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A "Hole-in-the-Community" Approach:

How Federal Disaster Policy Overlooks Indigenous Communities

Prepared for the Cascadia Coastlines and People Hazards Research Hub by Ashton Jenicek, Evan Mix, Alyssa Noltner, and Charles Veith

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EXECUTIVE SUMMARY

Disaster management has never been more relevant to policymakers than it is today. In the wake of the COVID-19 pandemic, and as the effects of climate change accelerate, governments and individual policymakers are more focused than ever on understanding the risks they face, attempting to mitigate those risks, and preparing to address them should they arise. In this respect, Tribal governments are no different from any others.

The Federal Emergency Management Agency exists for the primary purpose of helping state, regional, local, and Tribal governments succeed in efforts like these. It does so in part by awarding billions of dollars in grants each year to fund mitigation work—grants to which Tribal governments are nominally entitled on the same terms as any other government bodies.

This report examines the extent to which Tribal governments actually have equitable access to the grants and other mitigation aids that FEMA provides. Our work contributes to a broader effort by the Cascadia Coastlines and Peoples Hazards Research Hub to integrate multiple epistemological frames and values systems into disaster risk assessment and management—especially those frames and systems that originate from Indigenous knowledges and Tribal tradition. We examine the extent to which FEMA's existing policy structure supports such integration. Where it does not, we articulate alternative strategies to allow Tribal governments to access available resources.

Project Scope and Methods

Our research centers around three questions:

01 What funding and institutional support does federal policy provide for Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

02 What federal policy barriers impeded Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

03 What institutional support, regional partnerships, and federal relationships benefit or impeded Tribal nations' efforts to mitigate or prepare for natural-hazard-related disaster events?

After summarizing the relevant historical, legal, and policy background, we deploy three research modalities.

First, we conduct a systematic analysis of 47 FEMA-published documents that articulate FEMA's big-picture approach to disaster management and specific implementation guidance to Tribes. Using a qualitative content analysis approach, we assess both the frequency and quality of discussion of 13 concepts key to successful Tribal disaster management to identify barriers to access.

Second, in qualitative interviews with Tribal emergency management experts we explore the ways in which such barriers manifest in the everyday work of emergency management and the reasons why Tribal governments may be unable to access the resources they need.

Third, we analyze grant eligibility and award data published by FEMA to quantify barriers to access and grant award outcomes.

These research methods are described in detail in Chapter 3.

Key Findings and Conclusions

We find that Tribal governments are legally eligible to benefit from FEMA's grant programs and other disaster management assistance on the same terms as state and local governments. However, contextual barriers make it difficult for Tribes to access these resources in an equitable way.

Three broad themes characterize our results:

- Demonstrating grant eligibility and completing the application process are technically demanding and resource-intensive. Hazard mitigation planning and benefit-cost analysis are particularly onerous for Tribal governments that may lack the resources, staffing, and expertise to complete them without assistance.

- Tribal governments are systematically disadvantaged relative to other grant applicants. FEMA's grantmaking process interacts poorly with certain features of Tribes as political bodies and certain qualities that typify Tribal approaches to disaster management.

- FEMA recognizes that it has unique obligations to Tribal applicants that are defined by applicable law. However, it has not yet fully operationalized strategies to meet those obligations. This lack of implementation operates to the detriment of Tribal applicants.

We expand on these themes and make recommendations to address them in Chapters 4 and 5. In Chapter 4 we also present scorecards that summarize the results of our content analysis of 47 FEMA documents, including FEMA doctrine, policies, program manuals, job aids, and notices of funding opportunities.

Opportunities for Future Work

The disaster management landscape is shifting quickly as FEMA and other government stakeholders respond to the increasing number, pace, and variety of disaster events. After about a decade of relative stability, this policy area is currently in flux. A number of important shifts took place as we worked on this project and more are on the horizon. Fortunately, these changes appear on balance to be designed to lower barriers to equitable access for Tribes. We summarize relevant recent changes in Chapter 6.

This project portrays the grant application process as it currently operates; more work will be needed to incorporate these and other new changes. We hope that other researchers will continue this important work to enable Tribal governments to better meet the challenges of the future.

POSITIONALITY

As authors, we have sought while preparing this report to remain aware of the privileged positions we occupy.

We recognize that we approached this work with varied interpretations and unintentional biases informed by our own lived experiences, and particularly the privileges of living as white people. We also recognize that we conduct this work with the privilege of those who have access to, and work within, a system of higher education. Throughout this work, we aimed to acknowledge and check the power and privilege we hold.

Finally—and most importantly—we have been privileged to live, work, and study on the unceded ancestral lands of the Coast Salish peoples, the land which touches the shared waters of all Tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations. We are grateful to the many holders of Indigenous knowledges who chose to share that knowledge with us.

GLOSSARY

AIAN: American Indian and Alaska Native. AIAN is a term often used by the United States federal government to describe Indigenous populations and individual members thereof.

BCA: Benefit-Cost Analysis. BCA is a method to compare the benefits and costs of a project over time. Conducting a BCA is often a requirement for federal grant applications.

BRIC: Building Resilient Infrastructure and Communities. BRIC is a relatively recent FEMA grant program established in fiscal year 2020. This program makes funding available to states, territories, local governments, and federally recognized Tribes for natural hazard mitigation efforts. Non-recognized Tribes may apply as sub-applicants.

Cascadia CoPes Hub: Cascadia Coastlines and Peoples Hazards Research Hub, or "The Hub", is a team of researchers funded by the National Science Foundation (NSF Award 2103713) working to increase knowledge about natural hazards and climate change risks coastal communities face and ways to increase their resilience. The Hub works with communities in the Pacific Northwest, including Washington, Oregon, and Northern California, to increase their ability to mitigate and adapt to impacts from coastal hazards like Cascade Subduction zone earthquakes, tsunamis, sea level rise, landslides, erosion, and climate change.

DHS: United States Department of Homeland Security. Formed in response to the September 11 terrorist attacks, DHS is responsible for domestic public security of the United States, including disaster prevention and management and border security. The Federal Emergency Management Agency (FEMA) is an agency of DHS.

Disaster: as defined by FEMA, a disaster is "an occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries."[1] A disaster may be categorized as a:

- **Rapid-onset disaster:** these are disasters that arrive rapidly and often with little warning, such as earthquakes, wildfires, or flash flooding.
- **Slow-onset disaster:** the effects of these disasters are slow to be realized. Accordingly, the damage and disruption they cause may last over an extended period of time. Drought and sea level rise are examples of slow-onset disasters.

Disaster management: also referred to as emergency management, disaster management is the process of preparing for and responding to disasters.

Disaster management cycle: the disaster management cycle encompasses the four phases of emergency or disaster management:

- **Mitigation:** actions taken prior to the onset of potential future disasters to lessen negative impact and reduce the loss of life and property.
- **Preparedness:** planning, training, organizing, and other activities meant to prepare a community for the threats posed by disasters.
- **Response:** the operational actions and capabilities necessary to protect people, property, and the environment during or after a disaster incident.
- **Recovery:** the actions taken to assist communities affected by a disaster incident in recovery.

[1] FEMA. (2023, April 18). "Glossary." https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm.

Environmental & Historic Preservation: All federally funded projects must undergo an environmental and historic preservation review to ensure proper stewardship of historic properties and the environment. This process is governed by more than 30 federal regulations, directives, and legal mandates.[2]

Emergency declaration: more limited in scope than a major disaster declaration, an emergency declaration involves fewer federal programs and is not normally associated with recovery programs. However, the President may issue an emergency declaration prior to an actual incident to lessen or avert the threat of a catastrophe. Generally, federal assistance and funding are provided to meet specific emergency needs or to help prevent a catastrophe from occurring. The Stafford Act grants the chief executive of an affected Indian Tribal government the authority to request a declaration by the President.[3]

Federally-recognized Tribe: the U.S. government officially recognizes 347 Indian Tribes within the contiguous 48 states, and 227 Alaska Native Villages/Tribes within the State of Alaska as of the date this report was published. Recognition affords these Tribes a unique political status under United States law that includes a sovereign relationship with the U.S. government, the power to govern territory and Tribe members, and access to funding and services from the Bureau of Indian Affairs and other federal agencies. There are also many state-recognized Tribes, recognized by the governments of the states within the boundaries of which they are located, and various non-recognized Tribal groups.

FEMA: the Federal Emergency Management Agency is the lead federal agency dedicated to supporting citizens and emergency personnel to build, sustain, and improve capabilities in all stages of the disaster management cycle. FEMA often

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[2] Environmental & Historic Preservation Guidance for FEMA grant applications. FEMA.gov. (n.d.). Retrieved May 1, 2023, from https://www.fema.gov/grants/guidance-tools/environmental-historic.

[3] Congress. (2022, December 28). Robert T. Stafford Disaster Relief and Emergency Assistance Act. [Government]. U.S. Government Publishing Office. https://www.govinfo.gov/app/details/COMPS-2977, 76.

provides its support through funding and technical assistance to states, Tribal governments, and local jurisdictions. FEMA is an agency of the Department of Homeland Security.

FMA: Flood Mitigation Assistance is a competitive grant program, the funds from which can be used to mitigate repetitive flood damage to structures insured under the National Flood Insurance Program. Jurisdictions eligible to apply, including federally-recognized Tribes, are required to have a FEMA-approved Hazard Mitigation Plan.

Hazard Mitigation Plan: these plans aim to identify risks and vulnerabilities in a community and develop a strategy to protect people and property from those risks. A FEMA-approved Hazard Mitigation Plan is a requirement for many applications for FEMA assistance. The plan must be re-approved every five years, but the administrative checklist must be completed annually.

Hazard Mitigation Grant Program (HMGP): provides funding to state, local, Tribal and territorial governments so they can develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities. All state, local, Tribal and territorial governments must develop and adopt hazard mitigation plans to receive funding for hazard mitigation project application.

American Indian: sometimes shortened simply to “Indian,” this term refers to the Indigenous peoples of the continental United States (i.e. exclusive of arctic Indigenous populations such as the Inuit, Yupik, and Aleut) and individual members of those populations. It originates from the mistaken belief by European colonizers upon reaching the North American continent that they had landed in India. Despite its geographic inaccuracy, the term “American Indian” remains in use, particularly in federal law.

Indigenous knowledges: covering a diverse range of knowledge systems, Indigenous knowledges are often deeply rooted in the natural world and integrate the culture and shared knowledge of Indigenous communities.

Local government: any unit of government within a state, including a county; borough; municipality; city; town; township; parish; local public authority, including any public housing agency under the United States Housing Act of 1937; special district; school district; intrastate district; council of governments, whether or not incorporated as a nonprofit corporation under state law; and any other agency or instrumentality of a multi-regional, or intra-State or local government.

Major disaster declaration: provides more federal programs for response and recovery than an emergency declaration. The Stafford Act grants the authority for the President to provide financial assistance "in States that have received a major disaster declaration in the previous 7 years, or to any Indian Tribal government located partially or entirely within the boundaries of such States."[4] Unlike an emergency declaration, a major disaster declaration may only be issued after an incident.

Nature-based solutions: environmental engineering and management practices that integrate natural processes and features to accomplish community goals, often related to environmental adaptation or resilience. A nature-based solution such as a clam bed may have significant social and economic benefits that differ from traditional structural solutions such as a seawall.

Natural hazards: as defined by FEMA, a natural hazard is something that is dangerous or harmful and "related to weather patterns and/or physical characteristics of an area. Often natural hazards occur repeatedly in the same geographical locations."[5]

Resource management: the efficient, sustainable, and effective development of an organization's resources, often in reference to natural resources such as timber or fisheries.

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[4] Ibid.

[5] FEMA. (2023, April 18). "Glossary." https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm#N.

Risk reduction: policies, procedures, and practices aimed at reducing existing and preventing new disaster risk.

Self-determination: the inherent right of a people to govern itself, independent of the preferences of any other nation. The right to self-determination is an implicit characteristic of recognized Tribes.

Stafford Act: the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. 100-707, 42 U.S.C. § 5121, et seq., provides legal authorization for FEMA's actions in disaster management and response.

Sandy Recovery Improvement Act: an appropriations bill enacted in 2013 in response to Hurricane Sandy which provides funding for post-hurricane relief efforts. It amended the Stafford Act to include a provision providing federally recognized Tribal governments the opportunity to request a Presidential emergency or major disaster declaration. Previously, such a request would have to be made by the government of the state in which the Tribe is located.

Tribal Climate Change Principles: principles developed by the Tribal Climate Project that build on recommendations from the 2014 President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience. They are intended to guide the federal government in actions regarding Indigenous Peoples and climate change.

Tribal governments: Tribal governments are composed of the political bodies through which individual Tribes exercise self-governance. They are political entities within the United States distinct from the federal government and the governments of states and localities. Federally recognized Tribal governments are recognized under U.S. law as domestic dependent nations with sovereign authority over the lands and people they govern.

Tribal sovereignty: the inherent authority of Tribal nations to self-govern. Recognition by the United States government affords Tribes the inherent right of sovereignty, which is in theory recognized by the executive, judicial, and legislative branches of the federal government.

Tribe: a group of people connected by shared descent, customs, traditions, and/or governance. In the United States and in this report, the term "Tribe" refers specifically to Indigenous groups of this character. Tribes are culturally, historically, and politically distinct from one another.

Vulnerability: defined by the United Nations Office for Disaster Risk Reduction, vulnerability is "the characteristics determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards."[6]

Whole community: also referred to as "all of nation" or "whole of community," the whole community approach is a Department of Homeland Security and FEMA philosophy that presents national preparedness as a shared responsibility involving all levels of American society, including federal, state, Tribal, territorial, and local governments, but also groups and individuals in the private sector, faith-based organizations, and the non-profit sector.

[6] UNDRR. (2023, April 18). "Vulnerability" https://www.preventionweb.net/understanding-disaster-risk/component-risk/vulnerability.

01. INTRODUCTION

Natural hazards such as wildfires, earthquakes, and flooding have affected peoples in North America for thousands of years. These threats are not new, but as climate change accelerates, some have become more frequent, intense, and destructive. The increased severity of weather-related disasters disproportionately impacts the health and well-being of Indigenous waters, lands, and peoples even though anthropogenic climate change is driven largely by non-Tribal commercial and industrial activity.

The federal government diverts more resources each year toward climate-related disaster mitigation, preparation, response, and recovery work that is performed at every level of government. The Federal Emergency Management Agency (FEMA), which is part of the U.S. Department of Homeland Security (DHS), is the lead federal agency dedicated "to prepar[ing] for, protect[ing] against, respond[ing] to, recover[ing] from, and mitigat[ing] all hazards."[7] FEMA provides personnel, training, and resources to support states, regions, territories, and Tribal nations engaged in emergency management and disaster mitigation. Both the Stafford Act and the general federal trust obligation require FEMA to make and implement policy for the benefit of Tribes.

[7] USA.gov. (2023, February 16). Federal Emergency Management Agency. https://www.usa.gov/federal-agencies/federal-emergency-management-agency.

Under the Stafford Act, FEMA is required to provide assistance to Tribal governments just as it does for state and local governments, meaning federally-recognized Tribes are eligible for federal disaster assistance and can receive direct support from FEMA.[8]

However, Tribal governments remain excluded from equitable participation in and financial support from these efforts. The federal government has not recognized Indigenous ways of knowing or the centuries of emergency management experience present in Indigenous communities. In other words, the federal government has adopted disaster mitigation strategies that are rooted in colonial thinking.[9, 10]

FEMA has not provided adequate support for Tribal mitigation and adaptation strategies, resulting in a lack of technical assistance to Tribal governments and disqualifying them from eligibility for financial support to which they are theoretically entitled. For example, many FEMA mitigation grants are intended to fund improvements to the built environment or infrastructure projects. Because Tribal nations' mitigation strategies tend to focus on protecting and working within the natural environment rather than building or reinforcing human-made infrastructure, Tribal projects are often ineligible for the types of FEMA funding that have greatly benefited states and municipalities in the post-9/11 era.[11] The

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[8] Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5121, et seq. (1988), as amended.

[9] Dent, L.A., Donatuto, J., Campbell, L. et al. (2023). Incorporating Indigenous voices in regional climate change adaptation: opportunities and challenges in the U.S. Pacific Northwest. Climatic Change 176, 27. https://doi.org/10.1007/s10584-023-03499-z.

[10] Jantarasami, L.C., R. Novak, R. Delgado, E. Marino, S. McNeeley, C. Narducci, J. Raymond-Yakoubian, L. Singletary, and K. Powys Whyte (2018). Tribes and Indigenous Peoples. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 572–603. doi: 10.7930/NCA4.2018.CH15.

[11] Carter, L. (2016). An Investigation of United States Federal Policy Attempts to Reduce American Indian and Alaska Native Disaster Vulnerability. Colorado State University. ii-iii, 13-15.

federal government has not made sufficient efforts to provide alternative sources of funding for Tribal initiatives or offer culturally accessible guidance to Tribal nations seeking to take advantage of existing funding opportunities. Without sufficient funding, training, and other support, Tribal capacity to engage in mitigation work is limited.

This lack of engagement with Tribal governments and acknowledgement of Indigenous thinking is consistent with a pattern that has existed since before the founding of the United States. Beginning with the earliest treaties between the fledgling federal government and Tribal governments, the United States acknowledged that Tribes were separate sovereigns with territory and political powers independent from its own.[12] Formally, this principle is part of the bedrock of federal Indian law—most famously articulated by the U.S. Supreme Court in Worcester v. Georgia (1832), which described Tribes as "distinct political communities, having territorial boundaries, within which their authority is exclusive" [13] and retaining the sovereign power to exclude states from exercising power over Tribal citizens and territories. The Supreme Court ruled in Worchester that the State of Georgia lacked power to enforce its laws in Cherokee Nation territory based on the understanding that the Cherokee Nation was a distinct sovereign in a direct government-to-government relationship with the United States established by treaty.

Practically, this rule has been more honored in the breach than the observance. The history of federal and state infringement on Tribal sovereignty is longer and more tragic than we can recount here, but one illustrative example is the response to Worchester itself: the executive branch under President Andrew Jackson not only refused to enforce the decision but took steps to remove the Cherokee Nation from its treaty lands over the objection of a majority of its citizens.[14] This culminated in 1838 in the forced migration of the Trail of

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[12] Wilkins, D. and Stark, H. American Indian Politics and the American Political System (4th ed. 2018), pp. 55-56.

[13] Worchester v. Georgia, 31 U.S. 515, 557 (1832).

[14] Wilkins and Stark, American Indian Politics, pp. 152-53.

Tears and the resulting deaths of thousands of members of the Cherokee Nation.

The history of Tribal relations in the United States since has been characterized by similar federal and state efforts to undermine Tribal governance and either assimilate or outright exterminate the Indigenous population.[15] Recent rhetoric has trended back toward the recognition of Tribal sovereignty and enhancement of Tribal government resources and administrative capacity, but the federal government still struggles to allow Tribal governments the space and resources they need to govern in ways consistent with their unique history, expertise, and worldviews. This report investigates how and to what extent FEMA hazard mitigation policy supports Tribal mitigation efforts or fails to do so.

While directives such as the 2022-2026 FEMA National Tribal Strategy[16] seek to address many of these issues, it remains to be seen whether these initiatives will provide more equitable emergency management support to Tribal communities. This most recent FEMA National Tribal Strategy aligns with the 2022-2026 FEMA Strategic Plan, which "positions the agency to respond to a changing landscape in which the emergency management community must embrace its expanding role."[17] These FEMA strategic documents, along with the Department of Homeland Security's National Preparedness Goal, describe this as a "whole community," "whole of community," or "all-of-Nation" approach.[18, 19, 20]

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[15] Ibid. p. 31.

[16] FEMA. (2023, February 17). 2022-2026 FEMA National Tribal Strategy. https://www.fema.gov/sites/default/files/documents/fema_national-tribal-strategy_08182022.pdf.

[17] Ibid. p. 4.

[18] Ibid. p. 9.

[19] Ibid. pp. 3, 7, 14.

[20] U.S. Department of Homeland Security (DHS). (2023, February 17). National Preparedness Goal, Second Edition, September 2015: p. 1. https://www.fema.gov/sites/default/files/2020-06/national_preparedness_goal_2nd_edition.pdf.

But Tribal governments are being excluded from the “whole community.” According to a May 2022 report by the Government Accountability Office (GAO), “a representative from one Tribal association and eight of nine Tribal officials in northern California told us that there is little outreach from FEMA informing them about how to strengthen earthquake resilience” and that Tribal officials at times relied on internet searches to obtain guidance on earthquake risk reduction. As the National Tribal Strategy was being developed, FEMA officials had “…no plans developed for conducting outreach to Tribal governments because their focus is to complete the National Tribal Strategy and to begin consulting with Tribal governments to identify disaster preparedness capabilities.”[21]

Robert Holden, a former Deputy Director of the National Congress of American Indians experienced in emergency management and homeland security, explained how Tribal communities are left out of the "whole community” concept in an interview with the Louisiana State University National Center for Biomedical Research and Training Preparedness Podcast in 2021:

> …**I spell it, H-O-L-E,** because there are now 574 federally recognized Tribes that are not included, to a great degree, in a lot of the emergency management planning, programming, and funding that is available to states and local governments. …[I]f you include the Tribes, you now have another asset in emergency management that you can use and truly be a partner by definition, and that is a word that gets thrown around a lot. You know, ‘We have to talk to our partners. We have to include our partners.’ Tribes aren't partners. Tribes are an afterthought in a lot of ways. [22]

[21] U.S. GAO. (2022, May 4). Earthquakes: Opportunities exist to further assess risk, build resilience, and communicate research: pp. 24-26. Retrieved February 8, 2023, from https://www.gao.gov/products/gao-22-105016.

[22] LSU NCBRT. (2023, April 7). 35 – Tribal Emergency Management: Tribes and the Federal Government (Part 2) [Podcast].

Research Questions and Strategy

The Cascadia Coastline and Peoples Hazards Research Hub, or Cascadia CoPes Hub, is funded by the National Science Foundation to partner with local, state, and the federal governments, along with members of coastal communities in the Pacific Northwest, to increase knowledge about natural hazards and climate change risks coastal communities face and advance coastal community adaptive capacity. The Cascadia CoPes Hub also serves the long-term goal of improving the general preparedness of coastal communities and increasing their ability to recover following hazards such as sea level rise, tsunami, and landslides.[23] Participating in the Cascadia CoPes Hub are over a hundred researchers, students, and staff from Oregon State University, University of Washington, University of Oregon, Cal Poly Humboldt, U.S. Geological Survey, Arizona State University, the Ruckelshaus Center, and the Swinomish Indian Tribal Community.

Our research team was tasked by the Cascadia CoPes Hub to review current federal disaster policy and assess its ability to support Tribal disaster mitigation, preparedness, response, and recovery efforts. We identify explicit or implicit provisions in current federal disaster policy that raise barriers or create pathways to success for Tribal emergency managers. Finally, we use these observations to recommend policy changes, suggest workarounds for barriers, and propose best practices for Tribes seeking access to funding, technical assistance, and overall support from the federal government.

Motivated by Holden (quoted above) and similar observations, we adopted the following working hypothesis:

> Federal disaster policies and grant requirements are not inclusive of Indigenous ways of knowing and impede Tribal nations from making progress on natural-hazard related disaster mitigation and prevention.

[23] The Cascadia Coastlines and Peoples Hazards Research Hub. (2023, February 23). https://cascadiacopeshub.org.

We sought to answer the question: How does federal disaster policy in the United States explicitly or implicitly benefit or impede disaster preparedness, response, and recovery of Tribal nations? To direct our research, we focused on the following sub-questions:

01 What funding and institutional support does federal policy provide for Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

02 What federal policy barriers impeded Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

03 What institutional support, regional partnerships, and federal relationships benefit or impeded Tribal nations' efforts to mitigate or prepare for natural-hazard-related disaster events?

Purpose and Structure of Report

The purpose of this report is to analyze federal doctrine, policies, program manuals, job aids, and notices of funding opportunities referred to collectively hereafter as FEMA documents. We analyzed these FEMA documents to identify support (or lack thereof) for the disaster preparedness, response, and recovery efforts of Tribal nations. Our overarching goal is to develop practical guidance concerning policies, training, and resources that Tribal nations can use to formulate and implement their own disaster risk management plans that are true to their worldviews and are recognized by the federal government. The effects of natural hazards and disasters do not end at political boundaries. If communities throughout the United States are to have quality emergency management, then comprehensive plans led by the federal government must include and support each community, including Tribal communities. It is our hope that this report will be of practical use for Tribal staff or emergency managers and organizations supporting them who hope to gain better cooperation, support, and funding from federal partners such as FEMA.

The report proceeds as follows.

Chapter 2 summarizes the results of a review of relevant literature from the federal government, academic publications, pertinent legal precedent, and other sources on which we based our preliminary analysis of the pertinent issues. In particular, it explains disaster management theory, describes available FEMA grants, and outlines some of the background principles leading to barriers Tribal governments face in emergency management.

Chapter 3 describes our research methods for this project, which include a systematic analysis of FEMA strategic and policy documents; a trio of interviews with Tribal environmental policy and management experts; and a quantitative analysis of data concerning FEMA grant awards.

In Chapter 4 we lay out our findings concerning the reasons why Tribes are unable to access FEMA grants in an equitable way.

Chapter 5 provides recommendations to address the problems we have identified, including recommended changes to federal policy and strategies for Tribes seeking resources for emergency management.

In Chapter 6 we conclude the report with a discussion of limitations, a look at emerging policy developments, and a list of topics for future research.

02.LITERATURE REVIEW

Review Strategy and Methods

We conducted a thorough review of publicly available literature to understand federal disaster policies, the disaster management cycle, Tribal nations' access to federal resources, federal agencies' support for Tribal nations, and barriers to the disaster preparedness of Tribal nations inherent in federal disaster policies. Our review proceeded in two stages.

First, we identified relevant sources by searching the University of Washington Libraries academic database, reviewing the titles and abstracts of articles that were relevant to our research question, and reading literature proposed by our client and project advisors. We began with four articles: "Incorporating Indigenous Voices in Regional Climate Change Adaptation: Opportunities and Challenges in the U.S. Pacific Northwest,"[24] "Fourth National Climate Assessment Chapter 15: Tribes and Indigenous Peoples,"[25] "Tribal Climate Change Principles: Responding To Federal Policies And Actions To Address Climate Change,"[26] and "An Investigation of United States Federal Policy attempts to reduce American Indian and Alaska Native Disaster Vulnerability."[27]

Next, we reviewed the sources referenced in these articles to find additional materials for review and to identify any seminal works and key contributors to the field. We reiterated this practice with all subsequently identified pieces to ensure the literature review was comprehensive; when we found that articles

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[24] Incorporating Indigenous voices in regional climate change adaptation: opportunities and challenges in the U.S. Pacific Northwest. Climatic Change 176, p. 27.

[25] Jantarasami et al., Tribes and Indigenous Peoples. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, Ch. 15.

[26] Greunig, B., Lynn, K., Voggesser, G., & White, K. P. (2015, September). Tribal Climate Change Principles: Responding To Federal Policies And Actions To Address Climate Change. Tribal Climate Change Project. Retrieved February 8, 2023, from https://tribalclimate.uoregon.edu/publications.

[27] Carter, L. (2016). An Investigation of United States Federal Policy Attempts to Reduce American Indian and Alaska Native Disaster Vulnerability. Colorado State University.

referred predominantly to literature we had already identified and reviewed, we determined that we reached a saturation point.

Based on our initial review of federal doctrine, regulations, and policies, as well as previous reports from the Government Accountability Office,[28, 29, 30, 31] the Institute for Tribal Environmental Professionals,[5] and the National Congress of American Indians,[32] we identified several key barriers to equitable Tribal grant access: misconceptions or lack of recognition of Tribes and Tribal sovereignty, poor intergovernmental relationships, lack of understanding of Indigenous knowledges, and divergent assessments of risks and vulnerabilities, all of which contribute to the reduction or prevention of Tribal access to federal resources and support.

We used these barriers, as well as proposals to address them, as the conceptual basis for the codebook we created to analyze the content of documents guiding federal disaster policy.

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[28] U.S. GAO. (2018, May). Implementation of the Major Disaster Declaration Process for Federally Recognized Tribes. Retrieved January 24, 2023, from https://www.gao.gov/assets/gao-18-443.pdf.

[29] U. S. GAO. (2022, May 18). Alaska native issues: Federal agencies could enhance support for native village efforts to address environmental threats. Retrieved February 3, 2023, from https://www.gao.gov/products/gao-22-104241.

[30] Currie, C. P. (2021, October 27). Disaster Recovery: Efforts to Identify and Address Barriers to Receiving Federal Recovery Assistance. GAO. Retrieved February 16, 2023, from https://www.gao.gov/assets/gao-22-105488.pdf.

[31] U.S. GAO, Earthquakes: Opportunities Exist to Further Assess Risk, Build Resilience, and Communicate Research.

[32] Wolkyns, S., & González-Maddux , C. (2014, May). Welcome to the ITEP Tribes & Climate Change Program. Tribes & Climate Change - Tribes & Climate Change. Retrieved February 10, 2023, from https://www7.nau.edu/itep/main/tcc.

[33] Embassy of Tribal Nations. (n.d.). Policy Issues: Tribal Governance. National Congress for American Indians. Retrieved February 10, 2023, from https://www.ncai.org/policy-issues/tribal-governance.

