservation support.	**4**
Legal (L)	NHPA Section 106 compliance required; historic preservation review adds complexity but provides funding pathway.	**3**
Economic (E)	Moderate to high cost; FEMA and BIA historic	**3**

Criterion	Assessment	Score (1–5)
	preservation funding available.	
Environmental (Env)	Highly Beneficial: preservation of historic structures is an environmental and cultural benefit.	**4**

Action Code	EQ-02
Action Title	Household Earthquake Safety and Contents Anchoring Program
Description	Develop and distribute a household earthquake safety guide tailored to Fort McDermitt's housing stock and risk level. The guide should cover: securing heavy furniture and water heaters to walls; anchoring propane tanks; positioning beds away from windows; and storing emergency supplies within reach of sleeping areas. Provide a voluntary hardware kit program distributing furniture straps, cabinet latches, and water heater restraints to households that request them, particularly households with elders or small children.
Lead Department	Environmental Department
Supporting Departments	Humboldt County OES; NV DEM; FEMA Region 9; Housing Department
Timing	Year 1–2 (Short-Term)
Estimated Cost	$5,000–$15,000 | Cost Band B: $10,000–$50,000
Benefit to Tribe	Reduces injury risk from falling objects and contents during an earthquake. Most earthquake injuries in moderate events are caused by falling furniture, unsecured water heaters, and toppling shelves rather than structural collapse. Low cost with meaningful protective benefit.
Potential Funding	FEMA BRIC; Tribal operating budget; NV DEM; BIA Community Development
STAPLEE Total Score	28

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Directly protective for households; especially valuable for elders.	**5**
Technical (T)	Standard household safety measures; straightforward to implement.	**5**
Administrative (A)	Simple distribution program; Environmental Dept can manage.	**5**
Political (P)	No opposition; community safety-focused.	**5**

Criterion	Assessment	Score (1–5)
Legal (L)	No barriers.	**5**
Economic (E)	Very low cost.	**5**
Environmental (Env)	No impact.	**3**

Action Code	EQ-03
Action Title	Critical Infrastructure Seismic Vulnerability Review
Description	Conduct a seismic vulnerability review of the Reservation's critical infrastructure including: the community water system (well pumps, tanks, and distribution pipes); the power distribution system; the Wellness Center; and the school. Identify specific components most susceptible to ground shaking at the expected seismic hazard level (2 percent probability of exceedance in 50 years, approximately Modified Mercalli Intensity VI at the Reservation). Incorporate findings into capital improvement planning so that seismic resilience is factored into future repairs and upgrades.
Lead Department	Environmental Department
Supporting Departments	IHS; BIA; NV Energy; FEMA Region 9
Timing	Year 2–4 (Medium-Term)
Estimated Cost	$15,000–$40,000	Cost Band C: $50,000–$150,000
Benefit to Tribe	Identifies specific infrastructure vulnerabilities before an earthquake occurs, allowing informed investment decisions. Water system and power infrastructure are the most critical lifelines; disruption of either during an emergency compounds all other hazard responses. Seismic vulnerability review also informs other infrastructure improvement actions in this plan.
Potential Funding	FEMA BRIC; FEMA HMGP; BIA Community Development; IHS Sanitation Facilities
STAPLEE Total Score	23

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Protective of community infrastructure that all residents depend on.	**4**
Technical (T)	Seismic vulnerability assessment is a standard engineering service.	**4**

Criterion	Assessment	Score (1–5)
Administrative (A)	Requires coordination with utility owners and IHS; moderate complexity.	**3**
Political (P)	Support from FEMA, BIA, and Tribal Council.	**4**
Legal (L)	No significant barriers.	**4**
Economic (E)	Moderate cost; FEMA BRIC and IHS provide funding pathways.	**3**
Environmental (Env)	No direct environmental impact; improved infrastructure resilience benefits the community.	**3**

Cross-Cutting Capacity and Emergency Management Actions

Action Code	CC-01
Action Title	All-Hazards Emergency Operations Plan (EOP)
Description	Develop a Tribal All-Hazards Emergency Operations Plan covering notification and warning; evacuation; shelter; search and rescue; mass casualty management; coordination with external agencies; and recovery operations. The planning process confirmed the Tribe currently has no all-hazards EOP. This is the most foundational emergency management gap identified.
Lead Department	Tribal Administrator (Emergency Management Lead)
Supporting Departments	All Tribal Departments; Humboldt County OES; BIA Law Enforcement; NV DEM
Timing	Year 1 (Immediate; highest-priority action across all hazards)
Estimated Cost	$25,000–$75,000 | Cost Band C: $50,000–$150,000
Benefit to Tribe	A foundational document required for DMA2K compliance and FEMA grant eligibility. Enables coordinated response to any hazard event. Addresses the most critical emergency management gap identified in this planning process.
Potential Funding	FEMA EMPG (50% cost share); FEMA BRIC; BIA Emergency Management; NV DEM
STAPLEE Total Score	31

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community broadly supports having a real emergency plan.	**5**

Criterion	Assessment	Score (1–5)
Technical (T)	FEMA CPG 101 provides a clear, well-tested framework.	**5**
Administrative (A)	Requires significant staff time; technical assistance from FEMA and NV DEM available.	**4**
Political (P)	Tribal Council and FEMA strongly support.	**5**
Legal (L)	No barriers; required for FEMA compliance.	**5**
Economic (E)	Moderate cost; FEMA EMPG and BRIC fund this type of work.	**4**
Environmental (Env)	No impact.	**3**

Action Code	CC-02
Action Title	Formalized Emergency Management Function and Training
Description	Formalize emergency management as a defined program within the Tribal Administrator's office with dedicated staff time. Enroll the Tribal Emergency Management lead in FEMA Independent Study and Tribal EM training courses. Establish formal MOUs with Humboldt County OES and Nevada DEM. Join the National Tribal Emergency Management Council (NTEMC) and the regional NTEMC chapter.
Lead Department	Tribal Council / Tribal Administrator
Supporting Departments	FEMA Region 9; NV DEM; BIA Emergency Management; Humboldt County OES
Timing	Year 1–2 (Short-Term)
Estimated Cost	$40,000–$80,000 per year (staffing) | Cost Band C: $50,000–$150,000
Benefit to Tribe	Establishes permanent institutional emergency management capacity. Enables access to federal grant programs, mutual aid relationships, and sustained plan maintenance over time.
Potential Funding	FEMA EMPG (50% cost share for Tribal EM coordinator); BIA Emergency Management; NV DEM Tribal coordination
STAPLEE Total Score	29

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community supports having dedicated emergency management capacity.	**5**
Technical (T)	Standard EM training is widely available from FEMA and	**5**

Criterion	Assessment	Score (1–5)
	others.	
Administrative (A)	Requires funding for staffing allocation.	**4**
Political (P)	Council and FEMA strongly support.	**4**
Legal (L)	No barriers.	**5**
Economic (E)	Moderate staffing cost; EMPG covers up to 50%.	**3**
Environmental (Env)	No impact.	**3**

Action Code	CC-03
Action Title	Broadband and Emergency Communications Infrastructure
Description	Advance broadband internet and cellular service on the Reservation to support telemedicine, emergency alert systems, tele-MAT for substance abuse treatment, weather forecasting, and coordination with external agencies during emergencies. Coordinate with USRT Foundation's existing broadband efforts and pursue FCC Tribal Priority Window and USDA ReConnect funding.
Lead Department	Tribal Administration
Supporting Departments	USRT Foundation; FCC; BIA; USDA ReConnect; NV DEM
Timing	Year 1–3 (Short-Term)
Estimated Cost	$100,000–$500,000	Cost Band E: $500,000–$1 million
Benefit to Tribe	Foundational requirement for modern emergency management, healthcare delivery, and government operations. Currently absent in meaningful form, a gap that constrains every other hazard action in this plan.
Potential Funding	USDA ReConnect Program; FCC Tribal Priority Window; BIA Telecommunications; Treasury SLFRF; NTIA Broadband Equity
STAPLEE Total Score	27

STAPLEE Criteria Scores:

Criterion	Assessment	Score (1–5)
Social (S)	Community strongly supports connectivity improvements.	**5**
Technical (T)	Technology is available; deployment in remote areas is well understood.	**4**
Administrativ	Complex project requiring multi-partner coordination.	**3**

Criterion	Assessment	Score (1–5)
e (A)		
Political (P)	Federal support through multiple programs is strong.	**5**
Legal (L)	No barriers.	**5**
Economic (E)	High cost; very strong federal funding pathways.	**3**
Environmental (Env)	No significant negative environmental impact.	**3**

SECTION 7: IMPLEMENTATION SUMMARY

Summary of Actions and Implementation Sequencing

The Tribe will sequence implementation across the planning cycle as follows. Year 1 (Immediate) actions build foundational capability, establish core plans and protocols, or address urgent community-identified needs. Short-term actions generally require scoping, design, or partnership development before implementation. Medium-term actions are sustained multi-year programs or depend on the completion of an earlier assessment. Cost bands are defined in Section 6.