The Disaster Management Cycle

FEMA has five mission areas (Prevention, Protection Mitigation, Response, and Recovery) that support the National Preparedness Goal to "prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk," including events such as natural disasters, chemical spills and other man-made hazards, terrorist attacks, and cyber-attacks.[34] FEMA policies and operations related directly to natural-hazard related events are further guided by an industry-standard four-phase disaster management cycle: mitigation, preparedness, response, and recovery (Figure 1).

This disaster (or emergency) management cycle is the system the federal government uses to categorize phases of and resources available to address an emergency or disaster. FEMA is the lead agency for federal government disaster management, and manages disasters by working to equip states, regions, Tribes, and territories to prepare for and respond to disasters. Tribes have reported difficulty building and maintaining their emergency management capacity and developing FEMA-approved hazard mitigation plans, which are required to meet federal grant funding eligibility requirements.[35]

Figure 1: Disaster Management Cycle

Note. Summarizes the phases of the disaster management cycle, as adapted by the authors from the FEMA National Preparedness Goal (2nd Ed. September 2015)

[34] National Preparedness Goal. FEMA. (2015, September). Retrieved February 5, 2023, from https://www.fema.gov/sites/default/files/2020-06/national_preparedness_goal_2nd_edition.pdf.

[35] U.S. GAO, Implementation of the Major Disaster Declaration Process for Federally Recognized Tribes.

Table 1 provides more information pertaining to FEMA's goals, characteristics, and resources available throughout the disaster management cycle.

Table 1: FEMA Disaster Management Strategies

	Goal & Characteristics	Resources
Mitigation [36]	**Goal:** To manage risks from threats and hazards through risk reduction projects including but not limited to improving the resilience of critical infrastructure and key resource lifelines and initiatives to reduce future risks after a disaster has occurred. Mitigation activities include risk assessment, infrastructure improvement, and developing strategies to reduce risk, funded by FEMA-administered hazard mitigation assistance grants.	FEMA awards over $3 billion is awarded annually for competitive mitigation grants. FEMA provides a variety of technical assistance programs are available by request. FEMA also makes available low or no interest loans for mitigation activities.
Preparedness [37]	**Goal:** A secure and resilient nation with the capabilities across the whole community required to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk. Preparedness activities include identifying and assessing risk, estimating capability requirements, building and sustaining capabilities, planning to deliver capabilities, and validating capabilities.	FEMA allocates approximately $550 million annually for eight types of preparedness grants, of which Tribes are eligible for five.

[36] FEMA. (2021, March). Mitigation Resource Guide. Federal Emergency Management Agency. Retrieved February 18, 2023, from https://www.fema.gov/sites/default/files/documents/fema_mitigation-resource-guide.pdf.

[37] FEMA. (n.d.). National Preparedness System. FEMA.gov. Retrieved February 17, 2023, from https://www.fema .gov/emergency-managers/national-preparedness/system.

Response [38]	**Goal:** To coordinate actions to save lives, protect property and the environment, stabilize the incident, and meet basic human needs following an incident. Response activities include establishing coordinating structures to integrating capabilities across a whole community, establishing unity of effort across public and private sectors to stabilize community lifelines and prioritize restoration of infrastructure.	The amount of FEMA funding for response varies depending on the size, scope, number, and intensity of disasters in a fiscal year. Most funding for response and recovery is captured in the Public Assistance (PA) program.
Recovery [39]	**Goal:** Achieve recovery regardless of the size or scale of the disaster. Recovery tasks include whole community planning, public information and warning, operational coordination, economic recovery, health and social service activities, housing and infrastructure stability and development, and assessing impact to natural and cultural resources.	FEMA recovery resources are the same as response resources. FEMA also suggests that governments being mitigation activities during the recovery phase.

Note. Table adapted from cited FEMA documents to describe FEMA management strategies at different phases of the disaster management cycle and available funding.[40]

Hazard Mitigation Assistance Grants provide funding to states, Tribes, territories, and local communities to implement hazard mitigation measures designed to reduce the risk of future damage, loss, or hardship caused by natural disasters.

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[38] FEMA. (2019, October 28). National Response Framework. FEMA.gov. Retrieved February 9, 2023, from https://www.fema.gov/emergency-managers/national-preparedness/frameworks/response.

[39] DHS. (2016, June). National Disaster Recovery Framework - FEMA. Department of Homeland Security. Retrieved March 12, 2023, from https://www.fema.gov/sites/default/files/2020-06/national_disaster_recovery_framework_2nd.pdf.

[40] FEMA. (2022, October 25). Fiscal year 2022 notices of funding opportunities for Hazard Mitigation Assistance Grants. FEMA.gov. Retrieved February 6, 2023, from https://www.fema.gov/grants/mitigation/fy2022-nofo.

FEMA's hazard mitigation assistance grant programs include the Hazard Mitigation Grant Program (HMGP), Hazard Mitigation Grant Program Post Fire (HMGP Post Fire), Building Resilient Infrastructure and Communities (BRIC), and Flood Management Assistance (FMA). BRIC is the largest and most recently implemented of these programs. While these programs are broadly similar in structure and philosophy, they differ in many important ways, including type of disaster, timing of aid, triggering events, competition for funding, and eligibility to apply. Table 2 summarizes and compares these programs.[41]

Table 2: HMA Program Comparison

HMA Program Comparison	HMGP	HMGP Post Fire	BRIC	FMA
Program Type	Post-disaster	Post-disaster	Pre-disaster	Pre-disaster
Funding Availability	Presidentially declared disaster	FMAG-declared disaster	6% set aside from federal post-disaster grant funding	Annual appropriations
Competitive?	No	No	Yes	Yes
Eligible Applicants	States, federally recognized tribes, territories and the District of Columbia (DC)	States, federally recognized tribes, territories and DC	States, federally recognized tribes, territories and DC	States, federally recognized tribes, territories and DC
Eligible Subapplicants	State agencies, local governments, tribes and private nonprofit organizations	State agencies, local governments, tribes and private nonprofit organizations	State agencies, local governments and tribes	State agencies, local governments and tribes
Hazard Mitigation Plan Requirement	Yes	Yes	Yes	Yes
NFIP Participation	Communities with projects in Special Flood Hazard Areas (SFHAs)	Communities with projects in SFHAs	Communities with projects in SFHAs	Subapplicants and properties

Note. Comparison of HMA programs from FEMA Hazard Mitigation Assistance Program and Policy Guide, p. 61.

[41] FEMA. (2023, March 23). Hazard Mitigation Assistance Program and Policy Guide. Retrieved April 12, 2023, from https://www.fema.gov/sites/default/files/documents/fema_hma-program-policy-guide_032023.pdf.

The Disaster Management Cycle

Federally-recognized Tribes may apply to FEMA directly as applicants, or they may apply as sub-applicants under an applicant state or territory. There are benefits and challenges to applying as an applicant and sub-applicant, some of which vary by state and Tribe.

The benefits of applying as an applicant include control over the entire grant process, the ability to set priorities that meet the Tribe's needs, and increased percentage of funding dedicated to the planning and management costs of grant execution. Challenges include the increased responsibilities of managing the entire mitigation planning process, including the award and management of any contracted work. The applicant must submit a disaster declaration (when appropriate), develop an approved administrative plan demonstrating the ability to review and submit financial and progress reports,[42, 43] submit quarterly reports to FEMA,[44] perform grant closeout procedures, and maintain files for three years.[45] While the Tribe controls the process from beginning to end, it must have the capacity to manage the grant (i.e., adequate staffing and experience).

While sub-applicants must comply with program requirements, they can rely on the applicant (typically the state) to shoulder most administrative, monitoring, and closeout responsibilities. Tribes lacking the capacity to perform the functions of the applicant may opt to apply as sub-applicants and coordinate with the applicant to devise a strategy to meet all grant requirements. Applying for funding as a sub-applicant may reduce the requirements and administrative burden before, during, and after a disaster; however applying as a sub-applicant

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[42] Project Management, 44 C.F.R § 206.438(c) (2021).

[43] Requirements for Pass-through entities., 2 CFR § 200.332(d)(1) (2021).

[44] Ibid.

[45] FEMA. (n.d.). New recipients of Disaster Grants Guide. Retrieved April 22, 2023, from https://www.fema.gov/sites/default/files/2020-04/new-recipients-of-disaster-grants-guide_2019.pdf.

of a state means giving up the autonomy to work directly with the federal government as a sovereign nation, and may be viewed as limiting Tribal sovereignty, may not align with cultural values, or may reduce the proportion of allocated funds the Tribe receives.

Deciding whether to seek funding as an applicant or a sub-applicant may have special significance in the Tribal context. Applicants have greater control over proposal development, the application process, and the distribution and use of any awarded funds. This level of control may be welcome to Tribal governments seeking to exercise the full measure of sovereignty and self-determination to which they are legally entitled when determining how to mitigate hazards on their lands.

However, an applicant can only succeed in securing funding if it has the administrative capacity and expertise necessary to comply with FEMA's application procedures. As we explain below, this is a high bar. Thus, many Tribes may choose or be forced to choose sub-applicant status, which comes with somewhat less onerous procedural obligations but correspondingly less control over the fate of the application and the way award funds are used on Tribal lands —a potential limit on the exercise of sovereignty.

A Complex Grantmaking Process

The application process varies slightly by grant type, but applications for all hazard mitigation assistance grants follow similar processes.

Pre-submission requirements: Before an applicant or sub-applicant applies for a hazard mitigation grant, it must have a FEMA-approved hazard mitigation plan, complete a benefit-cost analysis using FEMA-approved methodologies to demonstrate the cost-effectiveness of the project, demonstrate the ability to pay the non-federal cost share for the project, apply for a project that aligns with its hazard mitigation plan, and meet all environmental and historic preservation (EHP) requirements.

Submission requirements: An applicant must have an active SAM.gov registered account to apply for FEMA awards through the FEMA GO System. The SAM.gov account must remain active throughout the evaluation process, which lasts for one year after which the account must be renewed. FEMA GO is a web-based portal that all eligible applicants and sub-applicants must use to apply for hazard mitigation assistance grants. In addition to the pre-submission requirements, the applicant must detail the proposed project's scope and schedule of work, document public outreach efforts, and forecast contractor support.

Post-submission requirements: If an applicant is awarded a grant, it must monitor and report all post-award activities in accordance with the project scope of work. The grant recipient must maintain records of work and expenditures in order to prepare and submit quarterly financial and performance reports to FEMA. Finally, the recipient has 90 days following the period of performance to complete the grant closeout procedures. Grant closeout requirements include final reports demonstrating that the approved scope of work was completed, all obligated funds were dispensed in accordance with the scope of work, all environmental and historic preservation (EHP) conditions were met and documented, and a description of applicable monitoring and auditing actions.

A Hazard Mitigation Plan Is a Prerequisite to Grant Eligibility

A hazard mitigation plan is required to receive grant and recovery funds through FEMA's Hazard Mitigation Grant Program. Hazard mitigation plans are technical, time-intensive, and procedurally taxing requirements for many FEMA grants. FEMA is bound by Title 2 which provides guidance on the administrative aspects of federal grants. 44 CFR §§ 201 and 206 contain the requirements and procedures to implement hazard mitigation planning provisions and federal disaster assistance under the Stafford Act. Federally-recognized Tribes, like other grant applicants, must have FEMA-approved hazard mitigation plans, administrative plans, and the capability to comply with financial reconciliation

requirements described in Title 2 of the CFR, Part 200, to be eligible for grant application.[46]

Applicants and sub-applicants for all Hazard Mitigation Assistance Grants must adopt and maintain FEMA-approved hazard mitigation plans and FEMA-approved Hazard Mitigation Grant Program administrative plans. A lapse in the FEMA-approved mitigation plan will result in a temporary hold on funding until the mitigation plan is reapproved. Further, activities submitted for consideration in the grant application must be consistent with the current, FEMA-approved plans. The requirements for a hazard mitigation plan and administrative plan are detailed in full in **Appendix A: FEMA Tribal Hazard Mitigation Plan and Administrative Plan Checklist**.

Hazard mitigation plans are also required to receive disaster recovery funds but can be completed after a disaster has been declared. There are two types of plans that Tribes can implement: a Tribal plan or a multijurisdictional plan, each of which can be standard or enhanced. An enhanced plan must meet additional requirements, including integrated planning initiatives, more detailed risk assessments, a wider range of potential mitigation measures, demonstration of timely financial reconciliation, and increased community engagement and involvement strategies.

The amount of federal funding available to each applicant is based on a sliding-scale formula.[47] Applicants with standard hazard mitigation plans are eligible to receive up to 15% for the first $2 billion of the amount of the grant. Those with enhanced plans receive an additional 5%, for a total of 20% of estimated eligible Stafford Act assistance (not to exceed $35.333 billion).[48]

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[46] FEMA (n.d.). Hazard Mitigation Guidance Regulations and guidance. Retrieved March 19, 2023, from https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning/regulations-guidance.

[47] Federal grant assistance, 44 C.F.R. § 206.432 (1990), as amended.

[48] Ibid.

Benefit-Cost Analysis Is Required for all Grant Applications

The Stafford Act requires FEMA to ensure that all mitigation activities funded by the hazard mitigation assistance program are "cost effective."[49] To meet this requirement, FEMA requires each applicant or sub-applicant to complete a benefit-cost analysis of the project for which it seeks funding, regardless of the size of the project.[50]

FEMA's benefit-cost analysis follows the traditional model articulated most recently in 1992 by White House Office of Management and Budget Circular A-94: [51] Monetizable benefits and costs associated with the project are calculated and discounted to present value, then costs are subtracted from benefits to produce a benefit-cost ratio. FEMA does not award funding to projects based on cost-effectiveness relative to each other—instead, a proposal must demonstrate a benefit-cost ratio of one or higher to be eligible for funding and is then evaluated with reference to other metrics.[52]

To complete a satisfactory benefit-cost analysis, the applicant must quantify both benefits and costs. Any benefit that is "subjective or non-quantifiable cannot be counted as a benefit in FEMA BCAs."[53] Most benefits arise from avoided harm

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[49] The Stafford Act does not establish a mechanism for calculating cost-effectiveness.

[50] All discussion of FEMA benefit-cost analysis in this section is based on information available in the BCA Resource Kit accompanying FEMA's BECA software, which is available at https://www.fema.gov/grants/tools/benefit-cost-analysis.

[51] White House Office of Management and Budget, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs" (1992), Circular No. A-94. Available at https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/circulars/A94/a094.pdf.

[52] FEMA. (n.d.). Alternative cost-effectiveness methodology for FY2022 BRIC and FMA. FEMA.gov. Retrieved February 23, 2023, from https://www.fema.gov/sites/default/files/documents/fema_alternative-cost-effectiveness-methodology-for-FY2022-BRIC-and-FMA.pdf.

[53] Goolsby-Brown, K. (n.d.). Introduction to FEMA's Benefit-Cost Analysis (BCA) Module. Retrieved April 23, 2023, from https://www.fema.gov/sites/default/files/documents/fema_2021-ndspts_intro-to-bca_katy-goolsby-brown.pptx.

to each "property" impacted by the proposed project, the calculation of which requires adequate records indicating value through appraisal, transfer, construction cost, etc. Non-property-specific benefits FEMA is willing to consider are limited largely to avoided injuries and loss of life, displacement costs, emergency management costs, and certain types of administrative costs. In certain cases, FEMA also considers less easily quantified benefits such as ecosystem benefits and social benefits—chiefly avoided mental stress/anxiety and lost productivity—for which FEMA has calculated fixed sums to include in the analysis. For example, avoided cost labeled "mental stress and anxiety" and is capped at a standard one-time value of $2,443 per person while avoided damage to forested land is an ecosystem benefit worth $554 per acre, per year.

Principles Informing Tribal Emergency Management and Governance Challenges

Our literature review revealed that Tribal governments engaged in emergency management work against a backdrop of barriers with origins in the history of colonialism, complex legal precedent, shifting political trends, and unique cultural and economic factors. The list is too long and the problem too complicated to analyze fully in a report of this nature, but we have briefly described several of the background concepts that are most directly relevant to the subject of this report below.

The Defining Quality of Indigenous Communities Is Diversity

According to mainstream archaeological understanding, human history in the Americas began between 15,000 and 20,000 years ago.[54] A spectacularly diverse array of peoples and cultures has developed over the ensuing millennia. Importantly, this diversity persists today. Policymakers in what is now the United States tend to ignore or overlook the sheer variety of groups and individuals that fall under labels such as "Indigenous," "Native," and "American Indian," treating them instead as an undifferentiated mass akin to a single ethnic group. In fact,

[54] Wells, S. and Read, M. The Journey of Man – A Genetic Odyssey (2002), pp. 138-140.

each of the hundreds of federally recognized Tribes, bands, and rancherias in the United States—and many more groups that are not so recognized—has a culture, spirituality, and history all its own.

We refer to these unique groups together at various points in this paper out of necessity, particularly in light of the fact that the federal government tends to make policy toward them as though they were interchangeable. In particular, consistent with federal government norms we often use the term "Tribe" as a catch-all to describe any politically organized and culturally distinct Indigenous group in the continental United States or Alaska. However, it is essential to acknowledge—and to remember when reading this report—that Tribal groups in the United States vary dramatically in terms of their size, resources, bureaucratic sophistication, governance structures, and policy priorities. As a result, if FEMA or any other federal bureaucracy is to engage with these groups successfully, it must do so in a way that acknowledges and accounts for these important differences.

The Importance of Tribal Recognition and Sovereignty

"The extension of federal recognition by the United States to a Tribal nation is the formal diplomatic acknowledgment by the federal government of a Tribe's legal status as a sovereign."[55] Under established law, federally recognized[56] Tribes are sovereign nations with the inherent authority to self-govern and to protect

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[55] Wilkins and Stark, American Indian Politics, p. 23.

[56] A full discussion of the recognition process is beyond the scope of this report. Generally, however, a group can be federally recognized as a Tribe by treaty, through Congressional legislation, by a federal court, or administratively by the Department of the Interior. The Department of the Interior recognizes a Tribe if (1) it has been identified as an American Indian entity on a substantially continuous basis since at least 1900; (2) it is predominantly comprised of a distinct community that has existed as such since historical times; (3) it has maintained political influence or authority over its members as an autonomous entity since historical times; (4) it has established governing documents, including membership criteria; (5) its members are descendants of one or more historical Indian Tribes that functioned as a single autonomous political entity; (6) its members are not members of any other federally acknowledged Tribe; and (7) Congress has not previously terminated or forbidden the recognition. 25 C.F.R. § 83.7. As applied, this is a high bar to clear; applying for recognition is often a costly, years-long process and the majority of applications are denied.

Tribal citizens within Tribal territory. Recognition is intended to acknowledge the character of an Indigenous group as a distinct long-term cultural, ethnic, and political entity.

However, the history of recognition is characterized by contradiction, shifts in policy, and injustices perpetrated against Tribes and their members. For example, from 1953 through the mid-1960s, the federal government operated under a so-called termination policy whereby it sought to sever its trust relationships with over 100 Tribes, dissolve those Tribes, and assimilate their members into mainstream American society.[57] Termination was officially rejected by Congress in 1988[58] and federal rhetoric has since shifted back in favor of respect for Tribal sovereignty. However, the modern recognition process is long, costly, bureaucratically complex, and politically fraught, and Tribes that were terminated in the mid-20th century are generally ineligible to regain recognition.

There are 574 federally recognized Tribes throughout the continental United States and Alaska. There are also state-recognized Tribes (some of which are not federally recognized) and Tribes lacking state and/or federal recognition.[59] Recognition is significant because it constitutes acknowledgement of (1) the inherent sovereign authority of a Tribal nation to control its territory and govern its members and (2) the fact that the relationship between a Tribe and the state and/or federal government is a relationship between two sovereign political entities. It also has the effect of limiting state government jurisdiction over Tribal governments, vesting them with sovereign immunity, and exempting them from most of the strictures of the Constitution. Federal law classifies recognized Tribes as “domestic dependent nations”[60] with their own political authority and

[57] Wilkins and Stark, American Indian Politics, p. 31.

[58] Ibid.

[59] Some Tribes that are not federally recognized saw their recognition terminated during the Termination Era of federal Tribal policy from 1953 to 1968. Ibid.

[60] Cherokee Nation v. Georgia, 30 U.S. 1, 17 (1831). As domestic dependent nations, Tribes are treated as subordinate in important ways to the federal government, and in some contexts as “completely under the sovereignty and dominion of the United States.” Ibid.

autonomy in self-governance as to internal matters, subject to the plenary power of the U.S. Congress.[61] Tribes that are recognized are therefore better able to engage with federal and state authorities and achieve desirable policy outcomes.[62, 63]

Recognized or not, Tribal governments experience many barriers when accessing federal disaster management resources. Barriers fall into three general categories: bureaucratic processes, lack of federal agency coordination, and regulations that prevent Tribal governments from equitably accessing federal programs.[64] Tribal recognition is a key determinant of eligibility for federal funding, the process Tribes take to access resources, and the policies by which they respond to disasters. Tribal nations face cultural and administrative barriers when accessing the complex federal aid process. All such barriers are higher—and in many cases insurmountable—for Tribes that are not recognized by the federal government.

Ownership and Control of Tribal Lands

Because Indigenous peoples are place-based peoples, Tribal sovereignty and Tribal lands are inextricably linked. Indigenous peoples have varying degrees of legally and customarily recognized rights on different types of lands. This complex relationship with territory is a legacy of the history of forced relocation and attempted assimilation perpetrated by the federal government. Of note, most Tribal lands are not owned by Tribes or individual members thereof outright—instead, Tribal lands are owned predominantly by the federal government, which holds them in trust for the benefit of Tribes and their members.[65]

[61] Wilkins and Stark, American Indian Politics, p. 23-24.

[62] Ibid. p. 31.

[63] Ibid.

[64] Embassy of Tribal Nations, Policy Issues: Tribal Governance.

[65] BIA. (n.d.). Benefits of trust land acquisition (fee to trust). Retrieved March 3, 2023, from https://www.bia.gov/service/trust-land-acquisition/benefits-trust-land-acquisition.

These evolving attempts to conform Tribal lands to European conceptions of property have had complex and sometimes counterintuitive effects. Generally, though, by imposing European property law on Indigenous peoples—characterized by rights of use and exclusion that are fundamentally incompatible with many Indigenous worldviews—federal policy has consistently undermined Indigenous self-determination and attempted to weaken the spiritual sense of connection to place that is essential to those worldviews. Table 3 provides an overview of common land ownerships and designation statuses that were compiled by the Congressional Research Service.[66]

Table 3: Types of Tribal Land Holdings and Other Land Designations

Type	Description or Definition
Trust	The US government holds legal title to trust land for the benefit of federally recognized Tribes or Tribal members.
Restricted Fee	Restricted fee lands are those to which a Tribe or Tribal member holds legal title, but the title is subject to restrictions by the US against alienation or encumbrance.
Fee or Fee Simple	Fee or fee simple lands are lands previously conveyed out of Tribal ownership or control to private owners that are freely alienable or can be encumbered without federal approval. Fee lands can be owned by non-Indians or may be repurchased and owned by a Tribe or Tribal members.
Allotted	Allotted lands can be held in trust or restricted fee status. These lands are allotted by treaties that divided land communally held by Tribes and allotted parcels of it to Tribal members.
Federal Indian Reservation	Federal Indian reservation is land reserved for a Tribe(s) under treaty, statute, or other agreement with the US that establishes permanent Tribal homelands. Trust, restricted fee, and fee lands can be included within reservation boundaries.

[66] Fitzpatrick, T. (2021, October 14). Tribal lands: An overview. Retrieved February 16, 2023, from https://sgp.fas.org/crs/misc/IF11944.pdf.

Table 3: Types of Tribal Land Holdings and Other Land Designations (continued)

Indian Country	For criminal jurisdictional purposes, the term Indian Country generally refers to all lands within a federal Indian reservation, all dependent Indian communities, and all Tribal member allotments.
Traditional Lands	The geographic area identified by members of a Tribal nation as the land they and/or their ancestors traditionally occupied and used.

Note. Definitions adapted from Tribal Lands: An Overview by the Congressional Research Service, 2021.[67]

Tribal government jurisdiction exists primarily on reservation lands. Most reservation lands are held in trust by the federal government, though some reservation lands may be privately owned by Tribal members or others. Tribes may also hold rights to non-reservation lands held in trust by the federal government, which may include rights of occupancy and/or rights to the proceeds from harvesting natural resources. Allotted lands are those that were conveyed to individual Indians, often in connection with the dissolution of Tribes and attempts to integrate the native population into white society; these may or may not be held in fee simple. “Indian Country” is a legal term defined in the U.S. Code to include reservation lands, dependent communities, and allotted lands. The majority of Indian County by area is composed of trust lands; much of the remainder is land allotted to individual Indians that is still held in trust or otherwise restricted status. Further, many treaties granted Tribes the right to harvest natural resources from “usual and accustomed places” in common with others. Finally, some Tribes claim a moral and/or legal right to use certain ancestral places, e.g., burial grounds and sacred sites; these claims are sometimes disputed.

[67] Ibid.

Challenges in Intergovernmental Relations

As the federal government works to establish a unified emergency management system, "volatile intergovernmental relationships between Tribes and the US government will inevitably have an adverse effect on that goal."[68] After the formation of the Department of Homeland Security in the wake of the September 11th attacks, Tribes bear increased emergency management and homeland security obligations, but they often have not received corresponding support from the federal government. This is especially true for the many Tribal nations whose jurisdiction is on or near the land and sea borders of the United States.[69] The NCAI webpage on homeland security illustrates some of these extensive management obligations:

> *Nearly 40 Tribes are located directly on or near the imposed US international borders with Mexico and Canada. Tribal governments have extensive border-security responsibilities, including immigration, anti-terrorism, and anti-smuggling. In addition, dozens of Tribes have critical national infrastructure on their lands, including national oil and gas pipelines, nuclear facilities, missile sites, and dams.[70]*

This trend follows the broader arc of federal policy toward Tribal nations, which oscillated for much of colonial and post-colonial history between neglect, meddling in internal affairs, and attempted assimilation and/or extermination. The federal government has consistently struggled to engage with Tribal governments as sovereign entities on their own terms, even where it has formally recognized them as such.

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[68] Anderson, L. R. (2014). An assessment of intergovernmental relationships between Native American Tribes, the states, and the Federal Government in homeland security and emergency management policy. The Ohio State University.

[69] Ibid., pp. 6-7.

The passage of the Sandy Recovery Act in 2013 improved the disaster management system by integrating Tribes into the system as enumerated eligible grantees; however, significant barriers remain. Survey data from the 562 Tribes that were federally recognized in March 2002, analyzed in Anderson's research, show that the majority of intergovernmental relationships between Tribes and states and between Tribes and the federal government do not display the characteristics of an acceptable or effective working relationship.[71] Key barriers to progress include a perceived lack of understanding on the part of US government officials of the unique cultural, legal, and political position of Tribes and a general perception of a lack of communication, responsiveness, and provision of technical assistance.[72]

Tribes with lands that cross state boundaries, such as the Navajo Nation encompassing portions of Arizona, New Mexico, and Utah, must also account for cross-jurisdictional considerations when seeking resources, financial aid, and technical assistance from federal agencies. It is also possible that unclear federal disaster management policy or the delegation of federal disaster management authority to states may cause tension between Tribal and state governments. In these situations where the federal government has ambiguously deferred its responsibility to state agencies, the lines of accountability become blurred during intergovernmental conflict between states and Tribes and limit opportunities for coordination.

Survey data analyzed by Anderson supported this point of conflict, showing that, "on average, Tribes reported having more contentious relationships with states than with the federal government."[73]

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[70] NCAI. (2023, April 19). Homeland Security. https://www.ncai.org/policy-issues/tribal-governance/homeland-securit.

[71] Anderson, An assessment of intergovernmental relationships.

[72] Ibid.

[73] Ibid., pp. 139-140.

Lack of Respect for Indigenous or Traditional Knowledges

Indigenous or traditional knowledges are not well incorporated into U.S. emergency management practices but are particularly important in the context of emergencies on Tribal land.[74] Indigenous knowledges can be leveraged advantageously throughout the disaster management cycle. Core characteristics of Indigenous knowledge (adaptive, cumulative, dynamic, holistic, etc.) interface or could interface with conventional disaster management thinking, but some challenges may arise.[75] For example, Indigenous knowledges tend to come from oral traditions, so reducing these to writing for centralized storage and dissemination reduces their utility and adaptability and is potentially extractive. Despite these challenges, Indigenous knowledge has been incorporated advantageously into the disaster management strategies of countries other than the U.S.[76]

The federal government has acknowledged that multiple ways of knowing create better informed decision making; in November 2022, the White House published guidance directing all federal departments and agencies to include Indigenous Knowledges in their decisions.[77] Further, the Indigenous Peoples Climate Change Working Group developed the Guidelines for Considering Traditional Knowledges in Climate Change Initiatives to advance the understanding and role of traditional knowledges in climate initiatives and throughout the disaster management cycle.[78] The guidelines aim to provide foundational information to federal agencies on intergovernmental relationships and the role traditional knowledges can have in federal climate change initiatives.[79]

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[74] Moore, D. D. (2021). Weaving Indigenous Knowledge with the Discipline of Emergency Management. California State University, Long Beach.

[75] Ibid.

[76] Ibid.

[77] Prabhakar, A., & Mallory, B. (2022, November 30). Implementation of Guidance for Federal Departments and Agencies on Indigenous Knowledge. White House Office of Science and Technology Policy. Retrieved April 1, 2023.

{78] Chief, K., Chischilly, A. M., Cochran, P., Durglo, M., Hardison, P., Hostler, J., Lynn, K., Morishima, G., Motanic, D., St. Arnold, J., Viles, C., Voggesser, G., Whyte, K. P., Wildcat, D., & Wotkyns, S. (2014). Guidelines for considering traditional knowledges in climate change initiatives. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2555299.