Sequence	Code	Action Title	Cost Band	Priority
Year 1 (Immediate)	**CC-01**	All-Hazards Emergency Operations Plan Development	C	High
	CC-02	Formalized Emergency Management Function and Training	C	High
	WF-02	Wildfire Emergency Response Protocols and Mutual Aid Formalization	B	High
	EH-01	Cooling Center Designation and Heat Emergency Response Plan	B	High
	EH-03	Heat Awareness and Early Warning Communications	A	High
	DC-03	Naloxone Distribution and Overdose Response Capacity	A	High
	WS-03	Winter Storm Early Warning and Road Coordination	A	High
	EP-01	Infectious Disease Surveillance and Response Protocols	B	High
	SW-02	Wind Event Early Warning and Community Communication Protocol	A	High
	FL-01	Culvert Maintenance and Drainage Management Program	A	High
	IN-01	Emergency Supply Stockpile and Bulk Fuel Reserve Program	C	High
	EQ-02	Household Earthquake Safety and Contents Anchoring Program	B	Low

Sequence	Code	Action Title	Cost Band	Priority
Years 1–3 (Short-Term)	**WF-01**	Community Defensible Space and Home Hardening Program	C	High
	WF-03	Wildfire Apparatus and Equipment Acquisition	D	High
	WQ-01	Water Distribution System Assessment and Phased Rehabilitation	F	High
	WQ-02	Continuous Automated Water Treatment System Installation	E	High
	WQ-03	Brownfields Phase II Assessment and Remediation Planning	E	High
	EH-02	Home Weatherization and Cooling Assistance; Vulnerable Households	E	High
	DR-01	Water Conservation and Drought Response Plan	C	Medium
	DR-02	Well Rehabilitation and Groundwater Monitoring Enhancement	D	High
	DC-01	Expanded Substance Abuse Treatment and Peer Recovery Support	D	High
	DC-02	Youth Prevention and Cultural Reconnection Program	C	High
	EP-02	Pandemic Supplies Stockpile and Wellness Center Surge Plan	C	High
	EP-03	Vector-Borne Disease Monitoring and Education	B	Medium
	WS-01	Emergency Warming Center Designation and Backup Power	C	High
	WS-02	Home Heating Weatherization and Pipe Protection	D	High
	CC-03	Broadband and Emergency Communications Infrastructure	E	High
	SW-01	Wind-Resistant Building Retrofits and Mobile Home Anchoring	D	Medium
	SW-03	Power Line and Critical Infrastructure Wind Hardening Assessment	E	Medium
	VA-01	Active Threat Response Training and Drills Program	B	Medium
	VA-02	Behavioral Health and Crisis Intervention Services Expansion	C	High
	VA-03	Physical Security Upgrades at Tribal Facilities	C	Medium
	ED-01	Post-Fire Rehabilitation and Native Seed Restoration Program	C	High

Sequence	Code	Action Title	Cost Band	Priority
	ED-02	Soil Erosion Assessment and Targeted Erosion Control Program	D	Medium
	ED-03	Traditional Plant Preservation and Cultural Landscape Stewardship	C	High
	IS-01	Cheatgrass and Noxious Weed Control; Targeted Annual Treatment	D	High
	IS-02	Livestock Disease Monitoring and Vaccination Coordination	B	Medium
	IS-03	Grasshopper and Mormon Cricket Outbreak Preparedness Plan	B	Medium
	FL-02	Floodplain Mapping and Low-Lying Structure Assessment	C	Medium
	FL-03	Flood Early Warning and Rapid Evacuation Protocol	B	Medium
	IN-02	Backup Generator Program for Critical Facilities	D	High
	IN-03	Communications Redundancy and Emergency Notification System	C	High
	EQ-01	Unreinforced Masonry Structure Assessment and Seismic Retrofitting	D	Low
Years 2–5 (Medium-Term)	**WF-04**	Fuels Management and Invasive Species Control (Annual Program)	D	High
	DR-03	Drought-Resilient Rangeland Management Program	D	Medium
	EQ-03	Critical Infrastructure Seismic Vulnerability Review	C	Low

Note: Most actions proposed in this THMP have identified federal or state funding sources capable of covering all or a substantial portion of costs. FEMA BRIC and HMGP are the primary channels for capital investments. Maintaining a current FEMA-approved THMP, satisfied through the passage of this plan, is a prerequisite for accessing those programs.