[79] Ibid.

Risks and Vulnerabilities Unique to Tribal Nations

Tribal nations' lack of services and widespread poverty lead to increased disaster risk and vulnerability.[80] Tribal lands are typified by underinvestment in infrastructure, low population density, less economic development of natural resources, and lower socioeconomic status of residents relative to non-Tribal lands—all largely stemming from the federal government's chronic failure to support Tribal communities financially and otherwise, which support is only necessary in the first place because of a long tradition of oppressive and exploitative federal policy toward these very communities.

The federal aid system predominantly views risk in terms of expected annual economic loss in relation to people, assets, and infrastructure and allocates funding accordingly.[81] This means that the same history of federal oppression and neglect that has depressed development and investment in Tribal communities over multiple generations has also had the effect of curtailing eligibility for disaster aid, exposing some of the most vulnerable communities in the U.S. to added risk and slower recovery in the case of an emergency event.

Furthermore, while many U.S. policies, resources, and other support tend to coalesce around rapid-onset disasters such as earthquakes, hurricanes, or flash flooding. Indigenous communities are particularly vulnerable to slow-onset disasters based on their location, limited access to resources, and historical injustices. For example, the Pointe-au-Chien Indian Tribe has been living in the coastal region of Louisiana for thousands of years and has experienced pronounced coastal erosion and flooding. The Pointe-au-Chien Tribe is working toward federal recognition, which would help it secure financial resources and technical assistance to better equip the Tribe in preparing for pronounced land

[80] Adams, H. K. (2017). Sovereignty, Safety, and Security: Tribal Governments Under the Sovereignty, Safety, and Security: Tribal Governments Under the Stafford and Homeland Security Acts Stafford and Homeland Security Acts. American Indian Law Journal, 1(1), 132.

[81] FEMA. (n.d.). Determining risk. Retrieved February 6, 2023, from https://hazards.fema.gov/nri/determining-risk.

loss due to climate change. It is using nature-based solutions including an oyster reef and marine mattress system to protect sacred burial grounds from the slow-onset disaster of rising sea levels caused by climate change.[82] The combination of a slow-onset disaster, lack of federal recognition, protection of a culturally important site, and use of nature-based solutions results in this Indigenous community having increased, unrecognized social vulnerability related to its cultural practices and reliance on the land that is not accounted for in federal aid.

The aforementioned factors appear throughout the literature as barriers that make it more difficult for Tribes to access federal resources and participate in federal programs intended to help navigate the disaster management cycle. Experts from the Tribal Climate Change Project developed eight Tribal Climate Change Principles to help lower these barriers, provide recommendations on how the federal government can better support Tribal nations prepare for increased frequency and intensity of natural-hazard events, and improve Indigenous peoples' access to federal financial and technical resources.[83]

[82] Maisie. (2019, March 1). For the pointe-au-chien tribe in Louisiana, oysters and a marine mattress system protect sacred burial grounds from Rising seas. Civil + Structural Engineer. Retrieved March 13, 2023, from https://csengineermag.com/for-the-pointe-au-chien-tribe-in-louisiana-oysters-and-a-marine-mattress-system-protect-sacred-burial-grounds-from-rising-seas.

[83] Tribal Climate Change Principles: Responding To Federal Policies And Actions To Address Climate Change.

Tribal Climate Change Principles

Based on recommendations from the 2014 President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience[84] and legislation that focuses on inclusion and participation of Indigenous Peoples in federal climate change programs, the Tribal Climate Change Principles are intended to guide federal agencies in the development, modification, and implementation of policies and programs.[85] These principles highlight the requirements for federal agencies to consult and work with Tribes and for federal resources to be allocated to Tribes equitably as well as recognize Tribal treaties and reserved rights to both on- and off reservation resources.[86]

Appendix B: Tribal Climate Change Principles details all eight principles in full.

Recap: FEMA's Challenges Engaging with Tribes

Our literature review revealed three broad and interrelated themes.

First, conventional disaster management theory in the United States is well developed and highly defined, as exemplified by the phases of the disaster management cycle and FEMA's defined goals and strategies for each phase. FEMA has established what it believes to be best practices in the field, which in turn structure its decision making and interactions with stakeholders. These practices are geared toward protecting people and property from rapid-onset disasters and are best suited to engaging with well-resourced local and state governments interested in developing and hardening the built environment. FEMA struggles to deviate from this structure even where doing so might be appropriate.

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[84] Ibid., p. 2.

[85] Ibid., p. 3.

[86] Ibid., p. 2.

Second, the hazard mitigation assistance landscape is complex. FEMA administers multiple overlapping grant programs, each with its own unique applications, procedures, and eligibility criteria. Engaging with this system requires significant administrative capacity and bureaucratic sophistication, and past efforts to make engagement easier have produced uneven results.

Third, Tribal grant applicants engage with FEMA in an idiosyncratic context because of their unique history, political and legal status, philosophies, and vulnerabilities. FEMA is not well positioned or naturally inclined to account for these considerations in its normal operations.

In light of these findings, we focus our own research on the ways in which FEMA and Tribal governments engage with one another and the ways in which the aforementioned conditions impede such engagement.

03. RESEARCH METHODS

Our research strategy is driven by the research question and sub-questions we posed in Chapter 1:

How does FEMA policy in the United States explicitly or implicitly benefit or impede disaster mitigation, preparedness, response, and recovery of Tribal Nations?

To direct our research, we focused on the following sub-questions:

01 What funding and institutional support does federal policy provide for Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

02 What federal policy barriers impeded Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

03 What institutional support, regional partnerships, and federal relationships benefit or impeded Tribal nations' efforts to mitigate or prepare for natural-hazard-related disaster events?

The multifaceted nature of our project—with the complex FEMA regulatory structure operating in the context of federal-Tribal relations against the backdrop of climate change—requires an interdisciplinary research approach. We proceeded in three phases: systematic content analysis of pertinent FEMA doctrine, policies, and supporting program documents; semi-structured interviews with Tribal environmental policy and management professionals; and quantitative analysis of data concerning FEMA grant awards.

Phase 1: Federal Document Content Analysis

The first phase of our research consisted of a methodical content analysis of FEMA policies, procedures and supporting program documents, including a thorough review of hazard mitigation and pre-disaster mitigation grants. We structured this research around a codebook we developed to analyze themes present in—and absent from—key FEMA policy documents.

Codebook Development

We developed a codebook to classify and analyze FEMA strategic doctrine, policies, and supporting program documents in three strategically different phases: deductive classification, collaborative revision, and codebook testing.

Deductive Classification

Our literature review, discussions with our client, and our research questions informed the development of our codebook. We identified concepts that were frequently referenced in the literature, were of importance to the Cascadia CoPes Hub goal of researching the epistemological integration of Tribal perspectives into disaster management, and were relevant to our research questions to define codes within the codebook. The team used the recommendations made in the Tribal Climate Change Principles (TCPPs) as a comprehensive framework to inform our content analysis of FEMA documents. However, the principles themselves were not specific enough to determine whether they were supported in FEMA's policy documents. Therefore, we conducted a crosswalk of the TCPPs to align the concepts therein to identifiable practices, procedures, and terminology. This allowed us to capture the information in a more reliable way. Table 4 is a summary of the crosswalk that was used to establish this portion of the codebook.

Table 4: Tribal Climate Change Principles Crosswalk [87]

Tribal Climate Change Principles (TCCP) Crosswalk		
TCCP Principle Definition		TCCP Concept Developed for Codebook
Principle 1	Federally recognized Tribes and other Indigenous Peoples and Indigenous communities must be partners with full and effective participation in assessing and addressing the problems of climate change at the local, regional, national, and international levels and must be accorded at least the status and rights recognized in the U.N. Declaration on the Rights of Indigenous Peoples and other international standards relevant to Indigenous Peoples.	Document describes a requirement or approach that includes equitable partnership for Tribes in the program/process.
Principle 2	Tribes must have fair and equitable representation on all federal climate committees, working groups, and initiatives in which states, local governments, and other stakeholders are represented.	Document describes a committee, workgroup or public participation requirement that is equitable for Tribes.

[87] Tribal Climate Change Principles: Responding To Federal Policies And Actions To Address Climate Change.

Table 4: Tribal Climate Change Principles Crosswalk (continued)

Principle 3	The federal government should establish a high-level interagency Tribal government task force to examine and propose solutions to close gaps across the federal agencies' relationships and programs with Tribes, and to develop, recommend, and implement Tribal-specific solutions that enable the agencies to support and foster Tribal climate-resilient planning and investment.	Document describes a federal Tribal government task force in the program or process.
		Document describes processes to improve relationships with Tribes
		Document describes implementation of Tribe-specific solutions for disaster management such as nature-based solutions or managed retreat.
Principle 4	Indigenous Peoples must have direct, open access to funding, capacity-building, and other technical assistance, with their free, prior and informed consent, to address the immediate and long-term threats from climate change.	Document describes resources other than funding (e.g. capacity-building, technical assistance) accessible to Indigenous Peoples to address climate change threats. * To reduce redundancy, funding is included in Principle 6.
Principle 5	Tribes must have fair and equitable access to federal climate change programs.	Document describes a requirement or approach that ensures Tribes have equitable access to programs and processes

Table 4: Tribal Climate Change Principles Crosswalk (continued)

Principle 6	Tribes must be made eligible for existing and future federal natural resource funding programs for which states are eligible for, but from which Tribes are currently, or might be, excluded.	Document describes funding that states are eligible for, but Tribes are excluded from.
Principle 7	A fair and equitable set-aside of direct monies or allowances must be made available for distribution to Tribes through legislation, administrative actions, and existing and future federal natural resource funding programs.	*Rolled into Principle 4 due to the scope of FEMA funding
Principle 8	Indigenous traditional knowledges, with the free, prior, and informed consent of Indigenous Peoples must be acknowledged, respected, and promoted in federal policies and programs related to climate change.	Document describes Indigenous traditional knowledges as part of the policy, program, or solution to climate change.

Note. Table relates each of the TCCPs to the authors' related coding concepts.

Collaborative Revision

Within our team and in collaboration with our client, we conducted multiple iterations of revisions to the codebook to ensure that we captured appropriate information to address our research questions, establish acceptable definitions and understanding of the coding scheme, and create specificity to promote inter-coder consistency.

Codebook Testing

We tested the codebook on sample FEMA documents for comprehensiveness and to verify the consistency and reliability of the coders. Through codebook testing, we developed a more inclusive codebook scheme and identified the need to include an administrative code capturing information such as inaccurate points of contact, invalid URLs, and outdated references.

Codebook Overview

The codebook captures 13 coding areas grouped into five coding categories to address the topics, barriers, and opportunities identified in our literature review. The purpose of each coding category is described in Table 5 and the summary codebook detailed in **Appendix C: Summary Codebook.**

Table 5: Purpose of Coding Categories and Category Concepts

Category	Purpose	Concepts Coded
Disaster Management Cycle	To understand how much information is presented throughout the documents for each phase and if any phase is more inclusive of Tribal nations or the Indigenous worldview	1 - Disaster Management Phase (Mitigation, Preparedness, Response, Recovery)
Tribal Recognition	To understand any explicit inclusion or exclusion of Tribes in policy or access to resources.	2 – Tribal Recognition (Federal recognition, State recognition, Seeking recognition)
Tribal Lands	To understand how FEMA documents describe different types of lands and how they allocate resources based on these variations	3 - Tribal Lands (Federally-recognized lands, traditional lands)
Tribal Climate Change Principles (TCCPs)	To understand how inclusive FEMA policy is on Tribal climate-specific concepts and recommendations made by the Tribal Leaders Task Force on Climate Preparedness and Resilience to identifiable practices, procedures, and terminology	Derived from TCCPs 4 - Partnership 5 - Committees/working groups 6 - Tribal task force 7 - Relationships 8 - Tribe-specific solutions 9 - Capacity-building/technical assistance 10 - Access 11 - Funding 12 - Indigenous traditional knowledges
Administrative Issue	Identify any administrative burden that may prevent comprehension, access, or support to a program	13 – Administrative issue (i.e. incorrect URL, incorrect POC, etc)

Note. Table describes the purpose of each coding category and the specific coding concepts in the authors' codebook structure.

Each category was given a unique code based on established definitions which allowed us to group common themes across all FEMA documents. A summary of the codebook used to conduct a content analysis of 47 FEMA documents is provided in **Appendix C: Summary Codebook.**

FEMA Document Selection

Our team started by reviewing a collection of FEMA's core strategic doctrine to analyze the guiding principles of the disaster management system at the federal level. We then selected the program and policy guides that were described in the strategic doctrine. Lastly, we identified program manuals and ancillary documents related to grants and funding opportunities that inform our sub-research question on funding and institutional support for natural-hazard-related disasters. Based on program requirements described in the program manuals, we identified documents specific to technical assistance, hazard mitigation, and benefit-cost analysis, as both our clients and the literature review described these requirements as barriers. The 47 documents we identified consisting of federal doctrine, policies, program manuals, job aids, and notices of funding opportunities, are referred to collectively hereafter as FEMA documents.

We selected 47 FEMA documents for coding: nine strategic documents, eight documents specific to Tribal nations and Tribal requirements, 25 fiscally focused documents, and five documents specific to technical assistance. **(Appendix D: FEMA Documents Reviewed)** The strategic FEMA documents we analyzed captured information on systems, support, relationships, and resources throughout the entire disaster cycle. Based on the breadth of information the documents cover, there is little specificity on funding or institutional support within these documents. Due in part to FEMA falling under the Department of Homeland Security (DHS), the strategic documents describe goals and strategies that align with the DHS mission: "to secure the nation from the many threats we face." Because DHS emphasizes terrorism as an area of responsibility, FEMA strategic documents address terrorism as a major threat. There were many examples of funding, resources, and technical assistance that specifically addressed terrorism and therefore did not address the focus of our research

questions on "natural-hazard-related disasters." The documents describe the purpose, guiding principles, responsibilities, expectations of communities, and, implicitly, the culture of FEMA. The strategic documents also describe responsibilities and access to resources for federally-recognized Tribes as part of a group that includes states, territories, and insular areas.

Thematic Analysis

Our codebook helps answer our research questions by allowing us to categorize themes directly related to each of our research questions. Before beginning the manual coding process, we grouped our codes by themes corresponding to each of our research questions (see Table 6).

We first established a thematic group of codes to identify “when,” “where,” and to “whom” the FEMA documents applied. Here we coded the disaster management cycle, which allowed us to identify which documents referenced preparedness for and mitigation of natural-hazard-related disaster events. We also coded Tribal lands to investigate the geographic bounds of support and funding–or lack thereof–provided to Tribes. Finally, we coded Tribal recognition to understand “who” was included (and excluded) from policies and programs, and what resources were available to various groups. These codes served to bound all research questions in time, space, and Tribal inclusion.

Our next thematic group of codes was tied to the Tribal Climate Change Principles described in Table 4, which have been proposed as a guide for the federal government to develop and implement administrative and legislative action to address climate impacts and ensure Tribal access to climate resources.

Table 6: Research Questions and Corresponding Codes

Research Question	Coding Concepts
What funding and institutional support does federal policy provide for Tribal efforts to mitigate or prepare for natural-hazard related disaster events?	Relationships, Resources, Funding
What federal policy barriers impede Tribal efforts to mitigate or prepare for natural-hazard related disaster events?	Tribe-specific solutions, Access, Indigenous Traditional Knowledges
What institutional support, regional partnerships, and federal relationships benefit or impede Tribal nations' efforts to mitigate or prepare for natural-hazard related disaster events?	Partnership, Committee/Workgroup participation, Task Force, Relationships

Note. Table relates the authors' coding themes to their research questions.

Here we analyzed funding eligibility and institutional supports such as capacity building and technical assistance for projects on Tribal lands, initiatives to engage directly with Tribal authorities or increase Tribal participation, and opportunities to pursue nature-based solutions or projects that incorporate Indigenous knowledges. Grouping our codes by themes allowed us to identify trends by document type, publication date, and through explicit inclusion or exclusion of the themes we identified.

Once coding was complete, we developed scorecards for each coding concept to capture the quantity and quality of representations of each concept throughout the FEMA documents. The scorecards generally portray two separate ratings out of five stars:

Concept Inclusion: The frequency score is determined by the number of documents in which the concept appears. For example, we found that FEMA funding was described in 35 of the 47 documents we assessed. To determine the score we divide 35 by 47 and multiply by 5 to get 3.7 stars. Of note, our scorecards award stars to the nearest half star so this concept is awarded 3.5 stars for concept inclusion on the scorecard.

Equity or Acceptability of the Concept: This score is an interpretation of the equity or acceptability of the concept based on the language used in the documents and was developed based on our coding scheme for each concept. Seven of our scorecards received such a score; the remainder did not because this metric was not applicable in the context of those concepts.

Documents that described denial/rejection of the concept received a score of 0. Documents that described some acceptance of the concept, but for which equity/acceptability could not be determined, received a score of 0.5. Finally, documents that described equity in the concept received a score of 1.

For example, in documents that described capacity-building and technical assistance, two documents describe ineligibility, 31 documents describe access but are not detailed enough to determine equity, and one document describes equitable access. To determine the score we used the weighted score criteria described and calculated ((2*0)+(31*0.5)+(1*1)) divided by 34 (the number of documents in which the concept was present) multiplied by 5 to get 2.43 stars. Rounding up as before, this concept is awarded 2.5 stars for equity of capacity-building and technical assistance on the scorecard.

Our scorecards are supplemented by quotations from the FEMA documents to illustrate the evidence relevant to the concepts described on the scorecard.

Coding Limitations

We identified two potential limitations of our content analysis of FEMA documents: sampling and subjectivity.

Sampling

Our first limitation was that FEMA documents selected by our team may not be of appropriate quantity, quality, and scope to best support our research questions. We addressed this limitation by way of snowball sampling. Throughout the review of the strategic documents, we reviewed the purpose of

the documents referenced. If the purpose supported our research question, we included the document in the document review. We also included documents frequently referenced on the Tribal Affairs page of the FEMA website.[88] The strength of this selection method is that the types of documents were most directly related to mitigation and preparedness of a natural-hazard related events and most directly addressed funding and institutional supports. We excluded documents specific to homeland security, such as response to terrorism, or those in support of discontinued programs. Selecting documents specifically from the Tribal Affairs page, may not be representative of the overall inclusiveness of Tribes in all FEMA documents, however these documents fundamentally address the funding, institutional support, and federal relationships with Tribal nations.

Subjectivity

A second potential limitation was the difficulty of remaining objective and consistent as we conducted manual coding due to the inherent individual biases of each coder. To address this limitation, we first discussed the meanings of all themes and applicable coding instructions as a group to develop a shared understanding and consensus of definition. Next, we ensured two coders analyzed each document and discussed any discrepancies in code application. In the case of discrepancy between coders, this discrepancy was discussed with a third team member until an agreement was reached or a revision to the codebook was made.

[88] FEMA. (n.d.). *Tribal Affairs.* Retrieved April 8, 2023, from https://www.fema.gov/about/organization/Tribes.

Phase 2: Qualitative Interviews

The second phase of our research consisted of formative, semi-structured interviews with three professionals working with Indigenous communities. We conducted these interviews remotely due to the geographically disparate locations of the interviewees. Participants consisted of a primary interviewer, 1-3 note-takers and observers, and the interviewees. We recorded all interviews to ensure accurate recall and presentation of interviewee responses with consent from the interviewees. The study was deemed exempt under category 2 by the UW Human Subjects Division (STUDY00017661).

Interview Protocol

The interview protocol consists of an introduction explaining the structure of the interview and the subject matter to be examined, followed by twelve questions. The complete protocol is included in **Appendix E: Interview Protocols.** The intended length of the interview was 45 minutes, but we included buffer time at the beginning and end of the interview to allow for questions from interviewees and additional impromptu questions that might arise as the interview proceeded. We structured the interview questions around five general themes. These themes addressed the central concerns of our research and attempt to capture additional information beyond the scope of federal administrative data or academic literature.

During the first interview, it became clear that our protocol could be shortened in recognition of the level of expertise and amount of information elicited by the first few interview questions. To be sure we gathered as much useful information as possible, we adjusted our interview protocol during the first round of interviews to emphasize questions related to the challenges posed by federal disaster policy, policy change recommendations, and strategies for successfully obtaining federal disaster funds. The revised protocol used for the second interview is included in **Appendix E.**

Our questions focused on the following themes:

1. Overall state of Indigenous communities' interaction with federal disaster policies
2. What opportunities exist for Indigenous communities to access federal resources and why
3. What barriers exist for Indigenous communities to access federal resources and why
4. What workarounds exist to access resources for disaster response/preparedness

Sampling

Interviewees are currently working in environmental protection and climate change mitigation and provide technical and capacity services to Tribal communities. These services include culturally appropriate capacity building, training, and research to increase resilience and preparedness for climate change. We selected interviewees both for their work with Indigenous communities throughout the United States and for their experience providing training to FEMA disaster management employees. Given their expertise, our interviewees were positioned well to provide information based on their own experience and the experiences of their external partners, as well as technical expertise and insight into hazard mitigation and preparedness.

Analysis

We analyzed the results of our interviews in three phases. First, team members who were present during the interview process reviewed the recorded interviews to identify themes and topics of discussion such as “BCA” and “Overall Evaluation,” as well as types of barriers and opportunities such as “Technical Assistance,” “Administrative Capacity,” and “Cultural Competency.”

These team members then compared notes to create a consensus list of emergent domains and sub-themes. These domains and sub-themes are listed in **Appendix F**. Once the reviewers had isolated domains and subthemes, the entire research team compared them to those we synthesized from our content analysis, literature review, and quantitative analysis. We took care to note any ways in which these themes presented themselves differently in the experiences of our interview participants as compared to our other investigative techniques.

Limitations

A primary limitation of our qualitative data was scale; we conducted only two interviews with three total participants. The small number of interviews limited our ability to implement a more rigorous coding and analysis approach.We tried to mitigate the impact of this limitation by synthesizing the information provided by interviewees with what we discovered through our literature review and content analysis, comparing and contrasting findings across these research approaches.

An additional limitation to our qualitative research was interview duration. Initially intended to be one-hour long interviews, our participants' time constraints required a 45-minute interview and the omission of follow-up questions during the first interview. For the second interview we avoided this by revising the protocol to include fewer questions, with more time for interview participants to elaborate on their own responses.

Phase 3: Quantitative Analysis

The final phase of our research is a quantitative analysis of data concerning hazard mitigation plans and grant awards. Here we use statistical techniques to quantify disparities that typify the Tribal emergency management experience when qualifying for and securing FEMA funding in support of disaster mitigation projects.

Data

FEMA publishes data concerning hazard mitigation plans and grant awards to both Tribal and non-Tribal entities on its OpenFEMA website.[89]

The mitigation plan data include information only from Tribes that have submitted a hazard mitigation plan between 21 September 2006 through 07 March 2023 (the date the OpenFEMA dataset was downloaded for this analysis). To capture Tribes that have not submitted a hazard mitigation plan, we merged all the 574 Tribal entities recognized by and eligible for funding and services by virtue of their status as Indian Tribes listed in 86 Federal Register 7554.[90] The resulting dataset has 586 observations (229 Federally Recognized Alaska Native Villages/Tribes, 355 Indian Tribal Entities Within the Contiguous 48 States, and two Non-federally recognized Tribes).

The grant award data encompass approximately 32,000 awards through programs the Hazard Mitigation Grants Program (HMGP), Flood Mitigation Assistance (FMA), Building Resilient Infrastructure and Communities (BRIC), and various legacy grant programs. Variables available include applicant or sub-applicant Tribal status, grant size, applicant cost share, benefit-cost ratio, and total net benefits. The data cover grant awards back to the 1990s.

Areas of Inquiry

As noted above, our quantitative evaluation focuses on two areas: (1) adoption and maintenance of FEMA-approved hazard mitigation plans, which are required to qualify for funding; and (2) hazard mitigation grant awards to successful Tribal applicants. We examine mitigation plan status overall and within FEMA regions

[89] FEMA. (n.d.). *OpenFEMA Data Sets*. FEMA.gov. Retrieved February 24, 2023, from https://www.fema.gov/about/openfema/data-sets.

[90] 86 FR7554. (2020, January 30). Retrieved March 5, 2023, from https://www.federalregister.gov/documents/2021/01/29/2021-01606/indian-entities-recognized-by-and-eligible-to-receive-services-from-the-united-states-bureau-of.

to determine how many Tribes have active mitigation plans, how many plans have lapsed due to non-renewal, and how many remain in the approval process.

Thereafter, we evaluate awarded grants along four dimensions: amount of funding, cost burden, benefit-cost ratio, and total net benefits. We also examine the number grant awards over time for each grant award outcome, we compare Tribal applicants to non-Tribal applicants, Tribal sub-applicants to Tribal applicants, and Tribal sub-applicants to non-Tribal sub-applicants.

Methods

Given the limitations of these datasets (discussed below), we limit our analysis largely to the calculation of descriptive statistics. Where feasible, we explore differentiation between types of hazard mitigation plans, grant programs, and regions.

Limitations

The OpenFEMA datasets are limited in several respects that likewise limit the scope of possible statistical analysis. One disclaimer is applicable to both analyses: Although FEMA publishes the status of all hazard mitigation plans and grant awards on their OpenFEMA dataset webpage and the data use the Federal Emergency Management Agency's OpenFEMA API, they are not endorsed by FEMA. Neither the federal government nor FEMA can vouch for the data or analyses derived from these data after the data have been retrieved from the agency's website(s). We list additional limitations specific to each dataset separately and discuss their research implications below.

Limitations Specific to Mitigation Plan Data

Two limitations are important with respect to our analysis of hazard mitigation plans. First, the mitigation plan data are a snapshot in time and represent the status of hazard mitigation plans only at the time the data were pulled. FEMA updates the dataset regularly to annotate any changes in plan status; however,

hazard mitigation plans are valid for five years and there are not significant changes in short timeframes.

Second, the mitigation plan dataset includes various discrepancies—specifically, 10 observations (two in Alaska, and eight from Tribal entities in the contiguous 48 states) cannot be reconciled for analysis. The discrepancies are likely due to changes in the naming conventions of Tribal entities, Tribes that cross-boundaries and are accounted for in more than one jurisdiction, or bands of Tribes that have submitted Tribal mitigation plans but are only listed as one Tribal nation in the federal register.

Limitations Specific to Grant Award Data

Additional limitations apply to our analysis of grant awards. First, FEMA publishes data only on successful grant applications. We do not have access to data concerning applications that are pending or were denied,[91] and we are therefore unable to draw inferences concerning which characteristics of a grant applicant or application are associated with success.

Second, the grant award dataset does not include relevant background information from which we could construct additional controls. For example, we do not know the size of the populations governed by applicant or sub-applicant governments, the size of the geographical territory under their jurisdiction, or the amount of their own resources they are able to bring to bear on grant applications or funded projects. Since applicants and sub-applicants include a diverse array of entities that have submitted tens of thousands of applications over a period of decades, we were unable within the timeframe of this project to compile these data from secondary sources. And lacking these data, we are unable to control for numerous factors that may plausibly contribute to the grant application disparities we observe.

[91] We submitted a FOIA request to FEMA seeking these data. As of the date of publication, we have not received a substantive response.

Third, the information that is included in the database is of uneven quality and utility. In particular, grant award observations are coded at the grant level rather than the applicant/sub-applicant level, which makes it difficult to isolate outcomes for Tribal sub-applicants. For example, because funds from a grant are provided to sub-applicants by the applicant, the database does not tell us how much money any individual sub-applicant received from a grant award. The dataset also includes a substantial number of missing or miscoded observations.

Fourth, the OpenFEMA dataset contains a limited number of observations concerning Tribal applicants and sub-applicants. Of approximately 32,000 observations in the dataset, just 372 concern Tribal applicants and 424 concern Tribal sub-applicants. This small subsample amplifies the effect of outliers and makes it difficult to draw firm conclusions in some cases. In particular, this fact limits our ability to analyze outcomes separately across geographical regions.

04. FINDINGS AND ANALYSIS

In this chapter we present findings organized by their applicability to our research questions:

01 What funding and institutional support does federal policy provide for Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

02 What federal policy barriers impeded Tribal efforts to mitigate or prepare for natural-hazard-related disaster events?

03 What institutional support, regional partnerships, and federal relationships benefit or impeded Tribal nations' efforts to mitigate or prepare for natural-hazard-related disaster events?

The trends that we discuss throughout this chapter are informed primarily by our content analysis of the 47 FEMA documents and the specific language in these documents. We also incorporate excerpts from interviews where our content analysis and domains identified in **Appendix F** intersect. **Appendix G** provides the aggregated coding summary from our content analysis.

We analyze these findings further and make policy recommendations in Chapter 5.

FEMA Funding and Institutional Support for Tribal Hazard Mitigation

Federally Recognized Tribes are Generally Eligible to Apply for FEMA Funding

Tribal governments are eligible for all mitigation grants that we reviewed and all preparedness grants that support emergency management of climate change preparedness except for the Regional Catastrophic Preparedness Grant. As eligible applicants, Tribal governments are entitled to apply for funding on the same terms as states, municipalities, and other local entities. However, they must also meet all other eligibility criteria and follow the same application procedures as other applicants and, in most cases, compete for funding with other applicants.

Table 7 showcases which FEMA grants Tribes are eligible for and states whether we reviewed the supporting program documentation to assess other characteristics of Tribal inclusion. We did not review most of the preparedness grants because those grant programs are not intended to support responses to natural hazards or climate-related events.