SECTION 8: PLAN ADOPTION, IMPLEMENTATION, AND MAINTENANCE (ELEMENTS D & E)

Plan Adoption, Implementation, and Maintenance

Plan Adoption

This plan will be formally adopted by the Fort McDermitt Paiute-Shoshone Tribal Council by resolution prior to final submission to FEMA Region 9. The resolution commits the Tribe and all departments to integrate the goals and actions of this plan into capital-improvement budgeting, land-use decisions, emergency management procedures, and grant applications.

[Tribal Council Resolution No. 2026-XXX-### and signature block to be inserted upon Council adoption.]

Integration with Other Plans and Programs

Plan / Program	Integration Point
Malheur County HMP (2025 Update)	Team participated in county process; county will include Fort McDermitt annex
Tri-County HMP (Next Update)	Humboldt County EM Director committed to Fort McDermitt annex
Fort McDermitt Nonpoint Source Pollution Management Plan	WQ actions build directly on that plan's findings and programs
BOR Drought Management Infrastructure Program	Drought and WQ actions build on well mapping and QAPP in progress
USRT Priority Climate Action Plan	Mitigation actions aligned with climate adaptation strategies for all four USRT Tribes
USRT Adaptation Strategy Database	Reference for climate-adaptive actions in wildfire, drought, and rangeland management

Five-Year Implementation and Update Schedule

Timeframe	Activity	Responsible Party
Ongoing (annual)	Department leads report to Tribal Council on action progress during budget cycle	Department Directors

Timeframe	Activity	Responsible Party
Annual: Birthday Celebration	Public outreach booth; progress updates distributed to community	Environmental Department / Tribal Administrator
Annual: Social Media	Post progress updates on plan implementation to Tribe's Facebook page	Environmental Department
2027: Mid-Term Review	Review action status; update list if needed; report to Council	Tribal Administrator / Council
2030: Update Launch	Begin planning process for 2031 plan update	Environmental Department / USRT / AI
2031: Plan Expiration	Complete five-year update and submit to FEMA Region 9	Environmental Department / USRT / AI

APPENDICES

Appendices

Appendix A: Tribal Council Resolution

[To be inserted following formal Tribal Council adoption.]

PROPOSED LANGUAGE

RESOLUTION OF THE GOVERNING BODY OF THE PAIUTE-SHOSHONE TRIBES OF THE FORT MCDERMITT INDIAN RESERVATION

Resolution No. 2026-XXX-###

BE IT RESOLVED BY THE FORT MCDERMITT PAIUTE-SHOSHONE TRIBAL COUNCIL,

WHEREAS, The Fort McDermitt Paiute-Shoshone Tribe (“FMPST”) is a federally recognized sovereign nation exercising inherent authority over the lands and resources of the Fort McDermitt Indian Reservation pursuant to the Treaty of 1875 and subsequent federal law; and

WHEREAS, The Fort McDermitt Indian Reservation is governed by the FMPST Tribal Council and is empowered to exercise the legislative and executive authority of the Paiute-Shoshone Tribal Members; and

WHEREAS, The FMPST recognizes that floods, wildfires, severe storms, drought, earthquakes, hazardous-materials incidents, and other natural or human-caused hazards pose a continuing threat to life, health, property, cultural resources, and economic stability; and

WHEREAS, Under 44 C.F.R. § 201.7, tribes must maintain a current, FEMA-approved Tribal Hazard Mitigation Plan (THMP) to remain eligible for Hazard Mitigation Assistance and certain post-disaster grants; and

WHEREAS, add here; and

WHEREAS, The 2026 THMP analyzes current hazard exposure, updates loss estimates, establishes measurable mitigation goals and objectives, and lists prioritized, cost-beneficial mitigation actions for implementation;

NOW THEREFORE IT BE RESOLVED, that the Fort McDermitt Paiute-Shoshone Tribal Council officially adopts the Fort McDermitt Indian Reservation Tribal Hazard Mitigation Plan, dated [date], thereby committing all Tribal departments, enterprises, and governing bodies to integrate the 2026 THMP's goals and actions into capital-improvement budgeting, land-use decisions, emergency management procedures, and grant applications, and authorizing submission of the 2026 THMP to FEMA Region 9 for formal review and approval, and authorizing and requiring add here to provide periodic updates to the plan, while providing annual updates to the FMPST Tribal Council.