Table 7: Preparedness, Mitigation, Pre-Disaster, and Hazard Mitigation Grant Programs

Grant Program	Type	Tribes Eligible	Conducted Analysis
Tribal Homeland Security Grant Program	Preparedness	Yes	Yes
Nonprofit Security Grant Program (NSGP)	Preparedness	No	No
Transit Security Grant Program (TSGP)	Preparedness	No	No
Intercity Bus Security Grant Program	Preparedness	No	No
Intercity Passenger Rail (IPR) Program – Amtrak	Preparedness	No	No
Emergency Management Performance	Preparedness	Yes	Yes
Port Security Grant Program	Preparedness	No	No

Table 7: Preparedness, Mitigation, Pre-Disaster, and Hazard Mitigation Grant Programs (cont'd)

Grant Program	Type	Tribes Eligible	Conducted Analysis
Regional Catastrophic Preparedness	Preparedness	No	Yes
Assistance to Firefighters Program	Preparedness	Yes	No
Emergency Operations Center Grant Program	Preparedness	No	Yes
State and Local Cybersecurity Grant Program	Preparedness	No	No
Hazard Mitigation Grant Program (HMGP)	Hazard Mitigation	Yes	Yes
Hazard Mitigation Grant Program Post Fire	Hazard Mitigation	Yes	Yes
Building Resilient Infrastructure and Communities (BRIC)	Hazard Mitigation	Yes	Yes
Flood Management Assistance (FMA)	Hazard Mitigation	Yes	Yes
Pre-Disaster Mitigation grant program	Pre-disaster	Yes	Yes
National Earthquake Hazards Reduction Program's State Assistance Program	Resilience	No	No
Emergency Food and Shelter Program [92]	Resilience	No	No
National Dam Safety Program State Assistance Grant	Resilience	No	No

Note. Displays type of FEMA grant, whether federally recognized Tribes are eligible, and if the authors analyzed supporting documentation.

We determined eligibility for these grant programs based on whether the Notice of Funding Opportunities (NOFO) listed “federally recognized Tribal governments” as an “eligible applicant”; if the eligibility information did not list “federally recognized Tribal governments” we determined that Tribes are ineligible for funding. Figure 2, below, contains representative findings from our content analysis regarding the accessibility of FEMA funding. The funding scorecard shows that funding is described throughout FEMA documents as generally accessible for federally recognized Tribal governments. The funding scorecard shows two scores: the first score is the proportion of documents that mention Tribes are eligible for funding—35/47, rounded to 3.5 stars out of 5.

[92] States are also ineligible for this program, as it is for local nonprofit and government service organizations.

The second score reflects our assessment of the extent to which the 35 documents that did mention eligibility reflect equity of funding quantitatively (prevalence of discussion) and qualitatively (quality of discussion)—30/35, rounded to 4 stars of 5. Even though equity of funding receives a four-star rating in our analysis, eligibility requirements and competition from states can still function as barriers to receiving funding.

Figure 2: Funding Scorecard

Coding concept: *FEMA funding is accessible for States and Tribes*

Concept mentioned (35/47 documents) 

Equity of concept (30/35 documents) 

Strategic documents

National Response Framework, p. 43:

"The Federal Government may provide assistance in the form of funding, resources, and services. Federal departments and agencies respect the sovereignty and responsibilities of local, state, tribal, territorial, and insular area governments, while rendering assistance that supports the affected local, state, tribal, territorial, and insular governments."

National Disaster Recovery Framework, p. 48:

"Tribes may seek assistance, independent from states, from the Federal Government to clarify and streamline recovery funding."

Building Community Resilience with Nature Based Solutions 2021, p. 26:

"States, territories, tribes, and local communities may apply for HMA funding if they meet all eligibility criteria for each program, including having a FEMA-approved hazard mitigation plan."

Tribe-specific documents

Federally Recognized Tribes and Hazard Mitigation Grant Program Job Aid, p. 1:

"In some cases, HMGP funding may be minimal for a federally-recognized tribe when the HMGP ceiling is determined for the tribal jurisdiction. In these cases if the State is also requesting a major disaster declaration, it may benefit the federally-recognized tribe to act as a subapplicant and apply for HMGP trough the state."

Tribal Mitigation Plan Review Guide, p. 45:

"In accordance with 44 CFR Part 201, state, tribal, and local governments must have a FEMA approved Mitigation Plan before FEMA will obligate funds for certain programs."

Fiscal and procedural documents

New Recipients of Disaster Grants Guide, p. 1:

"The Stafford Act (as amended) provides federally recognized tribal governments the option to request an emergency or major disaster declaration directly from the President. This enables tribal governments to receive assistance in the form of grants or cooperative agreements through FEMA Public Assistance (PA), Individual Assistance (IA), and Hazard Mitigation Grant Programs (HMGP) as Recipients independent of a state's disaster declaration."

Tribal Mitigation Plan Review Guide, p. 45:

"In accordance with 44 CFR Part 201, state, tribal, and local governments must have a FEMA approved Mitigation Plan before FEMA will obligate funds for certain programs."

Note: This figure presents representative excerpts pertaining to funding accessibility from the authors' document analysis.

FEMA Offers Tools and Technical Assistance to Make Grant Applications Easier to Complete

FEMA offers direct technical assistance to Tribal applicants seeking to complete pre-submission requirements and grant applications. FEMA acknowledges that "completing certain preparatory tasks (e.g., preparing a Mitigation Plan) can be complex, time-consuming, and require in-depth research and analysis."[93] FEMA publicizes webinars to maximize the audience it can reach with asynchronous technical assistance, but this requires recipients to have the time and reliable internet connection, and that they prefer to receive technical information asynchronously and in the English language. Webinars are diverse, covering subjects from "Fundamentals of Grants Management"[94] to "Where and How We Build: Using Land Use and Building Codes to Increase Resilience."[95]

Direct Technical Assistance is an opportunity to increase the capacity of a community that may not have resources to apply for or complete a project on its own. FEMA accepts applications for technical assistance throughout a grant cycle and prioritizes those from socially vulnerable and economically disadvantaged rural communities—classifications into which only some Tribes fall. The most common types of support requested are benefit-cost analysis support, hazard mitigation planning, and environmental planning and historic preservation (FHP) support. There have been eight (of 28 total) published examples of Tribal nations receiving direct technical assistance, with requests

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[93] FEMA. (2019, May). *New Recipients of Disaster Grants Guide*. Retrieved April 2, 2023, from https://www.fema.gov/sites/default/files/2020-04/new-recipients-of-disaster-grants-guide_2019.pdf.

[94] FEMA. (n.d.). *Fundamentals of Grant Management.* Retrieved April 4, 2023, from https://emilms.fema.gov/grantsmanagement/post-award/lessons/fundamentalsofgrants management-monitoring/curriculum/1.html.

[95] FEMA. (n.d.). *Where and How We Build: Using Land Use and Building Codes to Increase Resilience*. YouTube. Retrieved April 12, 2023, from https://www.youtube.com/watch?app=desktop&%3Bv=QENhikka7ME.

that range from “build[ing] the Tribe’s grant management capacity, local Hazard Mitigation Plan development, stakeholder engagement and coordination” to conceptualizing a solar micro grid to power Tribal buildings. [96]

In 31 of 34 documents that mention Tribal access to capacity-building and technical assistance, we could not determine whether Tribes could in fact access the programs equitably as compared to States. In two of the 34 documents mentioning capacity-building and technical assistance, Tribes were not mentioned as being eligible for the programs. Figure 3: Capacity-building and Technical Assistance Scorecard shows two scores: the first score is the proportion of documents that mention Tribes are eligible for funding—34/47, rounded to 3.5 stars out of 5—and the second score reflects our assessment of the extent to which the 34 documents that did mention eligibility reflect equity quantitatively (prevalence of discussion) and qualitatively (quality of discussion).

To calculate the star rating for the equity of the concept, documents that indicated Tribes were ineligible for capacity-building or technical assistance received a score of 0, documents that described access but for which equity could not be determined received a score of 0.5, and documents that described equitable access for Tribes received a score of 1. The concept then received a total weighted score reflecting the overall quality and quantity of discussion of the concept, resulting in a two-and-a-half-star equity rating.

[96] *Direct technical assistance communities.* FEMA.gov. (n.d.). Retrieved April 14, 2023, from https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/direct-technical-assistance/communities.

Figure 3: Capacity-building and Technical Assistance Scorecard

Coding concept: *Accessibility of Capacity-building and Technical Assistance for Tribes*

Concept mentioned (34/47 documents) 

Equity of concept (31/34 Undetermined equity of access) 

Strategic documents

2022-2026 FEMA Strategic Plan, p. 11:

"Operating through a people first approach requires that FEMA resources can be accessed and leveraged by underserved communities in ways that meet their needs"

National Preparedness Goal, p. 2:

"Providing individuals and communities with information and resources will facilitate actions to adapt to and withstand an emergency or disaster"

Tribe-specific documents

2022-2026 FEMA National Tribal Strategy, p. 2:

"From aggressive expansion of our tribal affairs footprint across our regional and headquarters offices, to developing tribal-specific technical assistance programs, we are committed to better supporting and honoring our federal trust responsibility and nation-to-nation relationship"

FEMA Tribal Policy (Rev. 2), p. 3:

"The Agency, in consultation with Tribal Nations, will provide Tribal Nations with information necessary to participate in educational and technical assistance programs to develop, support, and enhance tribal expertise to build, sustain, and improve the capacity to prevent, protect against, mitigate, respond to, and recover from all hazards."

Tribal Mitigation Plan Review Guide, p. 1:

"Through the National Mitigation Planning Program, FEMA provides guidance, training, and technical assistance to support Indian tribal governments (tribal governments) in developing and implementing mitigation plans."

Fiscal and procedural documents

Fire Management Assistance Grant Program and Policy Guide, p. 1:

"Under this cost-share grant program, FEMA provides grant assistance to assist in reimbursement for equipment, supplies, and personnel to any state, tribal, or local government for the mitigation, management, and control of any declared fire on public or private forest land or grassland that threatens such destruction as would constitute a major disaster"

New Recipients of Disaster Grants Program, p. 5:

"Completing certain preparatory tasks (e.g., preparing a Mitigation Plan) can be complex, time consuming, and require in-depth research and analysis. FEMA staff are available to provide technical assistance to state, territorial, and tribal governments in completing each task."

Bric Grant Policy, p. 2:

"Support state and local governments, tribes, and territories through capability- and capacity-building to enable them to identify mitigation actions and implement projects that reduce risks posed by natural hazards."

Note: This figure presents representative excerpts pertaining to the accessibility of capacity-building and technical assistance from the authors' document analysis.

In 2019, FEMA solicited stakeholder comments about the BRIC grant program. It received 5,017 comments, of which 1,350 comments "requested technical assistance"—highlighting the many barriers to completing a grant application and the necessity of simplifying the pre-submission requirements or increasing technical assistance.[97] The importance of technical assistance and FEMA's inability to provide it at scale was also mentioned in interviews:

> [T]he issue of the administrative burden of handling these things right? 'Cause just throwing money doesn't necessarily address being able to have that capacity to handle it, to manage it, and that is where I say having some more of that technical assistance can be helpful.

Policy Barriers to Tribal Hazard Mitigation Efforts

We find that, in theory, federally recognized Tribes are eligible for all hazard mitigation funding opportunities administered by FEMA on the same terms as states and other non-Tribal applicants. However, problems arise because the process of demonstrating eligibility for funding, preparing a proposal, and completing the application process is long, expensive, and technically demanding. As a result, it requires resources and technical capacity that may be unavailable to many Tribal governments—particularly those with smaller staffs and fewer financial resources to devote to seeking grants. This creates a

[97] FEMA. (2020). *Summary of Stakeholder Feedback, Building Resilient Infrastructure and Communities (BRIC): 42.* Retrieved March 21, 2023, from https://www.fema.gov/sites/default/files/2020-06/fema_bric-summary-of-stakeholder-feedback-report.pdf.

feedback loop in which under-resourced communities struggle to benefit from federal grants precisely because they lack the resources necessary to secure those grants.

Recognition Is a Prerequisite to Engaging Directly with FEMA

Federal recognition is central to Tribal hazard mitigation efforts even though it is not explicitly a focus of FEMA policy or procedures. Unrecognized Tribes are not eligible to apply directly for hazard mitigation assistance grants because, being unrecognized, they lack a government-to-government relationship with the federal government of which FEMA is a part.[98]

This finding is supported primarily by evidence from our document analysis (see Figure 4). All documents we reviewed exclusively referenced government-to-government relationships, access to resources, and involvement in the “whole-of-community" approach with reference specifically to federally recognized Tribes. Since the federal government does not consider Tribes that are not federally recognized to be governments themselves, such groups are excluded, by definition, as organizational members of the “community” intended to benefit directly from grant programs administered by FEMA. Instead, the members of such groups are community members only as individuals. All of the nine strategic documents we reviewed explicitly stated that Federal recognition was a requirement for engaging formally with FEMA and the overall disaster national framework. The Tribal-focused documents make the prerequisite equally clear—7 out of 8 documents affirm the federal recognition requirement.

[98] FEMA. (2015, February 27). *Hazard Mitigation Assistance Guidance.* Retrieved March 1, 2023, from https://www.fema.gov/sites/default/files/documents/fema_hma-guidance-fy15-archived.pdf.

Figure 4: Tribal Recognition Scorecard

Coding concept: *Tribal Recognition*

Concept mentioned (41/47 documents)	
Federally-recognized Tribes mentioned (39/47 documents)	
Tribes without federal-recognition mentioned (6/47 documents)	

Strategic documents

2022-2026 FEMA Strategic Plan, p. 7:

"A Whole Community approach attempts to engage the full capacity of the private and nonprofit sectors... in conjunction with the participation of state, local, tribal, territorial, and federal governmental partners."

FEMA Tribal Relations Support Annex, p. 1:

"The United States recognizes Indian tribes as domestic dependent nations under its protection, recognizes the right of Indian tribes to self-government, and supports tribal sovereignty and self-determination."

National Disaster Recovery Framework, pp. 18-19:

"The Federal Government recognizes that the tribal right of self-government flows from the inherent sovereignty of American Indian and Alaska Native Tribes as nations and that federally recognized tribes have a unique and direct relationship with the Federal Government."

Tribe-specific documents

2022-2026 FEMA National Tribal Strategy, p. 3:

"...following enactment of the Sandy... Act in 2013,... Tribal Nations now have the explicit opportunity to make direct requests for presidential emergency and disaster declarations. Prior... federal statute required Tribal Nations to apply through states as subrecipients for disaster assistance."

Tribal Mitigation Plan Review Guide, p. 2:

"Tribes and local governments that are not federally recognized must meet the local mitigation planning requirements specified in 44 CFR § 201.6... State-recognized tribes and tribes that are still in the process of requesting and/or receiving federal recognition do not fall under the definition of a federally recognized tribe and will be reviewed against the Local Mitigation Plan requirements... "

Fiscal and procedural documents

FEMA Technical Assistance Program Fact Sheet, p. 1:

"assists states, tribes and local jurisdictions to build and sustain specific emergency management program capabilities by providing services and analytical capabilities..."

Hazard Mitigation Grant Program Post Fire Fact Sheet, p. 2:

"Tribes (including federally recognized tribes) may also apply through states as subapplicants."

Hazard Mitigation Assistance Guidance (2015), pp. 25-26:

"A federally-recognized tribe has the option to apply for HMA grants through the State as a subapplicant (when permitted) or directly to FEMA as an Applicant." As eligible subapplicants, "Local governments/community may include non-federally recognized tribes..."

Note: This figure presents representative excerpts pertaining to Tribal recognition from the authors' document analysis.

Of the 47 documents selected for our content analysis, only two documents—Tribal Mitigation Plan Review Guide and FEMA HMGP Post Fire Policy—specifically mention that non-federally recognized Tribes may apply as sub-applicants if states apply as applicants. The rest simply ignore this already-marginalized group. According to the Tribal Mitigation Plan Review Guide, "State-recognized Tribes and Tribes that are still in the process of requesting and/or receiving federal recognition do not fall under the definition of a federally-recognized Tribe" and should follow the same process as other local governments to pursue sub applicant status. [99] While the FEMA HMGP Post-Fire policy states, "Tribes (including federally-recognized Tribes) may apply through the State to FEMA as Sub-applicants and will follow the standard HMGP sub-applicant procedures consistent with program guidance including updates in effect at the time of the FMAG declaration."[100] Of note, applying as a sub-applicant generally requires recognition by the state applicant itself. The Tribal recognition scorecard indicates that when FEMA references Tribes, it almost exclusively refers to federally recognized Tribes. We found mention of Tribes without federal recognition in six of the 47 analyzed documents.

The unique legal status and jurisdictional complexity of Tribal lands is an issue closely tied to Tribal recognition itself. Of the 47 documents we analyzed, 37 did not mention Tribal lands. Nine mentioned federally recognized Tribal lands. Discussion of Tribal lands is largely absent from high level strategic documents including the 2022-2026 FEMA Strategic Plan (see Figure 5).[101] The most inclusive language in strategic documents is found in the National Disaster Recovery Framework describes the necessity for Tribes to engage with other governments to:

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[99] FEMA. (n.d.). *Tribal Mitigation Plan Review Guide, p* 2. Retrieved April 22, 2023, from https://www.fema.gov/sites/default/files/2020-05/FEMA_Policy_Tribal_Mitigation_Plan_Review_Guide.pdf.

[100] FEMA. (n.d.). *Hazard Mitigation Grant Program - Post Fire Policy #207-088-22.* Retrieved April 20, 2023, from https://www.fema.gov/sites/default/files/2020-07/fema_DRRA-1204-policy.pdf.

[101] FEMA. (2022). *2022-2026 FEMA National Tribal Strategy.* https://www.fema.gov/sites/default/files/documents/fema_national-tribal-strategy_08182022.pdf.

> *...inform partners of any Tribal distinctions or cultural differences to be aware of. It is essential that preservation of natural and cultural resources, sacred sites, and traditional lands be integrated into pre-disaster planning discussions and in recovery and mitigation planning efforts.[102]*

Figure 5: Tribal Lands Scorecard

Coding concept: *Tribal Lands*

Concept mentioned (34/47 documents) ★☆☆☆☆

Strategic documents

FEMA Tribal Relations Support Annex, p. 2:

"Federal... agencies recognize the unique political and geographical issues of tribes whose aboriginal and contemporary territory is on or near the current international borders of Canada and Mexico."

DHS National Disaster Recovery Framework, p. 19:

"It is essential that preservation of natural and cultural resources, sacred sites, and traditional lands be integrated into pre-disaster planning discussions and in recovery and mitigation planning efforts."

Tribe-specific documents

FEMA Federally-Recognized Tribes and Hazard Mitigation Grant Program, p. 1:

"If a federally-recognized tribe applies as an Applicant they are responsible for managing the overall HMGP grant program within applicable tribal lands."

Tribal Mitigation Plan Review Guide, p. 7:

"The tribal planning area includes the lands upon which the tribal government is authorized to govern, develop, or regulate. These lands may include, but are not limited to, lands within the Reservation and off-Reservation lands owned by, managed by, or held in trust for the tribal government, allotted trust land, and fee land. These lands may be either contiguous or noncontiguous and for multi-jurisdictional planning may include other tribes or non-tribal jurisdictions."

Tribal Mitigation Planning Handbook, p. 13:

"You should consider what sacred and cultural sites, including important landscape features, may be vulnerable to hazards and are important to protect."

Fiscal and procedural documents

Hazard Mitigation Grant Program Post Fire Fact Sheet, p. 2:

"Federally recognized tribes with land burned in FMAG declarations may choose to apply to FEMA for HMGP assistance as an applicant once a state or territory receives an FMAG declaration... If tribal land is not burned, subapplicant funding may be unavailable..."

Summary of Stakeholder Feedback, BRIC, p. 38:

"Project eligibility may be limited because there are often state and Bureau of Indian Affairs-owned roads throughout reservation; patchwork tribal land ownership can complicate potential project footprints."

Note: This figure presents representative excerpts pertaining to Tribal lands from the authors' document analysis.

[102] DHS. (2016, June). National Disaster Recovery Framework. Retrieved March 12, 2023, from https://www.fema.gov/sites/default/files/2020-06/national_disaster_recovery_framework_2nd.pdf, p. 19.

Only three documents mentioned traditional lands as to which a Tribe may have treaty-granted rights to natural resources or land that their ancestors may have traditionally occupied. The documents that do discuss Tribal lands tend to be more narrowly focused. The most detailed discussion of Tribal lands is in FEMA's Tribal Mitigation Planning Handbook. This document, designed to help Tribes develop the mitigation plans necessary to apply for programs such as the Hazard Mitigation Grant Program, provides specific instructions with respect to project planning:

> *[D]escribe the planning area, including all Tribal lands that may be reservation lands, noncontiguous land, and State and local jurisdictional boundaries... You should describe Tribal lands that your Tribe maintains or has jurisdiction over that are beyond the reservation boundaries. [It is] helpful to identify the structures on the reservation that provide essential community functions... you should consider what sacred and cultural sites, including important landscape features, may be vulnerable to hazards and are important to protect.[103]*

Hazard Mitigation Plans are Difficult to Develop and Maintain

Given that hazard mitigation plans are required to secure federal funding, we analyzed the status of hazard mitigation plans across all federally recognized Tribes (and two non-federally recognized Tribes, as discussed in further detail below). Understanding the landscape of Tribal eligibility for funding helps us understand how impactful the federal requirement for hazard mitigation plans might be.

[103] FEMA. (2019). *Tribal Mitigation Planning Handbook:* p. 16. https://www.fema.gov/sites/default/files/2020-06/fema-tribal-planning-handbook_05-2019.pdf.

The challenges of creating and maintaining hazard mitigation plans were echoed by responses in our interviews. As one interviewee shared,

> Many Tribes lack even an office of emergency management, which is definitely a barrier to obtain funds.

In addition, interviewees noted FEMA imposes strict project timelines that assume rapid, decisive administrative decisions, which is inherently at odds with the tendency for Indigenous communities to rely on more deliberative decision-making processes.

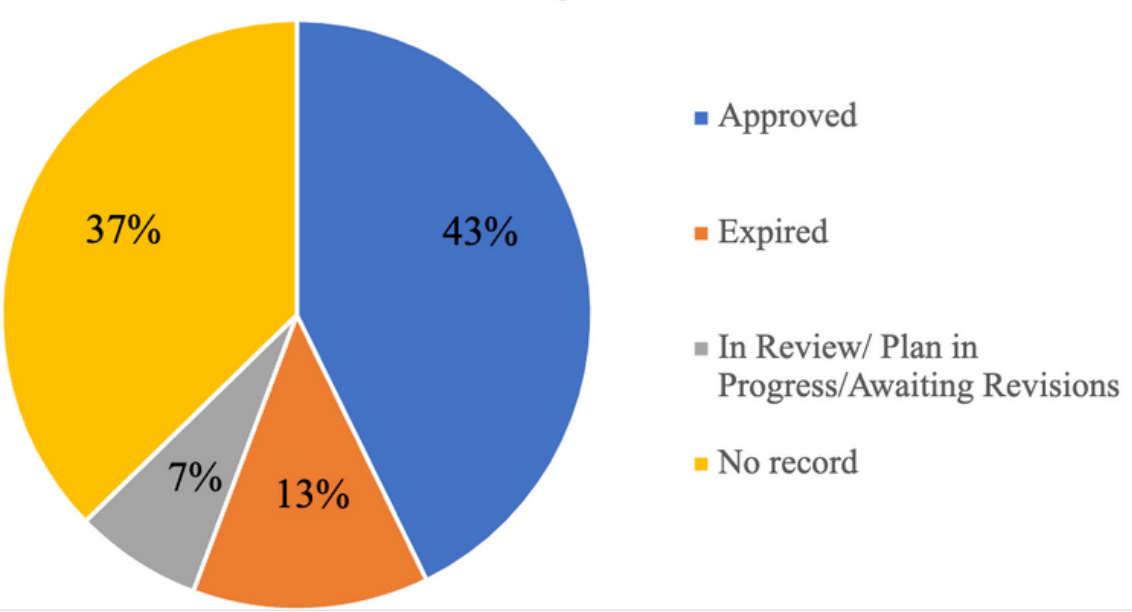
We took advantage of the availability of quantitative data from OpenFEMA to analyze trends in hazard mitigation plan status across Tribes and FEMA regions. We specifically analyzed the FEMA region and state, plan type, plan status, and jurisdiction type of hazard mitigation plans submitted to FEMA between September 21, 2006 and March 7, 2023.

Overall Analysis

Figure 6 portrays the data that we analyzed:

- 43 percent of Tribes have an approved multijurisdictional plan, standard Tribal plan, or both
- 37 percent of all Tribes have never submitted or have never been included in a hazard mitigation plan
- 13 percent of Tribes had a previously approved HMP that has since expired and not been resubmitted or re-approved
- 7 percent of Tribes have submitted a plan that is at some stage of the approval process

Figure 6: Tribal Hazard Mitigation Plan Status



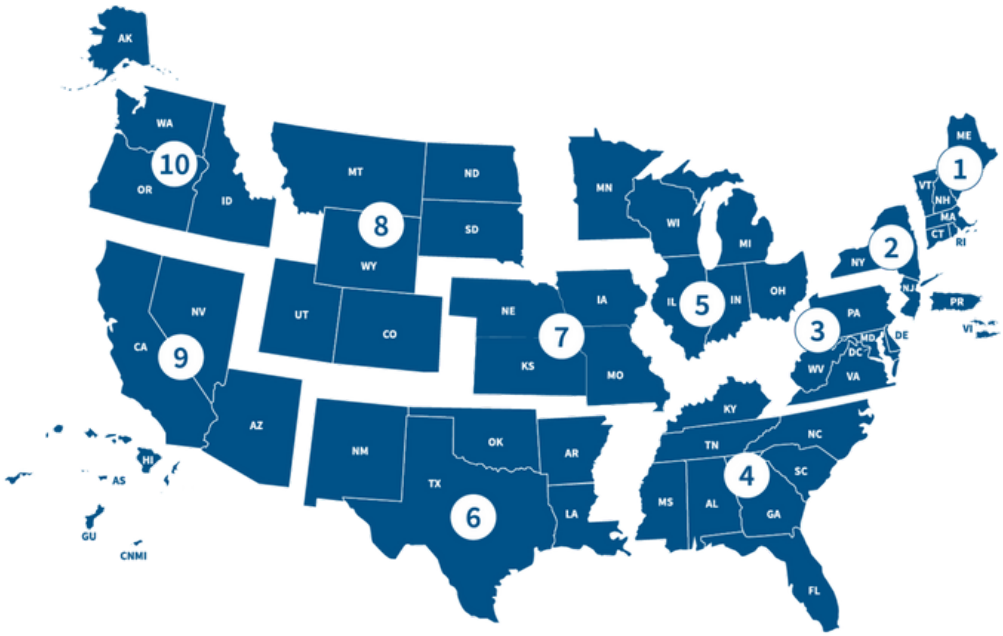
Note: Chart represents authors' analysis of OpenFEMA hazard mitigation plan data from March 7, 2023.

In sum, only 43 percent of Tribes have met one of the basic requirements to apply for FEMA grants. This requirement is a clear barrier to receiving federal grant funding. Further, the fact that 13 percent of Tribes developed and secured approval of plans but did not renew them indicates that annual renewal is a barrier, likely due to workload and availability of technical expertise. The concept of "expiration" for an administrative procedure may also not be a value shared by Indigenous communities, acting as a barrier between Indigenous ways of knowing and Western procedure-driven philosophies.