CERTIFICATION

It is hereby certified that the Fort McDermitt Paiute-Shoshone Tribal Council is composed of 7 Council Members, Council Chairman, and a Council Vice-Chair, of whom X Council Members consisting a quorum and a Chairman were present at a meeting held on the X day of MONTH, 2026, and that the foregoing resolution was adopted by an affirmative vote of X FOR, X AGAINST, and X ABSTENTIONS pursuant to the authority contained in REFERENCE, of the Constitution of the Fort McDermitt Paiute-Shoshone Tribe approved DATE.

_____

David Hinkey
Council Chairman

_____

Ryan Smart
Council Vice-Chair

_____

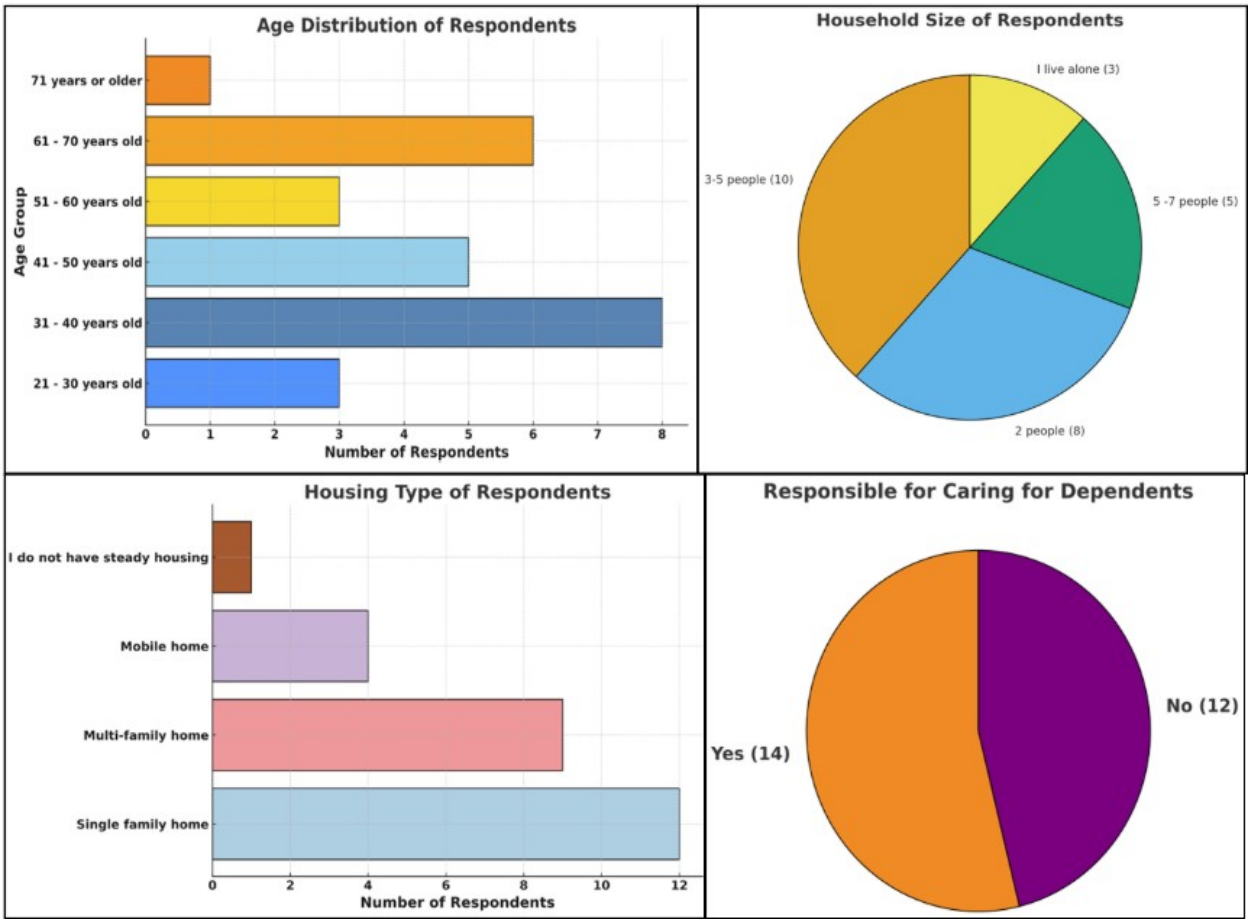
Maxine Redstar
Council Secretary

Appendix B: Community Survey Results Summary

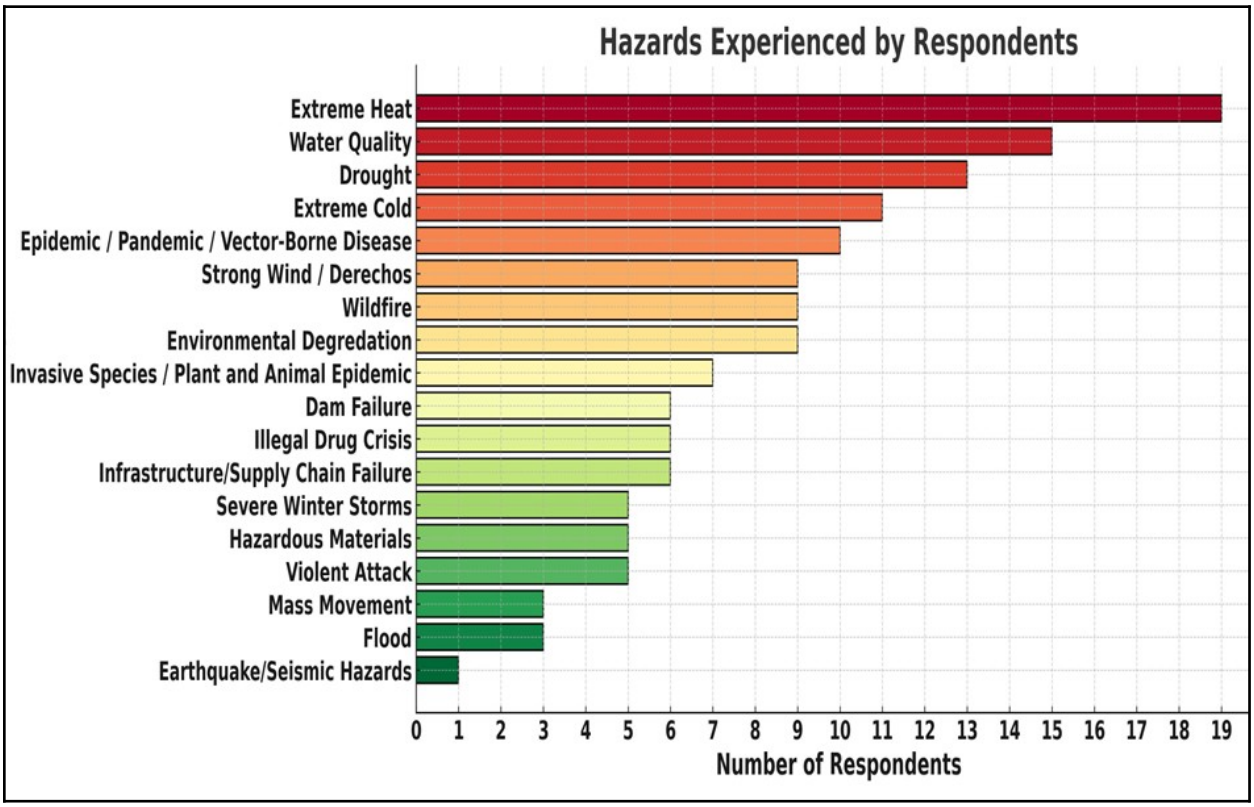
The following summarizes findings from the community hazard survey, launched July 12, 2025 at the Birthday Celebration and distributed through the Tribe's Facebook social media channel.

- Total respondents: 26 (approximately 8% of 326 on-Reservation residents)
- Survey period: July through October 2025