Analysis by Region

Each FEMA region is unique in composition, structure, and complexity. Figure 7 shows the composition of each FEMA Region by geographical area, states, and Tribes. [104]

Figure 7: FEMA Region Map with Number of Federally-recognized Tribes



Region	# of Tribes
01	10
02	8
03	7
04	6
05	34
06	68
07	9
08	29
09	150
10	271

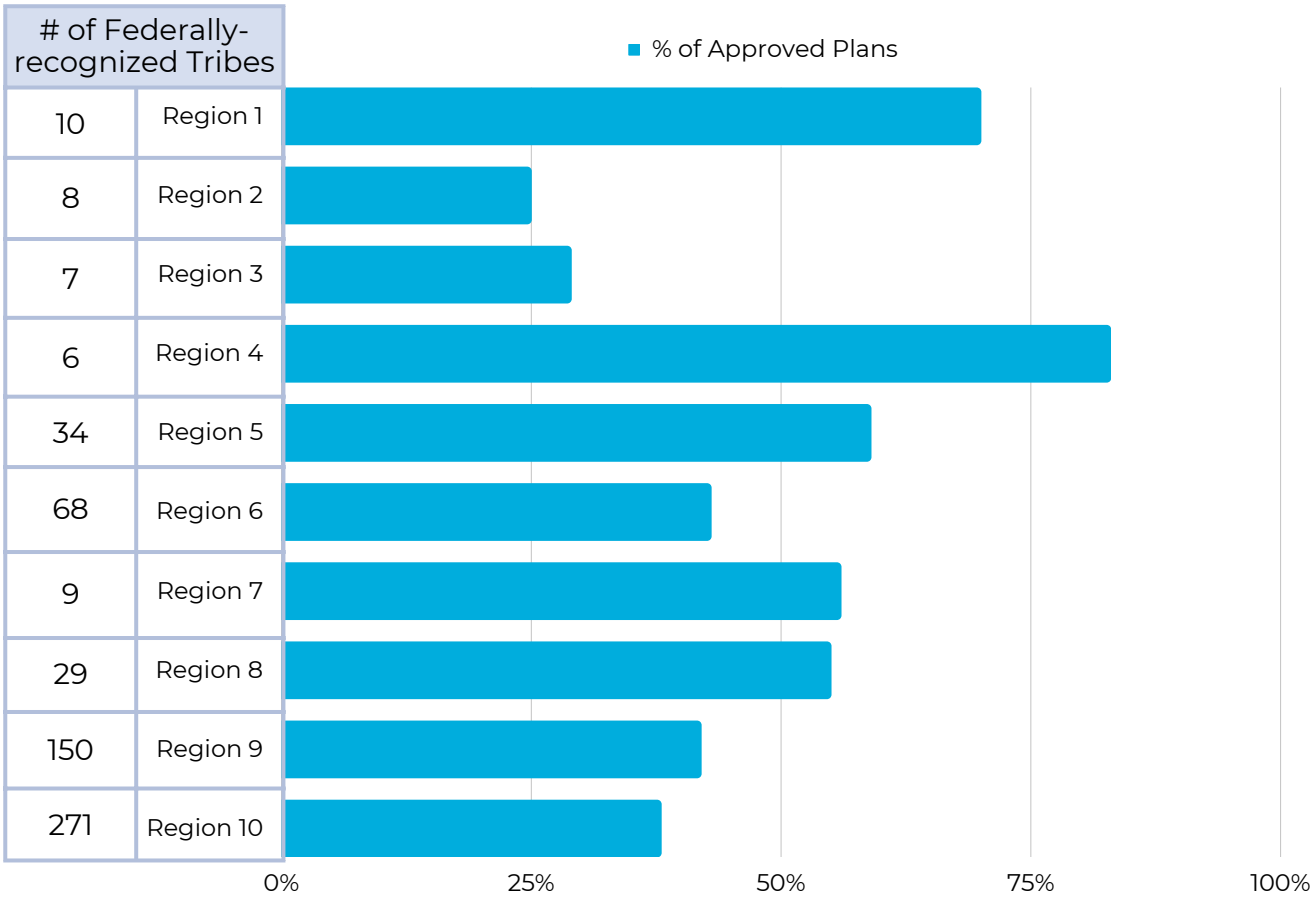
Note: FEMA Regions and Number of Tribes pulled from Regions, States & Territories webpage on 07 May 2023.

Nearly half of all Tribal entities are located in FEMA regions 8, 9, and 10 (due in large part to the 229 Federally Recognized Alaska Native Villages/Tribes in Region 10). Regional data help us to understand where capacity may be limited, which FEMA regional offices may be under-staffed, and where regional partnerships need to be improved upon.

[104] FEMA. (n.d.). Regions, States and Territories. Retrieved May 7, 2023, from https://www.fema.gov/about/organization/regions.

We assessed the approval status of hazard mitigation plans by region (see Figure 8) which shows that variance in approved hazard mitigation plans across FEMA Regions. [105]

Figure 8: FEMA Approved Mitigation Plans by Region

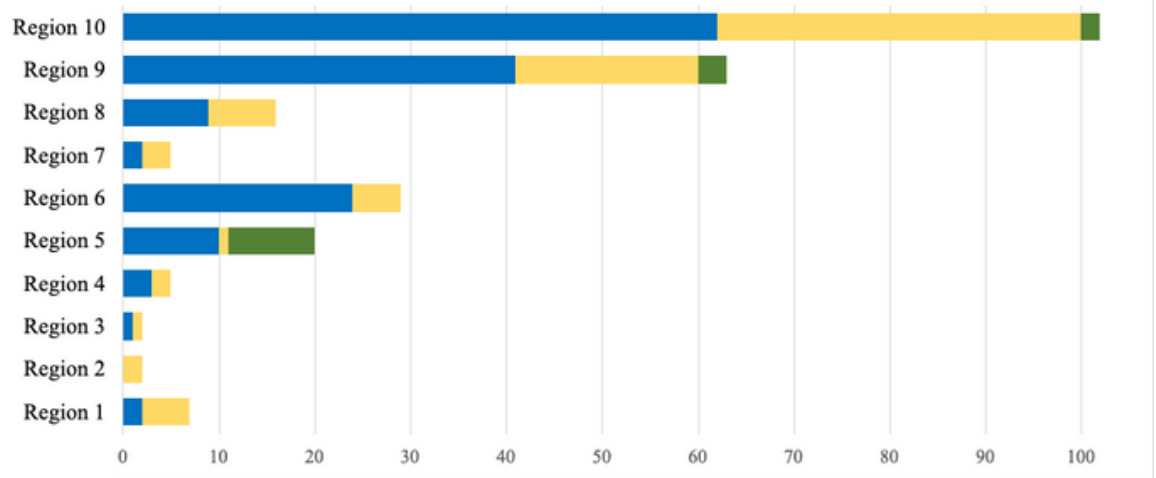


Note: Hazard Mitigation Plan status was pulled from OpenFEMA websource on 07 March 2023.

We also assessed hazard mitigation plan types by region (see Figure 9). These data show how Tribal entities are approaching the approval of hazard mitigation plans. FEMA Region 6 has over 80% of its hazard mitigation plans approved as Tribal plans, whereas FEMA Region 2 has approved only multijurisdictional plans. Further inquiry into the FEMA Regional Tribal liaison offices and insight from the Tribal entities in the regions themselves may reveal information about the capacity, political will, regional relationships, and best practices in each region.

[105] FEMA. (n.d.). Hazard Mitigation Plan Statuses. OpenFEMA Data Sets. https://www.fema.gov/about/openfema/data-sets#hazard.

Figure 9: FEMA Approved Mitigation Plans by Region and Type



	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Standard Tribal	2		1	3	10	24	2	9	41	62
Multijurisdictional	5	2	1	2	1	5	3	7	19	38
Tribal and Multijurisdictional					9				3	2
# of Federally-recognized Tribes	10	8	7	6	34	68	9	29	150	271

Note: Chart represents the authors' analysis of OpenFEMA hazard mitigation plan data pulled on March 07 2023. [106]

Notably, 14 Tribes across three FEMA regions have both an approved standard Tribal plan and a multijurisdictional plan. The first record of this practice in the OpenFEMA dataset is of the Paiute Shoshone Tribe of the Fallon Reservation and Colony, Nevada in 2017 (whose hazard mitigation plan has expired and has not been renewed) and the most recent is of Saginaw Chippewa Indian Tribe of Michigan. The seven bands of the Minnesota Chippewa Tribe, located in Region 5, have submitted under one standard Tribal plan and one multijurisdictional plan, both of which were approved in October 2022.

Two non-federally recognized Tribes—the Lumbee Tribe of North Carolina and Poospatuck State Tribe of New York—are listed as having approved multijurisdictional hazard mitigation plans. These are the only examples of explicit recognition by FEMA of non-federally recognized Tribes that we encountered.

[106] Ibid.

Benefit-Cost Analysis Is Burdensome to Complete

Numerous sources in our literature review and interviews identified the benefit-cost analysis requirement as the most significant procedural and substantive barrier to success for Tribal governments applying for grant funding. In both interviews, our participants explained that benefit-cost analysis presented a substantial barrier to Tribal grant access in multiple ways. One barrier is the administrative burden of completing a benefit-cost analysis and the need for assistance in doing so.

Interviewees explained that FEMA's approach to benefit-cost analysis undervalues Tribal communities and, therefore, Tribal projects due to a focus on characteristically Western ways of living and the inherent focus of benefit-cost analysis on monetary valuation:

> I think they are really centered around the western way of living…these applications don't take our [cultural dwellings and resources] into consideration, and like how do you put a price on a sacred site? Those kinds of things can be challenging as well.

Further, "these policies are very often directed individually as opposed to communally, and are also very focused, often say, on homeowners, and don't take into account different ways and systems that property can be held across communities or intergenerationally."

The Indigenous traditional knowledges (ITK) scorecard (**Figure 10**) shows that ITK are described infrequently in FEMA documents; we found arguable references to ITK in only five of the documents we reviewed. The Indigenous Traditional

Knowledges scorecard shows two scores: the first score is the proportion of documents that mention ITK—5/47, rounded to 0.5 star out of 5—and the second score reflects our assessment of the extent to which those 5 documents reflected acceptability of ITK. To calculate a star rating for the acceptability of ITK, documents that rejected the concept received a score of 0 and documents that were accepting of the concept received a score of 1. The documents then received a total weighted score reflecting the overall quality and quantity of discussion of the concept. In the five documents that mentioned Indigenous traditional knowledges, we found no explicit acceptance of the concept; it was mentioned only as a possible consideration.

Figure 10: Indigenous Traditional Knowledges Scorecard

Coding concept: *Indigenous traditinoal knowledges included as part of the policy or prgoram*

Concept mentioned (5/47 documents) 

Acceptability of concept (4/5 documents interpreted as "some acceptance") 

Strategic documents

2022-2026 FEMA Strategic Plan, p20:

"We consider all agencies of the federal government integral in upholding the trust and treaty obligations of the United States. It is important that with each agency we have ongoing, bilateral educational efforts."

Tribe-specific documents

Tribal Mitigation Planning Handbook, p16, 18:

[Regarding identifying hazards] "The data, reports, studies, and plans you collected when setting up the planning process will be helpful here, and so will Tribal knowledge and tradition….Describe how a changing climate can affect the probability of future hazard occurrences, based on Tribal knowledge and community observations."

Tribal Mitigation Plan Review Guide, p7:

"A successful planning process involves bringing tribal members, such as tribal leaders, tribal elders, and other partners together to discuss their knowledge, their perception of risk, and how to meet their needs as part of the process. This inclusive process works within the traditions, culture, and methods most suitable to a tribal government, so that participants better understand the unique vulnerabilities to the tribal planning area and can develop relevant mitigation actions."

Fiscal and procedural documents

BRIC Summary of Stakeholder Feedback, p38:

"Common Issues Expressed during Tribal Engagement…Ability to incorporate traditional knowledge into hazard mitigation is important (e.g., cultural resources in hazard mitigation plans [HMPs] and Benefit-Cost Analysis [BCA], consideration of cultural lifelines)."

Note: This figure presents representative excerpts pertaining to Indigenous traditional knowledges from the authors' document analysis.

This qualitative data is supported by the results of FEMA stakeholder outreach. An excerpt from FEMA's 2020 stakeholder feedback report highlights this alignment:

> *The criteria for most of the mitigation programs tends to favor large communities in urban areas because of the way the benefit-cost analysis works out. I work with Tribes and coastal communities in Alaska that are facing the need to relocate because of increasingly severe environmental hazards. These are small, rural communities with high shipping expenses, high cost of living, and small populations. They have had a hard time winning competitive grants because of the high costs and low populations, but they are facing serious risks to lives and safety of entire communities. . . .* ***Cultural resources cannot be monetized in BCA.****[107]*

Our quantitative results concerning benefit-cost analysis are mixed. Overall, approved Tribal projects record higher median benefit-cost ratios and median net benefits (n=84) than approved non-Tribal projects (n=12,089), as seen in Table 8. They record a much lower mean benefit-cost ratio—possibly due to an error in the data—but higher mean net benefits.

Table 8: Benefit-Cost Ratio and Net Benefits for approved Non-Tribal and Tribal projects

	Benefit-Cost Ratio (Median)	Benefit-Cost Ratio (Mean)	Net Benefits (Median)	Net Benefits (Mean)
Non-Tribal	1.82	418.18	$917,141	$2,400,000
Tribal	2.52	5.19	$1,065,978	$5,018,179

Note. Table represents the authors' analysis of OpenFEMA grant data.

Further, successful Tribal projects are rare—a potential indicator that benefit-cost analysis and other procedural requirements are preventing Tribal applications from succeeding or deterring Tribes from applying in the first instance. As seen in Table 9, the OpenFEMA database records more than 32,000 hazard mitigation assistance grants across seven grant programs over the past

[107] FEMA. (2020). *Summary of Stakeholder Feedback, Building Resilient Infrastructure and Communities (BRIC):* p. 42. Retrieved April 22, 2023, from https://www.fema.gov/sites/default/files/2020-06/fema_bric-summary-of-stakeholder-feedback-report.pdf.

three decades. Of those for which pertinent data are available, 25,024 were awarded to non-Tribal applicants and only 371 were awarded to Tribal applicants.

424 grants benefited Tribal sub-applicants, 362 of which were among the grants awarded to Tribal applicants. In other words, Tribal sub-applicants are rarely able to benefit from grant applications filed by high-capacity non-Tribal applicants (e.g. states)—instead, they often rely on applications filed by other, larger Tribes. This is a significant finding: both FEMA and other commenters have highlighted the strategy of seeking funding as a sub-applicant under a state as a way for lower-capacity Tribes to access funding. While these data suggest that Tribes are aware of the option to apply as a sub-applicant, they also suggest that partnering with a state has not been a successful strategy for most. It is difficult to say why this is the case, but there are several possibilities that deserve further exploration. Applying as a sub-applicant requires both good timing, since the sub-applicant must adhere to the applicant's schedule or be accommodated by the applicant, and a good alignment between the two, since the sub-applicant's proposal must generally be consonant with the overarching goals of the application and incorporated into the larger proposal. For whatever reason, these conditions do not seem to be common in practical application, suggesting that further changes are needed before state-Tribal partnership is a realistic option for most Tribes.

Table 9: Number of Awarded Tribal Applicants and Sub-applicants

Total Grants	Tribal Applicants	Tribal Sub-applicants	Tribal Sub-applicants (Non-Tribal Applicant)
32,324	371	424	11

Note. Table represents the authors' analysis of OpenFEMA grant data.

There is also substantial variation in apparent utility between the individual grant programs. Four of the seven grant programs in the database—Flood Mitigation Assistance, Legislative Pre-disaster Mitigation, Repetitive Flood Claims, and Severe Repetitive Loss—are effectively inaccessible to Tribal applicants and sub-applicants, with just five awards to Tribal beneficiaries across these programs out of 2,078 awards total. Of the remaining programs, Tribal applicants appear to be most successful applying for BRIC: 64 of 420 BRIC grants, or approximately 15

percent, are to Tribal applicants. By contrast, 0.4 percent of grants under the Hazard Mitigation Grant Program and 6.4 percent under the Pre-disaster Mitigation Program went to Tribes. Overall, less than 1.5 percent of the grants in FEMA's database benefited Tribal applicants (n=25,395).

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Planning and Implementing Projects is Costly to Tribes

One of our interviewees gave a stark assessment of the grant application process: "It is difficult to apply for any type of disaster funding." The grant application process is long, technically demanding, and as a result, costly. It requires staff with knowledge of application procedures, including benefit-cost analysis and similar technically oriented prerequisites, as well as demonstrating the capacity to complete the project if approved. Staffing is a significant barrier to Tribes whose employees are already overworked:

> There are these opportunities, but how to make it accessible to people who are already wearing ten thousand different hats, and managing all that can be quite burdensome.

Perhaps the costliest phase of the process begins if the application is approved. FEMA typically covers 75% of the cost of a funded project (as seen in Table 10); the applicant must make up the difference. FEMA will cover 90% of the project cost if the applicant is an "economically disadvantaged rural community," i.e. population of no more than 3,000 and average per capita income no higher than 80 percent of the national figure.[108] Qualifying for this additional funding can be difficult. As one Tribe explained, "We are made up of three communities that each are small and there is over 100 miles between them. But the Tribe itself is over 3,000 people" and therefore does not qualify.[109]

The OpenFEMA data suggest that while some Tribes have benefited from additional funding as economically disadvantaged communities, this is far from universal. Of the 371 Tribal grant recipients listed in the dataset, 186—approximately half—received funding at 90% of project cost. The remainder either did not apply for funding as economically disadvantaged communities or did not qualify.

Table 10: Cost-Share for Tribal and Non-Tribal Grant Recipients

	Number	Cost Share (Mean)	Cost Share (Median)
Non-Tribal Recipient and No Tribal Subrecipients	24,961	77.02%	75.00%
Non-Tribal Recipient and Tribal Subrecipient(s)	62	74.24%	75.00%
Tribal Recipient and No Tribal Subrecipients	9	72.92%	75.00%
Tribal Recipient and Tribal Subrecipient(s)	362	82.30%	75.00%

Note. Table represents the authors' analysis of OpenFEMA grant data.

[108] FEMA. (n.d.). FEMA POLICY FP-104-008-05: p. 4. Retrieved April 22, 2023, from https://www.fema.gov/sites/default/files/documents/fema_bric-policy-fp-008-05_program_policy.pdf.

[109] FEMA, Summary of Stakeholder Feedback, Building Resilient Infrastructure and Communities (BRIC), p. 42.

As mentioned during our interviews, even with this assistance, funding can be a barrier:

> When there is reduction in the amount of match funds for different grants you know, if it goes down say, to 10% for example, that is still completely untenable you know, for most groups to reach. If you need 10 million dollars that is still a million dollars.

Interestingly, FEMA is more generous toward applicants in so-called "insular areas," including American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. For hazard mitigation assistance projects in these locations, FEMA waives the applicant cost share if the total project award is less than $200,000.[110] If the award exceeds $200,000, FEMA may still waive the applicant cost share in its discretion.

Grant Programs Focus Primarily on Infrastructure Development and Rapid-Onset Disasters

As outlined above, successful Tribal grants have higher benefit-cost ratios and generate more net benefits than successful non-Tribal grants. Despite this, the median Tribal grant value is just $80,343.57 (n=371) compared to a median non-Tribal value of $134,401.50 (n=24,690), while the mean Tribal grant value is $201,032.30 compared to a non-Tribal mean of $1.01 million. Since we lack a means to control for population, this disparity may exist at least in part because of a population size disparity between Tribal and non-Tribal communities. However, this disparity may also exist because of other systematic differences between Tribal and non-Tribal communities.

[110] FEMA, Hazard Mitigation Assistance Guidance, p. 27.

For example, FEMA's valuation methods for benefit-cost analysis focus largely on property values, the built environment, and harm to the persons and productivity of individuals. Because Tribal lands tend to be more rural in character, with lower population density and less development, these lands are awarded lower values in the BCA process.

Another reason Tribal projects may be undervalued is that these projects often involve improvements to the natural environment rather than the built environment. Undeveloped land is unquestionably less valuable to FEMA than developed land. For example, avoided damage to forested land is an ecosystem benefit worth $554 per acre, per year. At that rate, a project would need to prevent the destruction of 1,960 acres of forest for one year to reach the median net benefits generated by Tribal projects funded by FEMA. Further, ecosystem benefits can only be included in the benefit-cost ratio in the first instance if the ratio exclusive of them exceeds 0.75. This limits the extent to which a project can focus on nature-based solutions.

Interview participants noted FEMA's emphasis on Rapid-Onset disasters as well. Yet Indigenous communities' exposure to slow-onset disasters makes them more vulnerable to the effects of rapid-onset disasters. One participant noted:

> "One issue is that there [are] so many layers of disasters and cascading effects as to what actually counts in terms of especially some of those slow-onset aspects, not always the more sudden focused hazard events, that often act together. . . . I have a lot of concern . . . especially in the context of multiple disasters, and things like flood map changes."

The Tribe-specific Solution Scorecard (Figure 11) shows that Tribe-specific solutions are infrequently described in the FEMA documents we reviewed, and most explicitly described in documents specifically directed toward a Tribal audience. The Tribe-specific scorecard shows two scores: the first score is the proportion of documents that mention Tribe-specific solutions—9/47, rounded to 1 star out of 5—and the second score reflects our assessment of the extent to which those 9 documents reflected the acceptability of Tribe-specific solutions quantitatively (prevalence of discussion) and qualitatively (quality of discussion).

Figure 11: Tribe-specific Solution Scorecard

Coding concept: *Tribe-specific Solutions*

Concept mentioned (9/47 documents) 

Acceptability of concept (5/9 documents) 

Strategic documents

(Tribe-specific solutions are not described in Strategic documents)

Tribe-specific documents

Tribal Mitigation Review Plan, p3:

"This is the tribe's plan. Plan reviews will recognize the efforts, interests, and cultural beliefs of each tribal government that develops a mitigation plan."

Tribal Mitigation Planning Handbook (2019), p1:

"The regulations describe what should be done, not how the plan should be written, so Tribes should feel free to develop and organize the plan in a way that works within their governance and tradition"

Fiscal and procedural documents

BRIC Summary of Stakeholder Feedback, p28:

"Stakeholder recommendations for supporting nature-based infrastructure projects include: Provide funding for nature-based infrastructure projects; Encourage nature-based infrastructure by providing pre-calculated benefits for those projects; Incentivize nature-based infrastructure by giving those projects a higher ranking in the evaluation process or prioritizing them in funding decisions"

Bric Grant Alt Cost-Effectiveness Methodology Memorandum, p2-3:

"Under the alternative methodology, FEMA will consider the project cost effective if…The mitigation activity primarily benefits a geographical area within a tribal jurisdiction …[or] The project provides significant benefits that are difficult to quantify or cannot be monetized and are not captured in FEMA's BCA toolkit. The subapplication should provide a narrative description of the benefits."

Note: This figure presents representative excerpts pertaining to Tribe-specific solutions from the authors' document analysis.

Our document analysis confirms FEMA's focus on infrastructure and the built environment over nature-based solutions. None of the strategic documents describe Tribe-specific solutions to support the National Preparedness Goal or in support of any of the National Frameworks. Instead, these documents refer to goals such as mitigating "adverse effects from climate change on the built environment, structures and infrastructure."[111] Similarly, the Federally-Recognized Tribes and Hazard Mitigation Grant Program Job Aid we reviewed addresses the importance of adherence to "accepted engineering practices, established building and design codes and standards, modeling techniques, and/or best practices,"[112] which could be interpreted as exclusionary of techniques such as nature-based solutions that FEMA considers not to be conventional, and another document "encourage[es] the use of building codes and standards wherever possible."[113]

However, some guidance regarding nature-based solutions does exist. For example, FEMA has published guidance on building community resilience with nature-based solutions which fall into three categories: watershed or landscape scale, neighborhood or site scale, and coastal areas.[114] When describing coastal area nature-based solutions, the document describes practices such as oyster reefs that have been used by Tribes to address sea level rise. Within the Tribe-specific documents that we analyzed, two documents reference "community-based approaches" which could be interpreted to include Tribe-specific solutions.[115]

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[111] Ibid.

[112] FEMA. (n.d.). Tribal Mitigation Planning and HMA grant application development. Hazard Mitigation Assistance. Retrieved April 2, 2023, from https://www.fema.gov/sites/default/files/documents/fema_hma-tribal-job-aid.pdf.

[113] FEMA, Hazard Mitigation Assistance Guidance, p. 3.

[114] FEMA, Building Community Resilience with Nature-Based Solutions.

[115] Similarly, none of the documents explicitly acknowledged or accepted Indigenous knowledges, though two strategic documents and three Tribe-specific documents address culturally appropriate practices rooted in historical understanding and vaguely describe the need to learn from and accept the expertise of Tribes.

Institutional Support, Regional Partnerships, and Federal Relationships

In a letter prefacing the 2022-2026 FEMA Strategic Plan, FEMA Administrator Deanne Criswell outlines three key goals for her agency:

01 To “instill equity as a foundation of emergency management”

02 To “lead the whole of community in climate resilience”

03 To “promote and sustain a ready FEMA and prepared nation”

Each of these goals acknowledges in some way the importance of intergovernmental partnership in emergency management. The first goal—to instill equity as a foundation of emergency management—is especially relevant to partnering with Tribal emergency managers, as FEMA acknowledges that “structural inequities in our society compound the impacts of disasters for historically underserved communities.”[116]

The 2022-2026 FEMA National Tribal Strategy,[117] which is the first document of its kind, parallels the goals of the FEMA Strategic Plan "to address its responsibilities to federally recognized Tribal Nations.” While this type of language from FEMA is well intentioned in building and maintaining an effective partnership with Tribal governments, many of our findings suggest that this commitment may be only superficial. This section documents those findings in further detail.

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[116] FEMA. (2023, April 22). 2022-2026 FEMA Strategic Plan: Building the FEMA our Nation Needs and Deserves: p. 3. https://www.fema.gov/sites/default/files/documents/fema_2022-2026-strategic-plan.pdf.

[117] FEMA. (2023, April 22). 2022-2026 FEMA National Tribal Strategy.

Contextual Barriers to Access

All of the strategic and Tribal specific documents that we analyzed (other than the 2016 National Mitigation Framework) describe an approach to ensure federally recognized Tribes have access to FEMA programs. This is in line with Tribal Climate Change Principal 5:

> *Tribes must have fair and equitable access to federal climate change programs.[118]*

In practice, requirements to gain access to these programs and poor communication from FEMA may result in inequitable access.

Our interviews highlighted the structure of applications to FEMA grant programs as a barrier and raised concerns that FEMA may not be responsive to Tribal needs. As a result, FEMA may struggle to learn how to connect with Tribal emergency managers and change applications to be more effective and accessible. All interviewees expressed concern that various cultural values, such as sacred sites that are outside of Tribal jurisdiction and the prevalence of multi-generational homes, are not adequately accounted for in the current application system.

Unreliable access to high-speed internet, low numbers of available personnel such as grant writers and dedicated emergency response and management staff, and even limited English ability in some parts of Alaska may impede Tribes that are forced to apply for FEMA funding online through a complicated web portal:

[118] Tribal Climate Change Principles: Responding to Federal Policies and Actions to Address Climate Change, p. 4.

> "[T]hat's a really important point about access to broadband. And reliable, steady broadband. We definitely hear about Tribes, they may fill out an application and then the broadband goes out, and they have to start all over from the beginning because of the way the portals work."

In this way, both access to broadband and the complicated FEMA web portal itself is making access to FEMA programs more difficult.

The access scorecard (Figure 12) demonstrates that Tribes are frequently mentioned as having access to FEMA programs throughout the documents. Tribal access appears mostly as statements that federally recognized Tribes are eligible for a program if they can meet the same requirements that states must meet.

However, Tribal eligibility does not equate to equitable Tribal outcomes. The access scorecard also rates the equity of access based on descriptions of the process to gain access to a program. This distinguishes between formalistic, statutorily defined access to the program and practical, useful access to a program. The Tribal Access scorecard shows two scores: the first score is the proportion of documents that mention access to a program or process—40/47, rounded to 4 stars out of 5—and the second score reflects our assessment of the equity of access in those 40 documents. Documents that described inequitable access received a score of 0, documents that described access but for which equity could not be established received a 0.5 score, and documents that explicitly described equitable access received a score of 1. The documents were then given a total weighted score that reflects the overall quality and quantity of the concept for the documents assessed.

Figure 12: Tribal Access Scorecard

Coding concept: *Access for Tribes to FEMA programs and processes*

Concept mentioned (40/47 documents) 

Equity of concept (34/40 Undetermined equity of access) 

Strategic documents

2022-2026 Strategic Plan, p. 9:

"The importance of equity in emergency management is not a new concept. The Stafford Act requires FEMA assistance be delivered in an equitable manner without discrimination on the grounds of race, color, religion, nationality, sex, age, disability, language accessibility, or economic status. However, this cannot be done through a one-size-fits-all approach. Instead, FEMA must be aware of, and responsive to, the needs of different individuals and communities to ensure that the benefits of FEMA programs are available."

National Disaster Recovery Framework, p. 4:

"Engaging the whole community is critical to success, and individual and community preparedness is a key component. By providing equal access to acquire and use the necessary knowledge and skills, this Framework seeks to enable the whole community to contribute to and benefit from national preparedness."

Building Community Resilience with Nature-Based Solutions, p. 26:

"States, territories, tribes, and local communities may apply for HMA funding if they meet all eligibility criteria for each program, including having a FEMA-approved hazard mitigation plan."

Tribe-specific documents

2022-2026 FEMA National Tribal Strategy, p. 8:

"Support Equitable Opportunities for Tribes to Access FEMA Programs and Resources: Include Tribal Nations in national and regional external meetings and briefings, as well as standing meetings with emergency management associations, and webinars on new or modified programs. Outcome: Tribal Nations know FEMA programs and can more easily access FEMA resources for disaster readiness, hazard mitigation, response, and recovery."

Federally-Recognized Tribes and Hazard Mitigation Grant Program Job Aid, p. 1:

"The SRIA amendments allow federally-recognized tribes to directly request disaster declarations from the Federal government. This change provides federally-recognized tribes with the option of applying for FEMA Hazard Mitigation Grant Program (HMGP) funds as either an Applicant or a subapplicant."

Fiscal and procedural documents

Public Assistance Program and Policy Guide, p. 42:

"Applicant eligibility…Tribal Governments: Federally recognized Tribal governments including Alaska Native villages and organizations, are eligible Applicants. Alaska Native Corporations are ineligible as they are privately owned. … Local Governments: The following types of local governments are eligible Applicants: … State recognized Tribes."

Building Resilient Infrastructure and Communities (BRIC) Policy, p. 3:

"Available Funding Allocations….Tribal Set-Aside -Set-aside for an allocation to eligible Indian tribal government applicants for mitigation capability-and capacity-building activities and mitigation projects."

Technical Assistance Program Fact Sheet, p. 1:

"FEMA's National Preparedness Directorate (NPD) and Grant Programs Directorate (GPD) Technical Assistance (TA) program assists states, tribes and local jurisdictions to build and sustain specific emergency management program capabilities by providing services and analytical capacities…"

Note: This figure presents representative excerpts pertaining to Tribal access to FEMA programs and processes from the authors' document analysis.

Incompatible Modes of Communication

We also see that online application and communication may not meet the needs of Tribal administrators. As mentioned by an interview participant:

> With Tribes, many times it's more effective to actually have a phone call… Email's very Western. Picking up the phone and actually talking to someone is huge. People often think they've done due diligence if they've sent an email, but… talking to people is really, really important. And responding.

It may also be difficult for Tribal emergency managers seeking technical assistance and application help to know who to contact. In 12 of the 47 documents we reviewed, there were incorrect links or inaccurate points of contact linked to obtaining information or accessing resources. This is an added administrative burden for already short-staffed Tribal emergency managers. Staffing shortages may be an issue for FEMA Regional Tribal Liaisons, as well. This point was emphasized by interview participants, saying:

> Often, those Tribal liaisons… sometimes I feel it is just a pretty word, a pretty title… they are kind of stretched thin, as well, these Tribal Liaisons that can offer that technical assistance. Or, that they're non-Indigenous, which sometimes is a barrier if you got someone who is so new and doesn't know or have that adequate background to go and work with an Indigenous community.

While the requirements to access funding and assistance are theoretically the same for state and Tribal governments, Tribes often have fewer staff and resources, less access to broadband internet, and don't share the Western/colonial assumptions on which FEMA's systems are based. The DHS National Disaster Recovery Framework recognizes this fact:

> *While resources from other communities and governments may be available and easily accessible for most local and state governments, this is not the case in many tribal government communities. [119]*

The federal documents we analyzed describe explicit access to resources, but fail to consider implicit barriers that need to be addressed.

As one interviewee phrased it, "all agencies need to be asking, how can they be improving their processes... to better serve Indigenous communities... I don't know if they always do that."

Lack of Specificity Regarding Institutional Partnerships

Seven of the nine strategic documents describe an approach that includes partnerships between Tribes and the federal government, as seen in **Appendix G**. However the documents are not specific enough to determine whether these are equitable partnerships. In the 2022-2026 FEMA National Tribal Strategy, a stated aim is "to address its responsibilities to federally recognized Tribal Nations and to identify unified agency actions to build, enhance, and sustain its relationships with Tribes."[120] The National Tribal Strategy goes on to address recent efforts to improve partnerships and relationships with Tribal nations:

[119] DHS. (2023, April 23). National Disaster Recovery Framework.

[120] FEMA, 2022-2026 FEMA National Tribal Strategy, p. 3.

> *In December 2020, FEMA updated its "FEMA Tribal Policy (Rev.2)" (FEMA Policy #305-111-1), reaffirming its commitment to enhance its nation-to-nation relationships with Tribal Nations, and in full recognition of tribal sovereignty, self-governance, and its trust responsibility. This specific tribal policy ensures FEMA works with Tribal Nations to build, sustain, and improve capacity to prevent, protect against, mitigate, respond to, and recover from all hazards. [121]*

The National Tribal Strategy does outline some methods for achieving the main three FEMA goals from the Strategic Plan. In support of the first goal to "instill equity as a foundation of emergency management," the document describes an intent to "develop Tribal-specific technical assistance resources," to organize a "routine meeting of Regional Tribal Liaisons," and to "connect Tribal and FEMA leaderships."[122] However, no timelines to implement these strategies, or measures of success, are described.

Our interviews highlighted the importance of establishing these relationships between the federal government and Tribes prior to the impacts of natural hazards, and also their importance to the longevity of those partnerships.

> I think especially for smaller groups, some of those trusted partnerships are really critical... A lot of this is what is put in place before the disaster occurs... because you can't start after it's upon you. It's not the moment to start talking.

[121] Ibid.

[122] Ibid., p. 6-7.

Four of these documents refer to partnerships including states, Tribes, territories, and insular areas all participating to support the whole-of-community approach in line with the FEMA Strategic Plan. The National Disaster Recovery Framework includes "Engaged Partnerships and Inclusiveness" as one of the eight guiding principles[123] for disaster recovery and building community resilience. The framework goes on to state:

> *Effective partnerships rely on an inclusive recovery management and coordination process that engages all elements of the whole community…Engaged partnership and coalition building includes ongoing clear, consistent, effective, accessible, and culturally appropriate communication and information sharing throughout recovery.[124]*

Finally, four of the strategic documents include the phrases "collaboration," "coordination," and "consultation with Tribes" to describe partnerships between governments. For example, the 2022-2026 FEMA Strategic Plan[125] describes partnering to reverse historic inequity but does not describe the means to do so or set forth any measurable outcomes by which to judge success. It is the only document we analyzed that specifically described that FEMA processes have resulted in a lack of equitable partnership and participation, running counter to TCC Principle 1: "Federally-recognized Tribes and other Indigenous Peoples and Indigenous communities must be partners with full and effective participation in assessing and addressing the problems of climate change at the local, regional, national, and international levels".[126]

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[123] DHS, National Disaster Recovery Framework, p. 5.

[124] Ibid., p. 7.

[125] FEMA, 2022-2026 FEMA Strategic Plan, p. 9.

[126] Tribal Climate Change Principles: Responding to Federal Policies and Actions to Address Climate Change, p. 3.

The partnership scorecard (Figure 13) demonstrates that partnership is mentioned infrequently in FEMA documents, and when it is mentioned, the discussion is not detailed enough to confirm equitable Tribal partnership. The partnership scorecard shows two scores: the first score is the proportion of documents that mention access to a program or process—21/47, rounded to 2 stars out of 5—and the second score reflects our assessment of the equity of partnerships in those 21 documents. To determine the star rating for the equity of the coding concept, documents that described inequitable partnership received a score of 0, documents that described partnership, but equity couldn't be determined received a .5 score, and documents that explicitly described equitable partnership received a score of 1. The documents are then given a total weighted score that reflects the overall quality and quantity of the concept for the documents assessed.

Figure 13: Partnership with Tribes Scorecard

Coding concept: *Partnership for Tribes in the program/process*

Concept mentioned (21/47 documents) 

Equity of concept (20/21 Undetermined equity of access) 

Strategic documents

2022-2026 Strategic Plan, p. 11:

"...working directly and consistently with underserved communities to learn about their priorities, needs, and barriers. FEMA must proactively and continuously engage state, local, tribal, and territorial partners, local community leaders, and other community representatives to gain insight into how FEMA programs can better serve them."

National Disaster Recovery Framework, p. 6:

"Engaged partnership and coalition building includes ongoing clear, consistent, effective, accessible, and culturally appropriate communication and information sharing throughout recovery."

National Preparedness Goal, p. 11:

"Develop approved hazard mitigation plans that address relevant threats/hazards in accordance with the results of their risk assessment within all local, state, tribal, territorial, and Federal partners."

Tribe-specific documents

FEMA National Tribal Strategy, p. 11:

"Collaborate with Tribal nations before, during, and after disasters to provide financial assistance based on 1) their identified needs and 2) in accordance with laws and regulations governing FEMA mitigation, response, and recovery programs to improve disaster preparedness including coordination with interagency partners where and when applicable."

Tribal Mitigation Planning Handbook, p. 3:

"Mitigation planning builds partnerships across the Tribal community, maximizing opportunities to share information and resources toward achieving disaster resilience goals."

FEMA Tribal Consultation Policy, p. 1:

"FEMA is committed to strengthening its nation-to-nation relationship and consultation efforts with tribal governments. FEMA tribal consultation is the process for communicating and collaborating with federally recognized Indian tribal governments and ANCs (hereinafter collectively referred to as "tribal governments") to exchange information, receive input, and consider their views on actions that have tribal implications.."

Fiscal and procedural documents

FEMA BRIC Policy, p.2:

"Support state and local governments, tribes, and territories through capability- and capacity-building to enable them. . . . Promote partnerships and enable high-impact investments to reduce risk."

BRIC Summary of Stakeholder Feedback, p. 2:

"Stakeholders appears to believe that most communities do not have the experience, capacity, or capability to effectively start, engage, or manage these partnerships and also that there are a variety of regulatory barriers to establishing effective partnerships in the context of a BRIC grant."

BRIC Summary of Stakeholder Feedback, p. 40:

"FEMA's National Preparedness Directorate (NPD) and Grant Programs Directorate (GPD) Technical Assistance (TA) program assists states, tribes and local jurisdictions to build and sustain specific emergency management program capabilities by providing services and analytical capacities..."

Note: This figure presents representative excerpts pertaining to Tribal representation in FEMA partnerships from the authors' document analysis.

Some Interest in, but Few Strategies for, Improving Committee/Workgroup Participation

Four of nine strategic documents describe Tribal participation on committees or workgroups. For example, the National Mitigation Framework describes the inclusion of representatives from "local, state, tribal, and Federal government" in the Mitigation Framework Leadership Group which informs the integration of mitigation activities across federal agencies, but it does not describe the composition of the group.[127]

Only two of eight Tribe-specific documents describe equitable participation on committees or workgroups, and two of the 30 documents regarding program resources describe Tribal participation on committees or workgroups. The Preparedness Grants Manual[128] and Public Assistance Program guide[129] both describe committee or workgroup participation by way of inclusion of at least one representative from relevant stakeholders including Tribal and government officials on the senior advisory committee.

In these examples, since the document does not specify the number of participants on the council, equitable representation cannot be determined. The document describes a lengthy list of 37 types of relevant stakeholders, which includes 28 types of state representatives, seven types of representatives from specific career fields, representatives from non-profit and faith-based organizations, and "local or tribal government officials"; thus, we infer that there is not equitable representation for Tribes on the council.

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[127] FEMA. (June 2016). National Mitigation Framework.

[128] FEMA. (n.d.). Preparedness Grants Manual. Preparedness Grant. Retrieved March 22, 2023, from https://www.fema.gov/sites/default/files/documents/FEMA_2021-Preparedness-Grants-Manual_02-19-2021.pdf.

[129] FEMA. (n.d.). Public Assistance Program Guide. Public Assistance Grants. Retrieved March 12, 2023, from https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf.

Figure 14: Committee/Workgroup Scorecard

Coding concept: *Equitable committee, workgroup, or public participation*

Concept mentioned (9/47 documents) 

Equity of concept (7/9 Undetermined equity of access) 

Strategic documents

2022-2026 Strategic Plan, p. 6:

"Through a series of conversations and workshops, FEMA connected with over 1,000 members of the agency's workforce and senior leadership, and more than 400 external partners spanning all sectors, levels of government, and a wide range of disciplines--including federal and territorial partners, state and local governments, over 50 tribal nations, private and nonprofit partners, and the academic community."

National Disaster Recovery Framework, p. 34:

"A Mitigation Framework Leadership Group (MitFLG) coordinates mitigation efforts across the Federal Government and assesses the effectiveness of mitigation capabilities as they are developed and deployed across the Nation. The MitFLG includes representatives from local, state, tribal, and Federal Government."

Tribal Relations Support Annex, p. 2:

"A Tribal Relations Element is established in the Joint Field Office (JFO) to provide the operational capability for collecting and sharing relevant incident information, alerting and deploying required tribal relations staff to or near the affected area, and ensuring compliance with Federal laws relating to tribal relations. For incidents that directly impact tribal jurisdictions, a tribal representative shall be included in the Unified Coordination Group, as required."

Tribe-specific documents

2022-2026 FEMA National Tribal Strategy, p. 12:

"Seek Agency-wide Input on Working with Tribal Nations: Create and convene a Tribal Affiars Work Group, within FEMA, composed of a cross-section of representatives from FEMA programs at the headquarters and regional levels. The Work Group will meet and discuss recommendations on how FEMA could better serve Tribal Nations and leverage tribal feedback to ensure equitable outcomes."

2022-2026 FEMA National Tribal Strategy, p. 10:

"FEMA will . . .[p]articipate in regular meetings and conferences coordinated by the White House Council on Native American Affairs (WHCNAA) and serve on at least one working committee, with priority on the WHCNAA committee, 'Climate Change, Tribal Homelands, Treaties.'"

Fiscal and procedural documents

FY23 Preparedness Grants Manual, p. A-28:

"Senior Advisory Committee (SAC): The SAC builds upon previously established advisory bodies . . . SAC membership shall include at least one representative from relevant stakeholders including: Individuals from the counties, cities, towns, and Indian tribes within the state or high-risk urban area, including, as appropriate, representatives of rural, high-population, and high-threat jurisdictions of UASI-funded high-risk urban areas; . . . Local or tribal government officials; Tribal organizations . . . ."

Note: This figure presents representative excerpts pertaining to equitable Tribal representation in committee, workgroup, or public participation from the authors' document analysis.

The Tribal government task force scorecard (Figure 15) shows that there was no mention of TCC Principle 3: "The federal government should establish a high-level interagency Tribal government task force to examine and propose solutions to close gaps across the federal agencies' relationships and programs with Tribes..."[130] and the only description of an interagency Tribal group was the Tribal Assistance Coordination Group described in the National Response Framework.[131]

Figure 15: Federal Tribal Government Task Force Scorecard

Coding concept: *Federal Tribal Government Task Force*

Concept mentioned (0/47 documents) ★★★★★

Strategic documents

*There is no mention of a Federal Tribal Government Task Force as described in the Tribal Climate Change Principles

National Response Framework, p. 19:

"The Tribal Assistance Coordination Group (TAC-G) is a MAC Group that assists federally recognized tribes during emergencies and disasters and provides information and technical assistance for tribal emergency management programs in coordination with federal partners. The TAC-G is led and managed by the Bureau of Indian Affairs Emergency Management Program. The TAC-G consists of partners from all levels of government (local, state, tribal, territorial, insular, or federal), as well as nonprofit aid organizations and the private sector."

Tribe-specific documents

*There is no mention of a Federal Tribal Government Task Force as described in the Tribal Climate Change Principles

Fiscal and procedural documents

*There is no mention of a Federal Tribal Government Task Force as described in the Tribal Climate Change Principles

Note: This figure presents representative excerpts pertaining to a federal Tribal Government Task Force from the authors' document analysis.

Three of nine strategic documents describe the importance of improving relations with all governments, and the 2022-2026 FEMA National Tribal Strategy and FEMA Tribal Policy explicitly describe the need to improve relationships with Tribes. However, none of the documents describe a strategy to do so or a way to

[130] Tribal Climate Change Principles: Responding to Federal Policies and Actions to Address Climate Change, p. 4.

[131] FEMA, National Response Framework, p. 19.

measure improvement. The BRIC Grant Stakeholder feedback also explicitly describes the need to improve relations with tribes:

> *Effective partnerships rely on an inclusive recovery management and coordination process that engages all elements of the whole community…Engaged partnership and coalition building includes ongoing clear, consistent, effective, accessible, and culturally appropriate communication and information sharing throughout recovery.[123]*

The relationships with Tribes scorecard (Figure 16) shows that improving government-to-government relationships with Tribes is only mentioned in seven of the 47 documents we analyzed. For the most part when improving relationships was described, it was in regard to the "whole community." Improving relationships specifically with Tribes was almost exclusively mentioned only in the Tribe-specific documents.

Figure 16: Improving Relationships with Tribes Scorecard

Coding concept: *Improving Relationships with Tribes*

Concept mentioned (7/47 documents) 

Strategic documents

National Mitigation Framework, pp. 1, 5:

"Establishing trusted relationships among leaders and communities prior to a disaster is essential to preparedness, community resilience, and sustainability. . . . The whole community includes individuals and communities, the private and nonprofit sectors, faith-based organizations, and all levels of government (local, regional/metropolitan, state, tribal, territorial, insular area, and Federal)."

2022-2026 FEMA Strategic Plan, p. 11:

"Deliberately shaping FEMA's work to meet the needs of those individuals and communities must be a top priority."

Tribe-specific documents

FEMA Tribal Policy (Rev. 2), p. 1:

"The FEMA Tribal Policy outlines a commitment by the Agency to enhance its nation-to-nation relationship with federally recognized Indian tribal governments."

Tribal Mitigation Review Guide, p. 2:

"FEMA commits itself to building a stronger and lasting partnership with tribal governments."

Fiscal and procedural documents

BRIC Grant Summary of Stakeholder Feedback, p. 38:

"Common Issues Expressed during Tribal Engagement: Nature of working relationships with state/county varies among tribes; can have implications for HMPs/planning, application reviews, eligibility, etc."

Note: This figure presents representative excerpts pertaining to improving relationships with Tribes from the authors' document analysis.

Finally, many FEMA documents reference assistance and support from other federal agencies. These agencies each provide niche technical assistance, capacity-building, or resource and funding opportunities. Agencies referenced throughout FEMA documents include, but are not limited to: Bureau of Indian Affairs (BIA), Indian Health Service (IHS), United States Army Corps of Engineers (UASCE),the Administration for Children and Families (ACF), National Oceanic and Atmospheric Association (NOAA), National Fish and Wildlife Foundation (NFWF), Department of Housing and Urban Development (HUD), Environmental Protection Agency (EPA), United States Department of Agriculture (USDA), US Forest Service (USFS), Natural Resources Conservation Service (NRCS), National Park Service (NPS), and the Bureau of Land Management (BLM).

When these agencies are referenced in FEMA documents, they are referenced generally and without describing a pathway to receive services; it is simply noted that they exist. For example, the Tribal Support annex states that the Department of Agriculture "provides technical assistance and subject-matter expertise for pet evacuation and sheltering activities".[132] Our research suggests that many Tribes lack the technical and administrative capacity to effectively navigate FEMA's complex rules and regulations, let alone those of multiple additional agencies. The complexity of this support system also emerged in our interviews:

> There are other federal entities, right? So it's not necessarily that FEMA is the only game in town. That can also, of course, then further add administrative burden when you are now trying to piecemeal all of these aspects together.

[132] FEMA. (n.d.). Tribal Relations Support Annex. Retrieved January 15, 2023, from https://www.fema.gov/sites/default/files/2020-07/fema_nrf_support-annex_tribal-relations.pdf.

05. RECOMMENDATIONS

Recommended Changes to Federal Policy

01 Establish interagency Tribal government task force

02 Establish working group to Review DHS Lexicon[133]

03 Reorganize regional Tribal Liaison Offices to better support Tribal nations

04 Change or eliminate the benefit-cost analysis requirement for Tribal grant applications

05 Include Tribes in all mitigation and preparedness grant programs

Suggested Strategies for Tribal Applicants

01 Prioritize grant applications through the BRIC program

02 Seek funding through federal agencies other than FEMA

03 Considerations for non-federally recognized groups

[133] The DHS Lexicon is a controlled vocabulary that DHS and FEMA use to standardize terminology when communicating/sharing information.

Our findings suggest a variety of systematic complexities, inefficiencies, and inequities in FEMA's support of Tribal disaster management in the United States.

Our content analysis of the FEMA strategic doctrine describes a system that often neglects the diverse needs, capabilities, and structures of Tribal governments. Similarly, our analysis of FEMA grant data suggests wide disparities in both access to financial grants and the overall dollar amount of grants awarded to Tribal applicants when compared to non-Tribal applicants.

These findings point to a variety of recommendations to both improve FEMA's partnership with Tribal governments and help Tribal emergency managers take advantage of a less-than-perfect federal emergency management system. Our recommendations are grouped into two categories that support Tribal nations' access to federal resources: changes to federal policy and strategies for Tribal applicants.

Recommended Changes to Federal Policy

Change is required at FEMA and other relevant agencies to reduce barriers to Tribal emergency management in the United States. Addressing the barriers identified in our findings and analysis in Chapter 4 would likely make emergency management stronger and more effective for many Tribal nations, thereby making comprehensive emergency management across the nation stronger and more effective as well.

We recommend that Tribal governments and other interested parties advocate at the federal level for the actions we lay out in this section. Ultimately, we believe implementing these changes to FEMA policy would serve to better protect and benefit both Tribal communities and low-capacity communities that may be underserved by FEMA.

Establish an Interagency Tribal Government Task Force to Implement TCC Principles

While the most recent FEMA Tribal Strategy shows that the federal government is beginning to recognize the disproportionate effects of natural hazards on Indigenous peoples and Tribal governments, more action must be taken to ensure effective implementation of federal disaster policy for Tribes in the United States. Forming an ongoing task force to address these issues would be a necessary step forward.

The Tribal Climate Project—a collaborative effort supported by the University of Oregon, the USDA Forest Service Pacific Northwest Research Station, the Affiliated Tribes of Northwest Indians, the Bureau of Indian Affairs, and the North Pacific Landscape Conservation Cooperative, and others—has recommended just such an action to respond to the threat of climate change. The Tribal Climate Change Principles (TCCP), published in 2015 and presented in full in **Appendix B**, build upon many of the recommendations from the 2014 President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience.

The principles and recommendations therein form the basis to establish a regularly occurring interagency task force dedicated to implementing and enforcing the TCCP in support of an effective Tribal and federal response to climate change. Principle three specifically states that:

> *The federal government should establish a high-level interagency Tribal government task force to examine and propose solutions to close gaps across the federal agencies' relationships and programs with Tribes, and to develop, recommend, and implement Tribal-specific solutions that enable the agencies to support and foster Tribal climate-resilient planning and investment.[134]*

[134] Tribal Climate Change Principles: Responding To Federal Policies And Actions To Address Climate Change, p. 4.

This interagency Tribal government task force would be composed of Tribal representatives from each of the 12 Bureau of Indian Affairs (BIA) regional offices, as well as from other relevant federal agencies. The task force would be responsible for key tasks such as providing recommendations for improving communication with Tribes surrounding federal programs, assessing federal agencies' efforts to meet their trust responsibilities to Tribes, forming and implementing tailored Tribal-specific solutions, and crafting recommendations to maintain a funding stream adequate to build and sustain Tribal capacity.

While the TCCP recommendations were created to support Tribal climate related activities, we view these recommendations as a framework to be adapted for Tribal emergency management. Such a body should include representatives of all the many federal agencies responsible for emergency management and land management, including the Bureau of Land Management, the Department of Homeland Security and FEMA, and the US Department of Agriculture and US Forest Service. The task force should meet yearly and publish an assessment of its progress toward key goals, as well as recommended actions moving forward for each of the agencies involved. We recommend additionally including Tribal emergency managers as members of or advisors to the task force.

We believe the role of the task force in improving inter and intra-governmental communication surrounding Tribal emergency management is critical and would do much to build and sustain trust and relationships that would benefit all parties involved. While communication between federal agencies and Tribal governments has suffered due to changing Presidential administrations and political appointees, a regular forum of career professionals would provide stability and promote continuity of expertise as the demands of natural hazards continue to increase. Similarly, the task force would provide a way for federal agencies to adapt their professional culture to be more inclusive of Tribal ways of knowing and methods, such as nature-based solutions, and to adapt institutional processes such as grant applications to be more accepting of Tribal-specific approaches.

Establish a Working Group to Review the DHS Lexicon

Based on our analysis of FEMA documents and the processes FEMA describes to secure resources, we recommend that a working group be established to review, inform, and develop more inclusive language in the Department of Homeland Security (DHS) Lexicon.[135] The Lexicon is a controlled vocabulary that standardizes terminology and is used by the agencies within the Department of Homeland Security when communicating and sharing information. The purpose of this document is to reduce the possibility of misunderstanding and to help develop and manage shared knowledge and information.

Indigenous perspectives and Tribal-inclusive language are severely lacking in the Lexicon and therefore in policies and processes throughout FEMA, which may implicitly impact Tribes' eligibility for resources. Accessible and informed language is necessary to support the inclusion of Indigenous perspectives, insights, and knowledge at FEMA and other agencies. In the absence of language and terminology to describe Indigenous concerns and solutions about climate change and its impacts, these concerns are missing from the agency's policies, processes, and acceptable solutions.

For example, the word "nature" occurs 28 times in the definitions or extended definitions of the terms in the 746-page DHS Lexicon. The word occurs 25 times when defined as, "the basic or inherent feature of something"; it occurs twice when describing how nature has impacted something or someone (but never as the object impacted); and it occurs once when defining sustainability. This instance included the phrase, "humans and nature can exist in productive harmony."[136]

Absent the terminology and concepts needed to discuss Indigenous perspectives, it is likely that FEMA reverts to its normal and historically

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[135] DHS. (n.d.). DHS Lexicon Terms and Definitions. Retrieved February 23, 2023, from https://www.dhs.gov/sites/default/files/publications/18_0116_MGMT_DHS-Lexicon.pdf.

[136] Ibid, p. 638.

exclusionary approach. We also recommend including Indigenous concepts in the DHS Lexicon because doing so may begin to shift accepted practices and solutions and change the culture of the organization.

Reorganize of Regional Tribal Liaison Offices to Better Support Tribal Nations

FEMA Regional Tribal offices lack the capacity to support the volume of Tribal requests for technical assistance they receive. Tribal liaisons are unable to meet time constraints imposed by FEMA policy and support Tribal government processes. Limited FEMA capacity makes it difficult for Tribal liaisons to spend needed time improving Tribal relationships and understanding Tribal practices.

We recommend that FEMA pursue an "Indian Preference Policy" like that of the BIA to encourage Indigenous peoples to seek employment at FEMA Regional Tribal Offices. To ameliorate issues of capacity and trust, we recommend that FEMA also increase the number of staff in Regional Tribal offices, aligning with the goal to hire "more Tribal FEMA Integration Team staff to better support Tribal Nations."[137] This would have the impact of building and strengthening relationships with Indigenous communities, providing regional and national visibility for local Tribal issues, and supporting equitable access for Tribal nations to FEMA programs and resources.

Current staffing at Regional Tribal Liaison offices is insufficient to handle the complexities of building relationships with the 574 individual federally-recognized Tribes, as seen in Table 7. Tribal liaisons need to be well versed in how state policies in their region shape the requirements for groups hoping to apply as sub-applicants on a state's grant application. Liaisons should also understand the capacity of Tribal staff and Tribal decision-making processes in each Tribe.

[137] FEMA. (2023, February 17). 2022-2026 FEMA National Tribal Strategy: p. 8. Retrieved February 23, 2023, from https://www.fema.gov/sites/default/files/documents/fema_national-tribal-strategy_08182022.pdf.

Only by dedicating time to build partnerships with Tribes and states will Tribal liaisons be able to bridge capacity gaps and help Tribes access resources.

To meet these responsibilities, we recommend that FEMA invest in increasing staffing (i.e. dedicated full-time equivalents (FTE) across all regions to allow the capacity to develop relationships and build partnerships in this complex environment. Listed in Table 11 below, the recommended staffing levels for each region are based on the complexity of managing multiple government jurisdictions (states and Tribes) and consider the level of coordination that may be required to build partnerships between Tribes and states.

We considered several factors when arriving at these recommendations. The number of Tribes was a key consideration because all Tribes are unique, have varying capacities, and are in different stages of hazard mitigation planning. The number of states within each region was another key consideration as Tribal liaisons need to be well-versed in the relevant laws and regulations of each state. We considered recommending FTE based on the number of non-financial direct technical assistance or number of grant applications submitted, but this number would not capture the assistance needed by Tribes that do not already engage with FEMA programs.

We further recommend that any organization that advocates for increased staffing in the Regional Tribal Liaison (RTL) Offices consult with current RTLs to better assess the requirement.

Table 11: FEMA Regional Tribal Liaison Breakdown

FEMA Region	# of States	Est Tribal Population [138]	# of Tribes [139]	Current FTE [140]	Recommended FTE
HQs				3*	5
1	6	16,169,336	10	1	3
2	2	28,752,247	8	1	3
3	6	30,236,141	7	1.5	3
4	8	69,584,995	6	1.5	4
5	6	52,736,507	34	2	6
6	5	44,275,202	68	3	6
7	4	14,298,106	9	2	4
8	6	12,717,900	29	2	5
9	4	51,011,590	150	4	8
10	4	14,761,536	271	3**	8

Note. Table presents the authors' recommended staffing increases for FEMA Tribal Liaison offices.
* National Tribal Affairs Advisor has been vacant since September 2022.
** One FTE is a dedicated Alaska Area Tribal Liaison.

Further, if RTL officials are given more staff capacity, Tribal liaisons should work to establish cross-agency partnerships with the BIA Tribal Climate Resilience Network. This organization works to provide technical and financial assistance, access to scientific resources, and educational opportunities for federally recognized Tribal nations and Alaska Native villages—a mission that meets FEMA's stated goals as well. Collaboration between the two agencies could improve efficiency by pooling resources and expertise in working toward similar objectives, improve relationships by partnering to support the limited capacity of

[138] U.S. Census Bureau. (2021). Estimated Tribal Population based on the 2021 American Community Survey. American Community Survey 1-year Public Use Estimated Detailed Tables [SAS Data file]. Retrieved March 27, 2023 from https://data.census.gov/table?g=010XX00US$0400000&tid=ACSDT1Y2021.B02010.

[139] FEMA. (n.d.). Regions, States and Territories. Retrieved March 7, 2023, from https://www.fema.gov/about/organization/regions.

[140] FEMA. (n.d.). Regional Contacts. Retrieved March 29, 2023, from https://www.fema.gov/about/contact#regions.

Tribal staff, and improve communication by establishing connections and sharing perspectives between agencies and Tribes. Incorporating FEMA into the BIA Tribal Climate Resilience Network would also allow Tribes to reach out to a single point of contact to seek opportunities for resources, funding, and navigating policy. This practice would be a step toward creating a "one-stop shop" resource to support Tribes with limited capacities recommended by experts in the Tribal emergency management field.

Change or Eliminate the Benefit-Cost Analysis Requirement for Tribal Grant Applications

As we explained in Chapter 4, FEMA's current benefit-cost analysis requirement is problematic in the Tribal context in many respects. In particular, it applies to all grants, irrespective of size; prioritizes property value and infrastructure over social, cultural, and environmental benefits; is technically demanding to complete; and is not supported by adequate assistance for applicants. The benefit-cost analysis system should be revamped so it is easier to complete and more inclusive of Indigenous values.