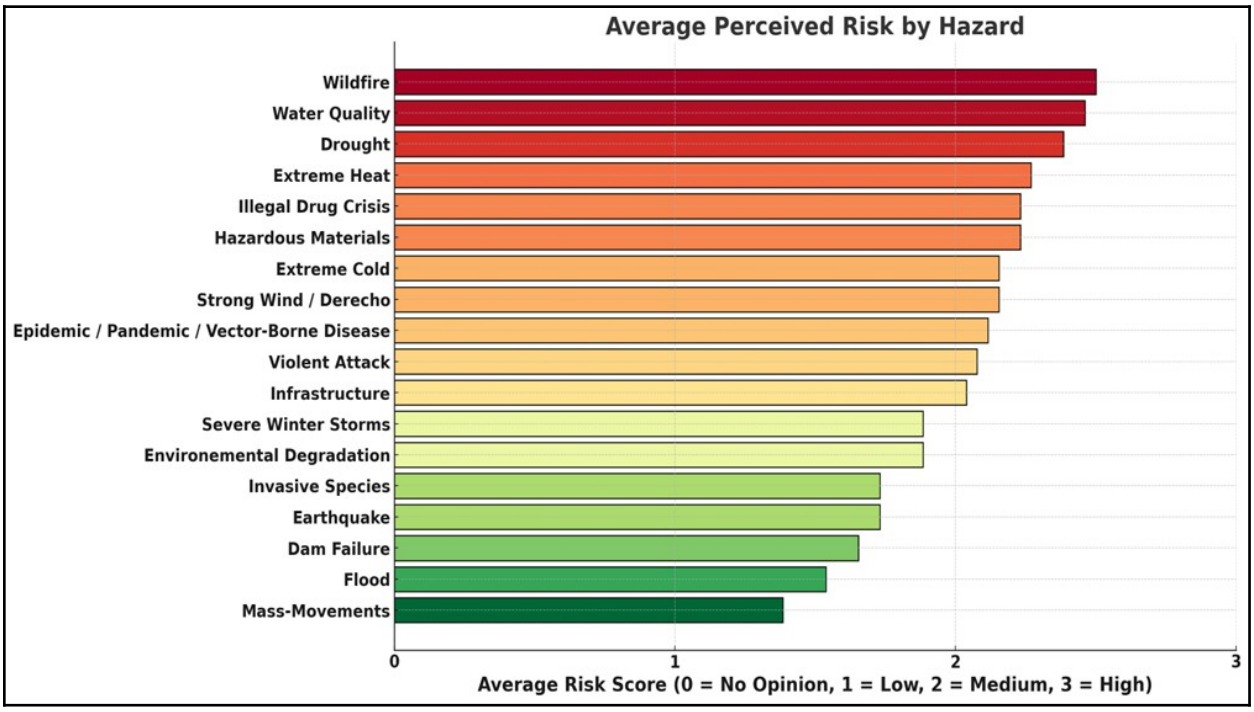
A total of 26 members of the public participated in the survey. This represented eight (8) percent of the 326 residents residing on the reservation. Demographic distributions were as follows:



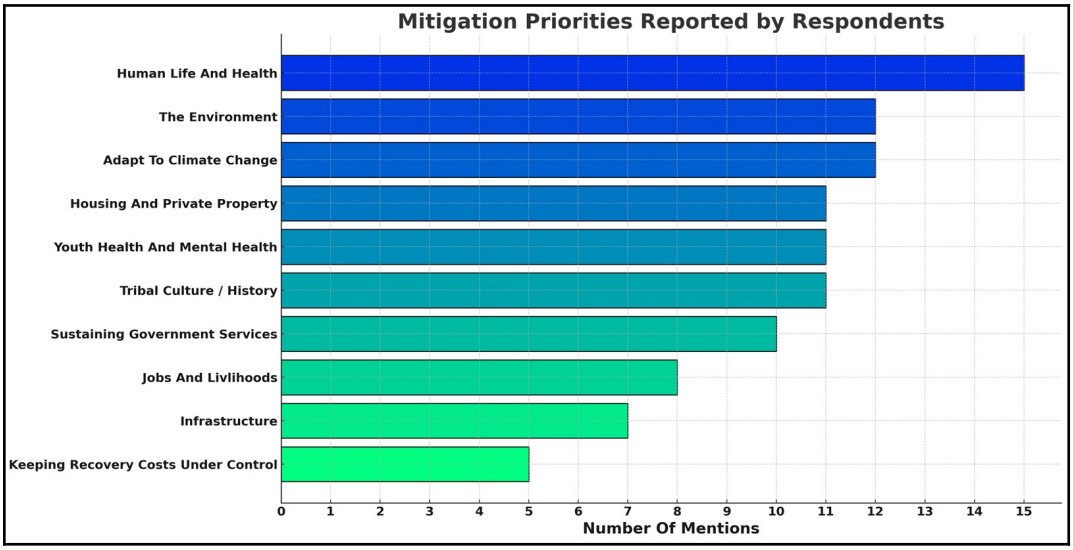
Nearly all respondents reported having experienced at least one emergency or disaster event caused by one or more of the sample hazards provided. The most common hazards that community members reported as having personally experienced were Extreme Heat, Water Quality Issues; and Drought. The full list is as follows:



Public risk perception was assessed by asking whether the risk posed by various hazards was high, medium, low, or whether the participant had no opinion about the risk or risks posed. Responses were scored from 0 (lowest concern) to 3 (highest concern). The results of these questions were as follows:



Participants were also asked to prioritize mitigation goals to better understand the relative importance each among this specific community. Respondents reported that the protection of human life and health was the most important, followed closely by protection of the environment and community adaptation to climate change. The full results are as follows:



Most Commonly Personally Experienced Hazards (by frequency of response):

1. Extreme Heat
2. Water Quality Issues
3. Drought
4. Wildfire smoke and near-miss fire events
5. Severe winter weather and road closures

Mitigation Priority Ranking (community-assigned):

1. Protection of human life and health
2. Protection of the environment and climate change adaptation
3. Safeguarding of infrastructure and government services
4. Preservation of cultural and natural resources

Appendix C: Key Reference Documents

- FEMA 2025 Tribal Mitigation Planning Handbook
- FEMA Tribal Mitigation Plan Review Guide (December 2017)
- Nevada Enhanced State Hazard Mitigation Plan (2023)
- Oregon State Natural Hazards Mitigation Plan (2025)
- Regional Tri-County Hazard Mitigation Plan (Humboldt, Pershing, and Lander Counties) (2021)
- Humboldt County Community Wildfire Protection Plan (2025)
- Humboldt County Fire Plan / Fort McDermitt Chapter (2003)
- Draft Malheur County Natural Hazards Mitigation Plan (2025)
- Fort McDermitt Nonpoint Source Pollution Management Plan (2025)
- Fort McDermitt Annual Water Quality Report (2024)
- FEMA National Risk Index: Fort McDermitt / Malheur County, Oregon
- Fort McDermitt Indian Reservation CMIP6 Climate Projections
- McDermitt Climate Normals 1991–2020 (Oregon State University PRISM Group)
- USDA Wildfire Risk to Homes: Fort McDermitt Community Profile
- Fort McDermitt EPA Tribal Environmental Plan / ETEP (2022)
- BOR Program Progress Report: Drought Management Infrastructure (2024–25)
- Upper Snake River Tribes Priority Climate Action Plan (2024)
- USRT Adaptation Strategy Database
- Boil Water Notice Documentation (2024)
- Malheur County Risk Perception Poll (2025)

Appendix D: Risk Ranking System Detail

RANK	Fort McDermitt Hazard Risk Assessment Tool	PROBABILITY	TREND	Health and Public Safety	Home and Property Damage	Livelihood Impacts	Cultural Wellbeing	Environmental Harm	Damage to Infrastructure	Recovery Costs	Government Services	Risk Acceptability	Mitigation Potential	Overall Hazard Ranking
1	Wildfire	4	3	3	3	3	3	3	2	3	2	3	2	0.91
2	Water Quality, HazMat, and Environmental Degradation	5	3	3	2	2	3	3	1	3	3	3	2	0.87
3	Extreme Heat	5	3	3	2	2	2	1	2	1	1	3	2	0.67
4	Drought	5	3	2	0	3	2	3	0	2	0	3	2	0.58
5	Illegal Drug Crisis	5	3	3	0	2	3	0	0	3	0	3	2	0.56
6	Epidemic / Pandemic / Vector-Borne Disease	3	3	3	0	3	3	0	0	3	3	2	2	0.55
7	Severe Winter Storms and Extreme Cold	4	2	2	2	2	1	0	3	2	3	2	2	0.47
8	Strong Wind / Derechos	3	2	2	3	1	0	1	2	3	1	2	2	0.42
9	Violent Attack / Workplace & School Violence	2	2	3	1	1	2	0	0	3	2	2	1	0.38
10	Plant & Animal Epidemic / Invasive Species / Habitat Loss	5	3	0	0	2	3	3	2	3	1	1	2	0.37
11	Flood (Flash Flood, Riverine, Stormwater)	3	3	1	2	1	2	2	2	3	2	1	1	0.34
12	Infrastructure / Supply Chain Failure	3	3	1	1	2	0	0	3	1	1	3	2	0.30
13	Earthquake / Seismic Hazards	2	2	1	2	0	2	1	1	3	2	1	2	0.28

Appendix E: Items Requiring Tribal Completion Prior to FEMA Submission

1. Adopt the plan by Tribal Council resolution and set the effective date.
2. Insert the signed resolution in Appendix A.
3. Confirm the full acknowledgment list, including any additional staff or community members to be named.
4. Review and update the Critical Facilities and Key Resources inventory with current condition assessments.
5. Document snow removal capacity and any active agreements with the county or Nevada NDOT.