A Critical Evaluation of Benefit-Cost Analysis in the Tribal Context

Full benefit-cost analysis makes little sense in the context of smaller projects because proving cost-effectiveness may itself be so expensive and time-consuming that it renders the project unfeasible. The tools FEMA offers may ease the burden somewhat, but these tools are unwieldy, and the process remains cumbersome. FEMA itself has implicitly acknowledged this in other contexts by preemptively waiving the requirement for smaller projects in places like Puerto Rico and the U.S. Virgin Islands.

Property-based valuation is a problem because it attempts to apply fundamentally incompatible Western conceptions of ownership and the financialization of everything to the Tribal context. Valuing property and infrastructure requires transfer records, appraisal, and comparison to comparable properties, and (typically) sole ownership. Instead, Tribal lands are rarely (if ever)

transferred or appraised, often because they are owned communally or by the federal government, and lack comparables because of these unique ownership structures and because of development histories that are not typical of the market.

The real value centers in Indigenous communities are often lands, ecosystems, peoples, and cultural resources, and the FEMA benefit-cost scheme systematically undervalues them all (or considers them impossible to quantify). Indigenous peoples tend to be "place-based" peoples, with strong spiritual connections to the specific land on which they live, the communities of which they are a part, and the ecosystems with which they coexist. As to social value, although a variety of stated-preference and revealed-preference techniques exist to (imperfectly) quantify it, the BCA process used by FEMA grants makes no attempt to implement any such techniques in any event. The only possible acknowledgment of this value in FEMA's BCA process is a potential avoided cost labeled "mental stress and anxiety" and is capped at a standard one-time value of $2,443 per person. It is inherently problematic to set a fixed value on the "mental stress and anxiety" a person suffers when displaced from their home, but especially so in the Tribal context given the displacement and forced relocation that Indigenous peoples in the United States have suffered for generations.

Potential ecosystem benefits are limited in two ways. First, the flat benefits rates per acre of ecosystem mitigated are at best a dubious measure of these benefits. Setting aside the philosophical problems with valuing ecosystems purely in dollars according to their putative use to humans as natural resources—problems we do not mean to overlook—there is no apparent recognition in these rates of the differences between ecosystems in different geographical areas or any differences in their significance to different peoples. These benefits are further limited by project useful life—often capped at 30 years—and the aggressive discount rates prescribed by Circular A-94 [141] (7 percent annually for many benefits). These standards tend to emphasize the short term over the long

[141] White House Office of Management and Budget, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs" (1992), Circular No. A-94.

term—a strategy that makes more sense with reference to the built environment because infrastructure and other artificial structures tend to degrade over time if not regularly maintained and improved. However, since projects that improve natural systems and processes tend to have benefits over long periods of time, the full extent of benefits from such projects tend to be heavily discounted or completely ignored under FEMA's BCA standards.

Finally, these social and environmental benefits can only be included in the analysis at all if the benefit-cost ratio exclusive of them exceeds 0.75. Since value in Indigenous communities is often centered in ecosystems and society rather than the built environment, this limitation may rule out many Tribal projects before they begin.

Room for Changes to Benefit-Cost Analysis

The Stafford Act does not require FEMA to apply benefit-cost analysis so strictly—it merely requires FEMA to limit funding to projects that are "cost effective" and leaves FEMA to determine which projects qualify. The Act's implementing regulations afford similar leeway. FEMA could change its approach to become more inclusive and reduce the administrative burden Tribal communities face when deciding to apply for grants.

This is evident in the approaches other agencies take to benefit-cost analysis. FEMA is not the only federal agency that relies on benefit-cost analysis to award funding. In fact, many federal agencies are required to expend funds only on cost-effective projects. However, FEMA's approach to benefit-cost analysis differs from those of other agencies in several important respects, and could be altered to lower or eliminate barriers to access. [142]

First, while most agencies require formal benefit-cost analysis only for projects that exceed a certain cost threshold, FEMA requires it for all projects, regardless

[142] Miller, B. et al., "The Cost of Cost-Effectiveness: Expanding Equity in Federal Emergency Management Agency Hazard Mitigation Assistance Grants." RAND Corp. (2023). https://www.rand.org/pubs/research_reports/RRA2171-1.html.

of size. FEMA could adopt a similar strategy, allowing applicants and sub-applicants with smaller projects to demonstrate cost-effectiveness in some other way.

Second, FEMA is more restrictive than other agencies regarding which potential benefits can be considered when calculating a benefit-cost ratio, specifically excluding categories of hard-to-quantify benefits that other agencies are willing to consider. FEMA could consider such hard-to-quantify benefits when evaluating projects, and specifically whether they would arguably render the project cost-effective if they could be adequately quantified.

Third, unlike FEMA, many agencies permit applicants for funding to present alternative analyses using lower discount rates than the OMB 7 percent default under certain circumstances. A lower discount rate has the effect of increasing the present value of long-term benefits—particularly environmental benefits that accrue over time. FEMA could introduce more flexibility in the use of discount rates to better capture the long-term benefits typical of emergency management projects.

Fourth, most agencies consider benefit-cost ratio as a factor in funding decisions rather than treating it as a baseline eligibility criterion. This allows flexibility to evaluate projects for funding that do not meet the threshold 1.0 benefit-cost ratio. If FEMA changed cost-effectiveness from an eligibility threshold to a factor in the funding decision, it would have the flexibility to award funding to projects that are not able to demonstrate a benefit-cost ratio of 1.0 due to issues with documentation or monetization of benefits.

FEMA could also make a number of changes specifically geared toward facilitating Tribal applications. First, the current BCA toolkit (and other elements of the application) requires the applicant to have reliable internet access in order to complete it. Our research suggests that this is an issue for Tribal officials who lack reliable internet access due to poor infrastructure on Tribal lands. FEMA could develop application tools that do not require internet access to ease the process for Tribal applicants and sub-applicants.

Second, FEMA could adjust its precalculated benefit rates to account for the Tribal context. For example, it could increase the value of avoided mental stress and anxiety to account for the place-based nature of indigenous peoples and the added trauma—historical and contemporary—associated with displacement from one's native lands. Similarly, FEMA could adjust its precalculated values for ecosystem and environmental benefits to account for the added importance of these values in the context of Tribal projects. Alternatively, FEMA could allow revealed-preference and/or stated-preference valuation techniques to substantiate benefits for purposes of benefit-cost analysis.

Third, FEMA assumes not only that the value of a dollar is equivalent no matter where it is invested, but that protecting more developed communities is preferable because it prevents more dollars of damage. Tribal projects tend to have lower calculated benefits due to chronic underinvestment in infrastructure, development, and natural resources on Tribal lands, but this is precisely why the residents of those communities would benefit the most from added investment. FEMA could use a weighting system to counteract this effect, placing Tribal projects on equal footing with projects in more developed areas.

Include Tribes in the Regional Catastrophic Preparedness Grant Program

While Tribes are nominally included in most FEMA grant programs, they are not eligible for the Regional Catastrophic Preparedness Grant Program. The exclusion of Tribes is one way in which Tribes are not included in the "whole community" approach and are not considered critical partners in emergency management.

The purpose of the Regional Catastrophic Preparedness Grant Program is to "develop innovative regional solutions to issues related to catastrophic incidents."[143] The program has strategic priorities of equity, climate resilience,

[143] FEMA.. (n.d.). Fiscal Year 2022 Regional Catastrophic Preparedness Grant Program Fact Sheet. Preparedness Grants. Retrieved March 29, 2023, from https://www.fema.gov/grants/preparedness/regional-catastrophic/fact-sheet.

and readiness and aims to support socially vulnerable populations. Including Tribes would be one way for local and state governments to build relationships with Tribes in their regions and work together to develop innovative regional solutions that consider different worldviews. Purposeful inclusion may also open lines of communication to discuss regional concerns and opportunities for future projects. While the grant program is much smaller than other FEMA programs, with only $12 million in annual funding, the momentum that it could develop by building relationships and ensuring all regional stakeholders are considered in preparedness planning would be much more impactful.

Suggested Strategies for Tribal Grant Applicants

Prioritize Grant Applications through the BRIC Program

While imperfect, the newly implemented "Building Resilience in Communities" (BRIC) program offers substantial new resources to any Indigenous community that has received a disaster declaration in the past seven years. In light of the COVID-19 pandemic, all communities currently qualify.

Improved Technical Assistance

One beneficial trait of the BRIC program for Indigenous communities is that it incorporates formalized technical assistance resources. As noted in the BRIC policy document, one of the four outcomes of BRIC assistance is technical assistance, including "provide non-financial technical assistance to promote the BRIC program, identify potential projects, develop and review applications and mitigation plans, and provide training on grants management."[144] The availability of this technical assistance is atypical and is an opportunity for communities with low capacity, which may struggle with mitigation plan preparedness and grant writing without access to full-time personnel. The non-financial direct technical assistance BRIC application also acknowledges that not

[144] FEMA. (n.d.). FEMA POLICY FP-104-008-05: p. 4. Retrieved April 22, 2023, from https://www.fema.gov/sites/default/files/documents/fema_bric-policy-fp-008-05_program_policy.pdf.

all communities have access to a reliable computer or internet and encourages applicants to contact their State Hazard Mitigation Officer or Regional Tribal Liaison for assistance applying in other ways.

Tribal Set-Aside

Unlike other FEMA funding sources, BRIC includes a Tribal set-aside, which has increased from $20 million to $50 million annually with further increases possible in the future. These funds are specifically held for federally recognized Tribal applicants, ensuring that there is less competition between Tribes and non-Tribal state and local governments.

It is important to emphasize that our research showed there still remains considerable opportunity to improve the BRIC program for Tribal applicants. As noted during our interviews, BRIC innovations are good, but "not enough" to truly support Indigenous communities experiencing disasters. But even with these flaws, BRIC remains the best option currently available and is the program most likely to improve in the foreseeable future. Tribal applicants are likely to have more success with BRIC than they do with other FEMA-administered grant programs.

Seek Funding Through Federal Agencies Other than FEMA

While federal agencies are guided by common regulations governing the accountability and disbursement of funds, individual agencies interpret these rules differently and thus have differing application requirements. The funding pool for FEMA grants is much larger than those of other federal agencies, but Tribes with relatively low-cost proposals should consider seeking funding through other agencies with less burdensome application processes.

Table 12 below provides information on six grant programs with fewer application requirements that may suit the needs of lower-capacity Tribes. For Tribes with limited internet connectivity, BIA and HUD allow applicants to request waivers from the requirement for electronic submission. Tribes that cannot meet the

federal cost share requirements expected by most FEMA grants may want to consider BIA, HUD, and NFWS grants that do not have a non-federal cost share requirement and are therefore less costly for the applicant to implement. Many of the grants only require a budget narrative, as opposed to the technical benefit-cost analysis required by FEMA, and none of these grants require approved hazard mitigation plans.

Table 12: Grant Programs with Less Onerous Application Requirements

Grant Program	Award Amount	Purpose	Key Requirements
2023 Coastal Program Department of the Interior Fish and Wildlife Service[145]	Up to $200,000 per award	To design and implement coastal habitat protection and restoration strategies that ameliorate the impacts of climate change and other environmental stressors	• Federally recognized Tribal governments • Submit SF-424, Application for Federal Assistance • Provide budget narrative • No cost sharing
BIA: Tribal Climate Resilience Program[146]	Up to $300,000 per award Total of $45 million	To support climate adaptation planning and implementation projects, including those related to natural disasters and extreme weather events	• Federally recognized tribe or Tribal orgs • Any plan that addresses or incorporates climate change • USGS Ecosystems Research Funding Opportunities (ECO Opps) account • PDF grant application and excel budget file

145] Federal Grants. (n.d.). F23AS00032 - 2023 Coastal Program. Retrieved May 1, 2023, from https://www.federalgrants.com/F23AS00032-2023-Coastal-Program-92513.html#:~:text=F23AS00032%20%2D%202023%20Coastal%20Program%3A%20The,and%20protect%20fish%20and%20wildlife.

[146] BIA. (n.d.). Annual awards program categories. Retrieved May 1, 2023, from https://www.bia.gov/service/tcr-annual-awards-program/categories.

Table 12: Grant Programs with Less Onerous Application Requirements (Cont.)

Grant Program	Award Amount	Purpose	Key Requirements
BIA: National Tribal Broadband Grant (NTBG)[147]	Up to $50,000	To explore the possibility of developing or extending broadband services in Tribal communities	• Federally recognized Tribe or Tribal org • Grants.gov application • Online intake form
EPA: The Environmental Justice Government-To-Government Program[148]	~$1 million per award Total of $30,000,000	To support government activities that provide positive environmental or public health impacts in communities disproportionately burdened by environmental harms	• A Tribe (includes federal and state recognized Tribes) in partnership with a community-based nonprofit organization • $20 million Tribal set-aside • Application: SF-424, Project and budget narrative
EPA: Indian Environmental General Assistance Program[149]	Minimum of $75,000 for initial awards Total grant funding Varies by FY	To build Tribal capacity for developing and administering environmental protection programs	• Federally recognized Tribal governments • No cost sharing • Apply through electronic submission or fillable PDF

[147] BIA. (2022, August 17). Indian Affairs seeking applications for 2022 National Tribal Broadband Grant Program. Retrieved April 30, 2023, from https://www.bia.gov/news/indian-affairs-seeking-applications-2022-national-tribal-broadband-grant-program.

[148] Environmental Protection Agency (EPA). (n.d.). The Environmental Justice Government-to-Government Program. Retrieved May 1, 2023, from https://www.epa.gov/environmentaljustice/environmental-justice-government-governmentprogram#.

[149] EPA. (n.d.). Fiscal year 2023 Indian Environmental General assistance program (GAP). FY-23-GAP-NOFA. Retrieved March 29, 2023, from https://www.epa.gov/system/files/documents/2022-11/FY-23-GAP-NOFA-Final.pdf.

Table 12: Grant Programs with Less Onerous Application Requirements (Cont.)

Grant Program	Award Amount	Purpose	Key Requirements
HUD: Indian Community Development Block Grant Program[150]	Up to $2,000,000 per award Total of $92,309,280	To fund community development projects, including disaster recovery and resilience	• Federally recognized Tribe or Tribal org • Grants.gov application • Online intake form

Note. The grants described in this table are examples of grants with fewer grant application and management requirements that Tribes are eligible for. Grants are funded annually and these grants may not be available every fiscal year.

Federal funding opportunities vary by agency each year and while some grant programs have recurring funding, many do not. Grants.gov is a centralized online platform used to simplify and streamline the grant application process. The platform allows Tribes to search for federal grants that federally recognized Tribal governments and unrecognized Tribal organizations are eligible for. The details of funding opportunities from most federal agencies—including the Department of Health and Human Services, Department of Energy, Department of Housing and Urban Development, and the Department of Interior—are also provided in the database. The platform was developed to standardize the grant application process which may make it easier for applicants to understand what information is needed to apply.

For Tribes that have the staff capacity for a dedicated grant manager/writer, conducting a monthly query of grants for which Tribal governments and Tribal organizations are eligible would generate a funding opportunity pool that could be narrowed based on application requirements, like those described above. For Tribes that do not have the staff capacity for a dedicated grant writer, FEMA, the BIA, and HUD all provide technical assistance in the grant writing process as well as in meeting application requirements such as a budget narrative.

[150] Housing and Urban Development (HUD). (n.d.). Community Development Block Grant Program. Retrieved April 23, 2023, from https://www.hud.gov/sites/dfiles/PIH/documents/PIH2021-22.pdf.

Considerations for Unrecognized Groups

Without federal recognition, many indigenous communities would still find themselves without support for hazard mitigation and preparedness, even if the above recommendations were implemented. Even when these groups are able to receive grants for disaster mitigation and response, their lack of recognized status has prevented them from being involved in decisions made for their communities, as happened to the Jean Charles Choctaw Nation.

As discussed previously, and according to the codebook we used to review federal doctrine and policy, non-federally recognized groups have no roadmap to receive disaster mitigation and preparedness assistance directly from FEMA. However, there are some possibilities. We identified two state-recognized groups with FEMA-approved hazard mitigation plans which both have approved multijurisdictional plans that make them eligible to receive federal funding if they apply as sub-applicants under a state grant application. We recommend that state-recognized Tribes in need of disaster funding work with federally recognized Tribes or local governments to participate in multijurisdictional plans, allowing them to meet the prerequisites for sub-applicant status.

An additional strategy that non-federally recognized groups could use to receive funds is to seek to apply as sub-applicants of the states in which they are located, as is allowed in BRIC Policy application requirement A3.[151] This is not a perfect option, as requesting help as a beneficiary may result in the funding being used in ways that are inconsistent with the wishes of the community itself. However, it may be the only way for groups lacking recognition to obtain resources for their community at all.

As a policy recommendation, we find that even if there is political unwillingness to extend recognition status to additional indigenous communities, an alteration to FEMA's policy could allow non-recognized indigenous groups to advocate for themselves more efficiently and to more readily receive aid. Specifically, we

[151] FEMA, FEMA Policy FP-104-008-05, p. 3.

recommend that BRIC application requirements for sub-applicants be loosened by eliminating the requirement for a Tribal Hazard Mitigation Plan.

Currently, applicants may apply for BRIC grants on behalf of other groups, and with this change, those groups could assist with the cost share and planning of the grant dispensation directly. This would ease the burden on the applicant, eliminating a disincentive to apply on behalf of other groups. In addition, official status as a sub-applicant grants a level of autonomy and administrative legitimacy to non-recognized indigenous groups, allowing them greater control of their communities' decisions, and would be a step towards fulfilling the first Tribal Climate Change Principle of ensuring indigenous communities have full and effective participation in addressing the problems of climate change (and by extension, disaster management).

06. CONCLUSION

The picture of FEMA that emerges from our analysis of relevant policy documents, interviews with Tribal environmental policy and management experts, and examination of grant and hazard mitigation plan data is of an agency that has acknowledged the unique situations of Tribal grant applicants and its special obligation to serve those applicants but has not fully incorporated those principles into its policies, procedures, or institutional culture. Importantly, some of these limitations have been imposed by Congress through legislation and the White House through regulation. Fortunately, there are early indications that this may change in the years to come.

In this chapter, we close with a discussion of some of the limitations inherent in our analysis and summarize a handful of late-breaking policy innovations that have developed as we were finishing this project. As we explain, these developments offer hope that FEMA is making progress on its obligation to offer equitable grant access to Tribal governments.

Limitations

First, and most fundamentally, our work has been limited by the timeframe in which we completed it. FEMA periodically updates its policies, which may change the ways in which our work applies in future years. As we discuss below, this area of policy is currently in particularly intense flux, and additional work will be needed in the coming months and years as the situation continues to evolve.

Second, we have been limited by the availability of data. For example, with sufficient time and resources we would have conducted additional interviews to capture more depth and nuance concerning the practical impact of barriers to access. Additionally, our quantitative work was limited to data that were publicly available from the OpenFEMA database. Although we filed a request for additional data under the Freedom of Information Act with FEMA during the course of this project, as of the date of this report we had received no substantive response to that request. Additional data—particularly concerning grant applications that did not receive funding—would provide a more complete picture of the Tribal grant application experience.

A Look to the Future of Tribal Emergency Management Policy

We faced an interesting dilemma as authors when preparing this report: we were tasked with evaluating federal disaster policy toward Tribes as it currently exists, but for the duration of this project, that policy—which for years had been largely stable—was in flux. The first indication of this trend came on November 30, 2022, when the White House Office of Science and Technology Policy released "Guidance for Federal Agencies on Indigenous Knowledges." [152] The purpose of the memorandum was to educate federal agencies on the existence and significance of Indigenous Knowledges, encourage them to improve

[152] White House. (2022, November 30). Memorandum for Heads of Federal Departments and Agencies Guidance on Federal Departments and Agencies on Indigenous Knowledge. Retrieved April 29, 2023, from https://www.whitehouse.gov/ostp/news-updates/2022/12/01/white-house-releases-first-of-a-kind-indigenous-knowledge-guidance-for-federal-agencies.

relationships with Tribal nations by considering Indigenous Knowledges, and instruct them to consider including Indigenous Knowledges in future decision making, research, and policies. While this document did not affect any concrete changes to federal policy, it was a significant departure from the way in which the White House had addressed Indigenous issues previously and proved to be an early indicator of broader change.

Beginning in March and April 2023, various federal agencies began issuing changes or proposed changes to some of the foundational policy instruments on which our analysis was based. Some of these changes remained in administrative review at the time of our report completion, while others had not yet been meaningfully used, so we did not know when or whether they would be adopted —or if they were, what form they would ultimately take. For this reason we necessarily restricted our main analyses to the state of policy as of winter 2022-23. However, we close with a review of three of these potential changes and discussion of how they might address the inequities we have identified.

Changes to Benefit-Cost Analysis

On April 6, 2023, the Biden Administration issued Executive Order 14094, "Modernizing Regulatory Review."[153] The main purpose of this order is to streamline administrative review by narrowing the scope of agency actions that are subject to the burdensome "interagency review" process. However, the order also instructs the White House Office of Management and Budget to issue revisions within one year to its Circular A-4 and A-94, which establish "best practices" for benefit-cost analysis by federal agencies (including FEMA) and the current versions of which have not been updated for decades.

We have discussed at length the many problems with benefit-cost analysis as FEMA currently practices it and why it is currently one of the most formidable barriers to Tribal grant access. (Chapter 5). To review: it is costly, technically demanding, time-consuming, and systematically undervalues Tribal projects by focusing on property and infrastructure instead of the cultural and ecosystem

[153] Executive Order 14094: Modernizing Regulatory Review, April 11, 2023. 86 FR 21879.

benefits that are the primary value centered in many Indigenous communities. Order 14094 instructs OMB to change its approach to benefit-cost analysis to recognize "distributive impacts and equity."[154]

It remains to be seen exactly how OMB will address this mandate. However, it did release proposed revisions to its circulars that were open for public comment as of the date of this report. As currently drafted, they include the following innovations relevant here.

Changes to discount rates. Presently, future benefits are discounted at an annual rate of 7 (or sometimes 3) percent. This has the effect of depressing the present value of projects that generate benefits over the long term, which is a particular characteristic of Tribal projects that generate long-term benefits through nature-based solutions. The revisions propose a new default rate of 1.7 percent, with lower rates for certain large projects with particularly long timeframes.

Consideration of distributional impact. The current norm in federal benefit-cost analysis is simply to maximize the net benefits of federally funded projects without considering to whom those benefits accrue. This is a problem for Indigenous communities, which suffer from the continuing effects of a long history of extractive policy and chronic underinvestment that paradoxically demonstrates acute need while reducing the potential net benefits of projects on Tribal lands. OMB's revisions call for consideration of distributional impacts—in other words, an analysis of who will reap the benefits and pay the costs.

Acknowledgment of non-quantifiable benefits. Current FEMA benefit-cost analysis procedures largely ignore the existence of any potential benefit that cannot be quantified in financial terms and adequately substantiated through restrictive conventional valuation techniques. This creates challenges in the Tribal context where lands are not privately or individually held, evidence of financial impact is lacking, and many of the benefits projects would generate are culturally idiosyncratic. The proposed revisions account for this possibility,

[154] Ibid.

acknowledging that some benefits may be infeasible to quantify for certain projects and suggesting alternative techniques to demonstrate cost-effectiveness where this is the case.

Indigenous knowledges as a basis to analyze benefits and costs. A systemic shortcoming of federal policy relating to Tribes is its failure to acknowledge, let alone prioritize, Indigenous perspectives and expertise in making that policy. The revised Circular A-94 takes a small step toward correcting this oversight by stating that analysis should "seek to incorporate the best available science, historical data, and indigenous and other local knowledge."[154]

If implemented as written, these changes would amount to a significant shift in how federal agencies conduct benefit-cost analysis and make cost-effectiveness determinations more broadly. All four of the changes listed here have potential to improve specific elements of the grant application process that we have confirmed across multiple research modalities to have adverse impacts on Tribal applicants. However, it remains to be seen what changes will be made during the review process, if any, and how FEMA will implement these new guidelines in its own policies and practices.

Updated Hazard Mitigation Assistance Program and Policy Guide

On March 23, 2023, FEMA published the 2023 Hazard Mitigation Assistance Program and Policy Guide (2023 HMA Guide)[155]—a replacement for the 2015 Hazard Mitigation Assistance Guide and addendum. The 2023 HMA Guide is an update intended primarily to incorporate the many statutory and policy updates that transpired after the 2015 version was issued, including the enactment of the

[154] OMB. (2023, April 7). Draft CIRCULAR NO. A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, 88 FR 20913.

[155] FEMA. (2023, March 23). Hazard Mitigation Assistance Program and Policy Guide. Hazard Mitigation Assistance. https://www.fema.gov/sites/default/files/documents/fema_hma-program-policy-guide_032023.pdf.

of the Disaster Recovery Reform Act of 2018[156] and updates to Title 2[157] and Title 44[158] of the Code of Federal Regulations. The 2023 HMA Guide also includes updates to White House priorities, such as Executive Orders 13985, "Advancing Racial Equity and Support for Underserved Communities through the Federal Government,"[159] and 14030, "Climate-related financial risk,"[160] as well as new FEMA strategic priorities such as resilience and climate adaptation, whole community approach, equity, and capability and capacity building.

The 2023 HMA Guide is nearly 650 pages long and we cannot enumerate every change from the status quo that it contains. However, we believe the eight changes outlined below are those with the greatest impact on Tribal access to and inclusion in FEMA programs and processes.

01 Changes throughout clarify the procedures Tribes should follow when applying for grants as applicants or sub-applicants and the types and amounts of aid to which they are entitled under various programs, effectively consolidating information that was distributed through a variety of preexisting source documents for ease of use.

02 Additional detail is provided concerning procedural and substantive requirements unique to individual programs. BRIC is now included, consistent with its implementation in FY20.

03 Substantial additional guidance is provided for sub-applicants in particular, including summaries of required documentation, advice concerning project scoping, and explanation of the respective obligations of applicant and sub-applicant.

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[156] Disaster Recovery Reform Act of 2018, to accompany S. 3041, to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act to provide for disaster recovery reforms, and for other purposes.

[157] Grants and Agreements, 2 C.F.R., (March 2023).

[158] Emergency Management and Assistance, 44 C.F.R., (January 2023).

[159] Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities through the Federal Government, January 20, 2021. 86 FR 7009.

[160] Executive Order 14030: Climate-related Financial Risk, May 20, 2021. 86 FR 27967.

04 New types of projects now eligible for federal aid are discussed. The document includes explicit emphasis on nature-based solutions and other "innovative" approaches to mitigation that fall outside what FEMA considers to be the norm.

05 ·Strategies to defray the expense of the non-federal cost share associated with HMA projects are provided, including a summary of additional funding available from the Department of Housing and Urban Development and other federal agencies.

06 FEMA's benefit-cost analysis requirements are loosened. In particular, grant applicants no longer need to meet the 0.75 benefit-cost ratio threshold before including social and ecosystem service benefits in their calculations. The document describes more streamlined alternative methods to demonstrate cost-effectiveness that can be used in certain circumstances.

07 Significant additional information concerning technical assistance and capacity-building resources is provided, including assistance and resources newly available through BRIC, to make these resources more accessible.

08 New procedural requirements for grant award notification and grant administration, some of which are applicable only to large grants, are explained. The period of performance for HMGP grants is increased from 36 to 48 months to accommodate longer-term projects.

Overall, the 2023 HMA Guide is an incremental improvement over the 2015 HMA Guide. While FEMA's eligibility requirements and application procedures remain complex, this document improves the clarity and thoroughness with which they are explained and consolidates existing guidance from other sources while addressing some of the specific critiques of its previous policies, including some of those set forth in this report. Procedural impacts are yet to be determined fully because the document has not yet been in use through a grant application cycle, so the full impact of this document cannot yet be quantified.

State and Local Mitigation Planning Policy Guides

FEMA's state and local mitigation planning policy guides[161, 162] were both updated on April 19, 2023. Before this update, these documents had been unchanged since 2011. The planning policy guides include interpretations of the mitigation planning requirements established by the Stafford Act and other governing federal statutes. While these policies do not apply directly to Tribes, they may impact Tribes that opt to adopt multijurisdictional mitigation plans in collaboration with local governments or states.

Both updated planning policy guides encourage governments to consider equity and climate change impacts in their mitigation plans and emphasize the inclusion of representatives from underserved communities in the planning process. The guides also require states and local governments to include discussion in their plans of (i) building code adoption and enforcement, and (ii) land use to improve mitigation capabilities. The new documents align more closely with the requirements of FEMA mitigation programs like the National Flood Insurance Program, Community Rating System, and flood risk mapping.

Tribes choosing multijurisdictional mitigation plans with state and/or local governments should take steps to verify that they are meeting all new planning guidelines. Further, Tribes should seek guidance on any proposed changes to the Tribal Mitigation Plan Review Guide, released December 5, 2017,[163] given the recent changes to other mitigation planning policies.

Taken together, these changes suggest that the federal government recognizes some of the problems inherent in the status quo and is trying to address them.

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[161] FEMA. (2023, April 19). State Mitigation Planning Policy Guide. Mitigation Planning Policy Updates. https://www.fema.gov/sites/default/files/documents/fema_state-mitigation-planning-policy-guide_042022.pdf.

[162] FEMA. (2023, April 19). Local Mitigation Planning Policy Guide. Mitigation Planning Policy Updates.https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-policy-guide_042022.pdf.

[163] FEMA, Tribal Mitigation Plan Review Guide.

As researchers, we are glad to see federal policy changing to become more inclusive. However, it will be for future researchers to evaluate these changes once they are final and have been tested in action.

APPENDICES

A.

FEMA Tribal Hazard Mitigation Plan and Administrative Plan Checklist

B.

Tribal Climate Change Principles

C.

Summary Codebook

D.

FEMA Documents Reviewed

E.

Interview Protocols

F.

Interview Emergent Domains and Common Sub-Themes

G.

Aggregated Coding Trends of FEMA Content Analysis

H.

Grant Award Data

Appendix A: FEMA Tribal Hazard Mitigation Plan and Administrative Plan Checklist

HMGP Administrative Plan Checklist
Section 1: Recipient Information (completed by recipient)
Recipient Name:
Disaster Number:
Date:
Section 2: Minimum Administrative Plan Criteria
The recipient should answer "YES" or "NO" for the following questions. If "YES", add page and section where information is provided. For additional comments, use Section 3: Additional Comments.

#	Administrative Plan Component	Meets FEMA Requirements (completed by recipient)	Page/Section (completed by recipient)	Meets FEMA Requirements (completed by FEMA)
1.	Does the Recipient have a FEMA-approved Mitigation Plan (44 CFR Part 201)?			
2.	Does the plan designate the recipient agency with responsibility for administration of the HMGP (44 Code of Federal Regulations (CFR) § 206.437(b)(1))?			
3.	Does the plan identify the Hazard Mitigation Officer responsible for all matters related to the HMGP (44 CFR § 206.437(b)(2))?			
4.	Does the plan establish an interagency mitigation team (HMA Guidance, Part VIII.A.2.2)?			
5.	Does the plan determine the staffing requirements and sources of staff necessary for administration of the program (44 CFR § 206.437(b)(3))?			

#	Administrative Plan Component	Meets FEMA Requirements (completed by recipient)	Page/Section (completed by recipient)	Meets FEMA Requirements (completed by FEMA)
6.	Does the plan include a procedure for expanding staff temporarily following a disaster if necessary (HMA Guidance (2015), Part VIII.A.2.2)?			
7.	Does the plan contain the procedures used to identify and notify potential subrecipients of the availability of the program (44 CFR § 206.437(b)(4)(i))?			
8.	Does the plan contain the procedures used to ensure that potential Subrecipients are provided information on the application process, program eligibility and availability of management costs and deadlines (44 CFR § 206.437(b)(4)(ii))?			
9.	Does the plan contain procedures used to determine subrecipient eligibility (44 CFR § 206.437(b)(4)(iii))?			
10	Does the plan contain the procedures used to provide information for Environmental and Historic Preservation (EHP) and floodplain management reviews in conformance with 44 CFR Part 9 and FEMA Directive 108-1 (44 CFR § 206.437(b)(4)(iv))?5			
11.	Does the plan contain the procedures used to establish priorities for the selection of mitigation projects and plans (44 CFR § 206.437(b)(4)(v))?			
12.	Does the plan contain the procedures used to process requests for advances of funds and reimbursement (44 CFR § 206.437(b)(4)(vi))?			

#	Administrative Plan Component	Meets FEMA Requirements (completed by recipient)	Page/Section (completed by recipient)	Meets FEMA Requirements (completed by FEMA)
13.	Does the plan contain procedures for subrecipients to apply for management costs (44 CFR § 206.437(b)(4)((ii) & (iii))?			
14.	Does the plan contain procedures to document when subrecipients choose not to apply for management costs provided under HMGP Management Costs (Interim) policy? (Policy #104-11-1 Program Requirements and Procedures (B)(2))?			
15.	Does the plan contain procedures to document when subrecipients do not to use all their management costs provided by the HMGP Management Costs (Interim) policy? (Policy #104-11-1 Program Requirements and Procedures (B)(2))?			
16.	Does the plan contain the procedures used to monitor and evaluate the progress and completion of the selected mitigation activities and management costs (44 CFR § 206.437(b)(4)(vii))?			
17.	Does the plan contain the procedures used to review and approve cost overruns (44 § CFR 206.437(b)(4) (viii))?			
18	Does the plan contain the procedures used to process appeals (44 CFR § 206.437(b)(4)(ix))?			
19.	Does the plan contain the procedures used to provide technical assistance, as required, to the subrecipients (44 CFR § 206.437(b)(4)(x))?			

#	Administrative Plan Component	Meets FEMA Requirements (completed by recipient)	Page/Section (completed by recipient)	Meets FEMA Requirements (completed by FEMA)
20.	Does the plan contain the procedures used to comply with the administrative requirements of 2 CFR Part 200, 2 CFR Part 3002 and 44 CFR Part 206 (§ 206.437(b)(4)(xi))?			
21.	Does the plan contain the procedures used to comply with the audit requirements of 2 CFR Part 200, Subpart F; 2 CFR Part 3002; and 44 CFR § 206.437(b)(4)(xi)?			
22.	Does the plan identify roles and procedures to implement the recipient's authority to address a subrecipient's noncompliance with grant requirements by providing an opportunity to subrecipients to bring the grant into compliance, if applicable, or by imposing remedy actions or special conditions on subrecipients that fail to comply with grant requirements (2 CFR § 200.207 and 2 CFR § 200.338)?			
23.	Does the plan contain the procedures used to provide quarterly progress reports to the Regional Administrator on funded mitigation activities and management costs (44 CFR § 206.437(b)(4)(xii))?			
24.	Does the plan fully document the recipient program for the administration of the HMGP and Section 404 funds (44 CFR § 206.437(c))?			
25.	Has the plan been incorporated into the recipient's Emergency Operations Plan as a separate annex or chapter (44 CFR § 206.437(c))?6			

#	Administrative Plan Component	Meets FEMA Requirements (completed by recipient)	Page/Section (completed by recipient)	Meets FEMA Requirements (completed by FEMA)
26.	Does the plan incorporate updates, amendments, or plan revisions required to meet current policy guidance or changes in the administration of the HMGP (44 CFR § 206.437(d))?			
27.	**Program Administration by States (PAS):** For recipients with a PAS Agreement, does the plan provide a procedural guide that details how the recipient will administer delegated activities (Addendum to the HMA Guidance Program Administration by States Pilot, HMGP)?			
28.	**HMGP Cost Share Strategy:** For recipients using a cost share strategy, does the plan meet the requirements of the HMA Guidance (2015) Part VIII.A.8?			

Section 1: REGULATION CHECKLIST

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT A. PLANNING PROCESS			
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process? [44 CFR § 201.7(c)(1)]			
A2. Does the plan document an opportunity for public comment during the drafting stage and prior to plan approval, including a description of how the tribal government defined "public"? [44 CFR § 201.7(c)(1)(i)]			
A3. Does the plan document, as appropriate, an opportunity for neighboring communities, tribal and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? [44 CFR § 201.7(c)(1)(ii)]			
A4. Does the plan describe the review and incorporation of existing plans, studies, and reports? [44 CFR § 201.7(c)(1)(iii)]			
A5. Does the plan include a discussion on how the planning process was integrated to the extent possible with other ongoing tribal planning efforts as well as other FEMA programs and initiatives? [44 CFR § 201.7(c)(1)(iv)]			
A6. Does the plan include a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within the plan update cycle)? [44 CFR § 201.7(c)(4)(i)]			
A7. Does the plan include a discussion of how the tribal government will continue public participation in the plan maintenance process? [44 CFR § 201.7(c)(4)(iv)]			
ELEMENT A: REQUIRED REVISIONS			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect the tribal planning area? [44 CFR § 201.7(c)(2)(i)]			
B2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for the tribal planning area? [44 CFR § 201.7(c)(2)(i)]			

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
B3. Does the plan include a description of each identified hazard's impact as well as an overall summary of the vulnerability of the tribal planning area? [44 CFR § 201.7(c)(2)(ii)]			
ELEMENT B: REQUIRED REVISIONS			
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan include a discussion of the tribal government's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including an evaluation of tribal laws and regulations related to hazard mitigation as well as to development in hazard-prone areas? [44 CFR §§ 201.7(c)(3) and 201.7(c)(3)(iv)]			
C2. Does the plan include a discussion of tribal funding sources for hazard mitigation projects and identify current and potential sources of Federal, tribal, or private funding to implement mitigation activities? [44 CFR §§ 201.7(c)(3)(iv) and 201.7(c)(3)(v)]			
C3. Does the Mitigation Strategy include goals to reduce or avoid long-term vulnerabilities to the identified hazards? [44 CFR § 201.7(c)(3)(i)]			
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with emphasis on new and existing buildings and infrastructure? [44 CFR § 201.7(c)(3)(ii)]			
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized, implemented, and administered by the tribal government? [44 CFR § 201.7(c)(3)(iii)]			
C6. Does the plan describe a process by which the tribal government will incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate? [44 CFR § 201.7(c)(4)(iii)]			
C7. Does the plan describe a system for reviewing progress on achieving goals as well as activities and projects identified in the mitigation strategy, including monitoring implementation of mitigation measures and project closeouts? [44 CFR §§ 201.7(c)(4)(ii) and 201.7(c)(4)(v)]			

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ELEMENT C: REQUIRED REVISIONS			
ELEMENT D. PLAN UPDATES			
D1. Was the plan revised to reflect changes in development? [44 CFR § 201.7(d)(3)]			
D2. Was the plan revised to reflect progress in tribal mitigation efforts? [44 CFR §§ 201.7(d)(3) and 201.7(c)(4)(iii)]			
D3. Was the plan revised to reflect changes in priorities? [44 CFR § 201.7(d)(3)]			
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. ASSURANCES AND PLAN ADOPTION			
E1. Does the plan include assurances that the tribal government will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR Parts 200 and 3002, and will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes? [44 CFR § 201.7(c)(6)]			
E2. Does the plan include documentation that it has been formally adopted by the governing body of the tribal government requesting approval? [44 CFR § 201.7(c)(5)]			
ELEMENT E: REQUIRED REVISIONS			

Appendix B: Tribal Climate Change Principles

Strengthen Tribal Sovereignty in the Climate Change Era

Principle 1: Federally recognized Tribes and other Indigenous Peoples and Indigenous communities must be partners with full and effective participation in assessing and addressing the problems of climate change at the local, regional, national, and international levels and must be accorded at least the status and rights recognized in the U.N. Declaration on the Rights of Indigenous Peoples and other international standards relevant to Indigenous Peoples.

Principle 2: Tribes must have fair and equitable representation on all federal climate committees, working groups, and initiatives in which states, local governments, and other stakeholders are represented.

Principle 3: The federal government should establish a high-level interagency Tribal government task force to examine and propose solutions to close gaps across the federal agencies' relationships and programs with Tribes, and to develop, recommend, and implement Tribal-specific solutions that enable the agencies to support and foster Tribal climate-resilient planning and investment.

Support Tribes Facing Immediate Threats from Climate Change

Principle 4: Indigenous Peoples must have direct, open access to funding, capacity-building, and other technical assistance, with their free, prior and informed consent, to address the immediate and long-term threats from climate change.

Ensure Tribal Access to Climate Change Resources

Principle 5: Tribes must have fair and equitable access to federal climate change programs.

Principle 6: Tribes must be made eligible for existing and future federal natural resource funding programs for which states are eligible for, but from which Tribes are currently, or might be, excluded.

Principle 7: A fair and equitable set-aside of direct monies or allowances must be made available for distribution to Tribes through legislation, administrative actions, and existing and future federal natural resource funding programs.

Traditional Knowledges and Climate Change

Principle 8: Indigenous traditional knowledges, with the free, prior, and informed consent of Indigenous Peoples must be acknowledged, respected, and promoted in federal policies and programs related to climate change.

Appendix C: Summary Codebook

Theme	Subtheme	Coding Instructions
Disaster Management Cycle	Mitigation	Code 0 if the document refers to the mitigation phase Code 1 if document refers to the preparedness phase Code 2 if document refers to the response phase Code 3 if document refers to the recovery phase Code 4 if all phases are described Code 5 if no phases are described * Code all phases described
	Preparedness	
	Response	
	Recovery	
Tribal Recognition	Federally-recognized Tribes	Code 0 if federal Tribal recognition is mentioned and is a condition for participation or access to funding, resources, and/or participation Code 1 if state Tribal recognition is mentioned and is a condition for participation or access to funding, resources, and/or participation Code 2 if Tribes seeking recognition are eligible for participation or access to funding, resources, and/or participation Code 3 if Tribes are explicitly excluded Code 4 if no mention of Tribes and cannot discern if they are excluded
	State-recognized Tribes	
	Tribes seeking recognition	
Tribal Lands	Traditional Lands	Code 0 if document describes traditional lands Code 1 if document describes federally recognized Indigenous Peoples' lands Code 2 if there is no mention of either traditional or federally recognized Indigenous Peoples' lands
	Federally-recognized lands	
Tribal Climate Change Principles	Derived from Principle 1	Code 0 if partnership is not mentioned Code 1 if the document states that Tribes do not have equitable partnership or describes a process that results in inequitable participation Code 2 if participation is mentioned, but not specific enough to determine equity Code 3 if document describes equitable participation for Tribes
	Derived from Principle 2	Code 0 if committees, working groups and initiatives are not mentioned Code 1 if the document states that Tribes do not have equitable representation on committees, working groups and initiatives Code 2 if document describes Tribal participation, but not specific enough to determine equity Code 3 if the document describes Tribes having equitable representation on committees, working groups and initiatives

Appendix C: Summary Codebook (continued)

Theme	Subtheme	Coding Instructions
Tribal Climate Change Principles (cont'd)	Derived from Principle 3	Code 0 if a federal Tribal task force is not mentioned Code 1 if there is mention of federal Tribal task force
		Code 0 if Tribal relationships are not mentioned or described Code 1 if document states that there will not be efforts make to improving relationships with Tribes Code 2 if there is mention of improving Tribal relationships with Tribes
		Code 0 if implementing Tribe-specific solutions are not mentioned Code 1 if document states that implementation of Tribe-specific solutions are ineligible for resources Code 2 if Tribe-specific solutions are eligible for resources
	Derived from Principle 4/7	Code 0 if capacity-building, and technical assistance are not mentioned Code 1 if Tribes are explicitly denied/ineligible for capacity-building, and technical assistance Code 2 if capacity-building, and technical assistance are available for Tribes, but not specific enough to determine equity Code 3 if capacity-building, and technical assistance and includes equitable access to Tribes
	Derived from Principle 5	Code 0 if access to programs, processes, or participation is not mentioned Code 1 if Tribes are explicitly denied access to program, process, or participation Code 2 if Tribes have access to programs, process, or participation, but not specific enough to determine equity Code 3 if Tribes have equitable access to program, process, or participation
	Derived from Principle 6	Code 0 if federal funding is not mentioned Code 1 if federal funding is available for States, but not for Tribes Code 2 if federal funding is mentioned and includes Tribes
	Derived from Principle 8	Code 0 if Indigenous knowledges is not mentioned or described Code 1 if document describes the rejection of Indigenous knowledges Code 2 if there is acceptance of Indigenous knowledge in aspects or a program, but not throughout the entire policy/program Code 3 if there is the explicit acceptance of Indigenous knowledge in the policy, program, or solution

Appendix D: FEMA Documents Reviewed

Document	Year	Edition	Publisher
FEMA Strategic Documents (n=9)			
National Preparedness Goal	2015	2nd	Homeland Security
2022-2026 FEMA Strategic Plan	2022		FEMA
National Protection Framework	2016	2nd	Homeland Security
National Mitigation Framework	2016	2nd	Homeland Security
National Response Framework	2019	4th	Homeland Security
Tribal Relations Support Annex	2013		Homeland Security
National Disaster Recovery Framework	2016	2nd	Homeland Security
2019 National Threat and Hazard Identification and Risk Assessment	2019		Homeland Security
Building Community Resilience with Nature Based Solutions 2021	2021		FEMA
Tribe Specific Document (n=8)			
2022-2026 FEMA National Tribal Strategy	2022		FEMA
FEMA Tribal Policy (Rev. 2)	2020	2nd	FEMA
FEMA Tribal Consultation Policy	2019		FEMA
Tribal Mitigation Plan Review Guide	2018	1st	Homeland Security
Tribal Mitigation Planning Handbook	2019		FEMA
Tribal Mitigation Planning and HMA Grant Application Development	2021		FEMA
Federally-Recognized Tribes and Hazard Mitigation Grant Program			FEMA
Tribal Mitigation Planning Fact Sheet	2021		FEMA

Appendix D: FEMA Documents Reviewed (continued)

Document	Year	Edition	Publisher
Fiscal and Procedure-focused documents (n=30)			
FEMA New Recipients of Disaster Grants Guide	2019		FEMA
Preparedness Grants			
FEMA Manual (FM) 207-22-0001 Fiscal Year 2022 Preparedness Grants	2023		FEMA
Emergency Management Performance Grant			
FY23 Emergency Management Performance Grant Program - FAQs	2023		FEMA
FY23 Emergency Management Performance Grant Program Fact Sheet	2023		FEMA
FY23 Emergency Management Performance Grant Program Key Changes	2023		FEMA
Emergency Operations Center Grant			
Emergency Operations Center Grant Program	2023		FEMA
Tribal Homeland Security Grant Program			
Tribal Homeland Security Grant Program	2023		FEMA
Tribal Homeland Security Grant Program Fact Sheet	2023		FEMA
Regional Catastrophic Preparedness Grant			
Regional Catastrophic Preparedness Grant Program Fact Sheet	2022		FEMA
Hazard Mitigation Assistance Grants (HMAG)			
Hazard Mitigation Assistance Guidance	2015		FEMA
Addendum to the Hazard Mitigation Assistance Guidance	2015		DHS
The Hazard Mitigation Grant Program Administrative Checklist			FEMA
eGrant Tribal Grant Application Job Aid			FEMA
Hazard Mitigation Action Portfolio	2020	1st	FEMA

Appendix D: FEMA Documents Reviewed (continued)

Document	Year	Edition	Publisher
Post-Fire			
Fire Management Assistance Grant Program and Policy Guide	2021	1st	FEMA
FEMA HMGP Post Fire Policy #207-088-2	2019		FEMA
FEMA Post Fire	2021		FEMA
Flood Mitigation Assistance (FMA)			
FY22 Flood Mitigation Assistance (FMA) Fact Sheet	2022		FEMA
FY22 Flood Mitigation Assistance (FMA) Grant			FEMA
Building Resilient Infrastructure and Communities (BRIC)			
BRIC Grant Policy	2022	1st	FEMA
BRIC Grant Stakeholder Feedback Summary	2020	1st	FEMA
BRIC Grant Alt. Cost-Effectiveness Methodology Memorandum			FEMA
Pre-Disaster Mitigation (PDM) Grant			
Pre-Disaster Mitigation (PDM) Grant			FEMA
FY 22 PDM Congressional Community Projects			FEMA
Public Assistance Category C-G			
Public Assistance Program and Policy Guide			FEMA
Specific Assistance / Toolkits			
Cost-benefit analysis toolkit			FEMA
BRIC Direct Technical Assistance			FEMA
FEMA Resources for Climate Resilience			FEMA
National Response Framework Training Guide	2019		ESFLG
FEMA Technical Assistance Program			DHS

Appendix E: Interview Protocols

Introduction

Hello, my name is _____ and I am the interviewing representative for the AACE team of the Evans Consulting Lab. We are exploring federal disaster policy in the United States and how it impacts, benefits, and creates barriers for Indigenous communities. The information you provide during this interview will help to inform research being conducted by the University of Washington on this subject. We will ask questions about disaster policy, current practices, and are seeking insight on these subjects based on your professional knowledge and lived experiences. We are offering a $100 honorarium for your time and expertise during this interview. With your permission, this interview will be recorded to ensure accurate representation of your responses throughout our project. This recording will be kept securely, with identifiers, and will not be published without your written consent. Your participation in this interview and the knowledge you provide is greatly appreciated. Please feel free to ask questions or ask to stop the interview at any time. We have 14 (revised protocol: six) questions for this 45-minute interview. Unless you have any questions or concerns now, may we begin?

Interview Questions and Domains

Federal Disaster Policy/Indigenous Community Interactions

1. On a scale of 1-10, 10 being perfectly addressed, how well does Federal disaster policy meet the needs of Indigenous groups on average?

> a. Can you tell me a bit about why you gave that rating? What came to mind when you were thinking about the rating?

2. From your experience, how would you characterize the experiences your training partners have had navigating Federal disaster funding processes? [Follow up prompt: Does anything more come to mind?]

3. How does current Federal disaster policy facilitate and/or impede the use of nature-based solutions, for disaster mitigation and preparedness?

Disaster Vulnerabilities/Adaptive Capacity

4. How does Federal disaster policy address any specific vulnerabilities and adaptive capacities of Indigenous communities?

5. How do you think Federal disaster mitigation funding can adequately address disaster vulnerabilities among Indigenous communities?

Practices of Successful Indigenous Groups

6. Could you provide any examples of Indigenous communities who, in your opinion, have successfully navigated Federal Policy to obtain resources to implement disaster mitigation strategies?

7. In your experiences with training partners, what are the most effective strategies and resources for Indigenous communities to successfully leverage federal disaster resources?

a. Follow Up Questions: Do they share common attributes? What about those who have struggled to leverage those resources? Are there common factors that make it hard for them to succeed? What are the biggest factors that contribute to or detract from Indigenous communities obtaining these resources?

Challenges Posed by Federal Disaster Policy

8. What are some of the greatest challenges that Indigenous communities face when applying for Federal Disaster mitigation funding?

9. A requirement for many FEMA grants is to have a hazard mitigation plan. Do you advise Indigenous communities to pursue a multi-jurisdictional plan or a standard Tribal plan?

a. Can you describe a certain Tribal capacity in which you would recommend one type over another?

10. Another requirement for most FEMA grants is to conduct a benefit-cost analysis of the proposed project. What best practices would you recommendation for Indigenous communities trying to meet this requirement?

a. What elements of the Benefit-Cost Analysis requirement create the most significant barriers to access for Indigenous communities? I.e., undervaluing buildings/undervaluing reservation land.

11. How would you characterize differences in grant outcomes you have seen when applying for federal funding as primary applicants versus those applying as subapplicants?

Policy Change Recommendations

12. What are one or two changes to current disaster policy that you would recommend allowing more equitable access to disaster resources for Indigenous communities?

13. In your experience, what are the most effective strategies for Indigenous communities to access Federal Disaster mitigation and response resources?

Workarounds

14. If an Indigenous community is unable to secure resources through FEMA disaster funding, are there other strategies you would recommend to secure resources for disaster mitigation and response? (State Partners, alternative Federal Agencies, other strategies as can come to mind)

15. How can organizations responsible for facilitating Indigenous disaster mitigation and response best support Indigenous communities to obtain resources for disaster mitigation and response?

Policy Change Recommendations

16. Is there anything else you think we should know about how Federal Disaster Policy affects how Indigenous communities respond to and prepare for Disasters?

Revised Interview Questions

Federal Disaster Policy/Indigenous Community Interactions

1. On a scale of 1-10, 10 being perfectly addressed, how well does Federal disaster policy meet the needs of Indigenous groups on average?

a. Can you tell me a bit about why you gave that rating? What came to mind when you were thinking about the rating? How does current Federal disaster policy facilitate and/or impede the use of nature-based solutions, for disaster mitigation and preparedness?

Barriers Posed by Federal Disaster Policy

2. In your opinion, what are the most significant barriers facing Indigenous communities when they apply for disaster mitigation funds?

Practices of Successful Indigenous Groups

3. What would you suggest as some effective strategies for Indigenous communities to successfully obtain federal disaster resources?

Barriers Posed by Federal Disaster Policy

4. What are one or two changes to current disaster policy that you would recommend allowing more equitable access to disaster resources for Indigenous communities?

Workarounds

5. If an Indigenous community is unable to secure resources through FEMA, what other strategies would you recommend to secure resources for disaster mitigation and response? (State Partners, alternative Federal Agencies, other strategies as can come to mind)

Closing

6. Is there anything else you think we should know about how Federal Disaster Policy affects how Indigenous communities respond to and prepare for Disasters?

Appendix F: Interview Emergent Domains and Common Sub-Themes

Emergent Domain	Sub-Themes	Sample Quotation
Cultural Competency	Methods of communication; Digital communication unreliable; Varying cultural values from federal government and Tribal governments;	*"People like many forms of communication, with Tribes many times it is more effective to have a phone call."*
Benefit-Cost Analysis	Undervalued Tribal property; Undervalued Tribal cultural resources	*"I would love to see them consider valuing cultural resources, and I don't just mean land and water, I mean places as well, rather than just infrastructure."*
Poor Institutional Trust	Low evaluation of federal policy in addressing Tribal needs; Lack of institutional knowledge or retention of FEMA Tribal Liaison staff.	*"They (FEMA) are trying in some ways… I'm debating between two and three. Two point five? (out of ten)"*
Administrative Burden	Challenging bureaucracy; Lack of capacity within Tribal governments; Need to increase number of personnel both within Tribes and at FEMA	*"There is a lot more red tape than people realize."*
Emphasis on Rapid-Onset Disaster	Shortening recovery period before disaster events; Policy written to address rapid onset disasters	*"Part of the issue is that as the disasters are coming closer and closer together, people are falling further behind as well"*

Appendix G: Aggregated Coding Trends of FEMA Content Analysis

	Code	Brief Description	Strategic Documents	Tribe-specific Documents	Fiscal focus Documents	All Documents
Disaster Management Cycle	0	Mitigation	1	4	18	23
	1	Preparedness	/	/	8	8
	2	Response	/	1	5	6
	3	Recovery	2	1	5	8
	4	All Phases	7	3	6	16
	5	No Phases	/	1	/	1
Tribal Recognition	0	Federal Tribal recognition	8	8	22	39
	1	State Tribal recognition	/	1	2	4
	2	Tribes seeking recognition	1	1	3	4
	3	Tribes explicitly excluded	/	/	1	1
	4	No mention of Tribes	/	/	6	6
Tribal Lands	0	Traditional lands	1	1	1	3
	1	Federally-recognized Tribal lands	2	3	4	9
	2	No mention of Tribal lands	7	5	25	37
Partnership	0	Not Mentioned	2	1	23	26
	1	Explicitly inequitable partnership	1	/	/	1
	2	Undetermined equitable Tribal partnership	6	7	7	20
Committee/Work Group Participation	0	Not Mentioned	5	5	29	38
	2	Undetermined equitable Tribal participation	4	1	1	7
	3	Equitable participation	/	2	/	2
Tribal Task Force	0	Not mentioned	9	8	30	47
Tribal Relations	0	Not Mentioned	6	5	29	40
	1	Explicitly excludes improving Tribal relations	/	/	/	0
	2	Improve Tribal relationships	3	3	1	7

Appendix G: Aggregated Coding Trends of FEMA Content Analysis (continued)

	Code	Brief Description	Strategic Documents	Tribe-specific Documents	Fiscal focus Documents	All Documents
Tribe-Specific Solutions	0	Not mentioned	9	5	24	38
	1	Explicitly Ineligible for resources	/	1	3	4
	2	Explicitly eligible for resources	/	2	3	5
Capacity-Building and Technical Assistance	0	Not mentioned	2	1	10	13
	1	Tribes ineligible	/	/	2	2
	2	Undetermined Equitable access	7	7	18	31
	3	Equitable access described	/	/	1	1
Access	0	Not Mentioned	1	/	6	7
	1	Denied Access	/	/	2	2
	2	Undetermined Equitable access	7	8	19	34
	3	Equitable access described	1	/	3	4
Funding	0	Not Mentioned	4	2	6	12
	1	Denied Access	/	/	5	5
	2	Available to Tribes	5	6	22	30
Indigenous / Traditional Knowledges	0	Not Mentioned	8	5	29	42
	1	Rejects ITK	/	/	1	1
	2	Some acceptance	1	3	/	4

Appendix H: Grant Award Data

Table H.1: Grant Breakdown by Region

Region	1	2	3	4	5	6	7	8	9	10
Non-Tribal Recipient and No Tribal Subrecipients	1,400	1,985	1,741	7,249	2,094	3,945	2,226	1,656	1,535	1,131
Non-Tribal Recipient and Tribal Subrecipient(s)	1	0	0	6	11	12	2	9	4	17
Tribal Recipient and No Tribal Subrecipients	0	0	0	2	2	0	0	3	1	1
Tribal Recipient and Tribal Subrecipient(s)	8	2	0	12	25	48	10	22	115	120

Table H.2: Grant Value and Cost Share

	Number	Grant Value (Mean)	Grant Value (Median)	Number	Cost Share (Mean)	Cost Share (Median)
Non-Tribal Recipient and No Tribal Subrecipients	1,400	1,985	1,741	7,249	2,094	3,945
Non-Tribal Recipient and Tribal Subrecipient(s)	1	0	0	6	11	12
Tribal Recipient and No Tribal Subrecipients	0	0	0	2	2	0
Tribal Recipient and Tribal Subrecipient(s)	8	2	0	12	25	48

Table H.3: Benefit-Cost Ratio and Net Benefits

	Number	BCR (Mean)	BCR (Median)	Number	Net Benefits (Mean)	Net Benefits (Median)
Non-Tribal Recipient and No Tribal Subrecipients	12,089	418.18	1.82	12,089	$2,400,000	$917,141
Non-Tribal Recipient and Tribal Subrecipient(s)	18	1.96	1.41	18	$1,209,775	$693,350.50
Tribal Recipient and No Tribal Subrecipients	2	1.16	1.16	2	$2,427,968	$2,427,968
Tribal Recipient and Tribal Subrecipient(s)	82	5.29	2.61	82	$5,081,355	$1,065,978

Table H.4: Number of Properties Mitigated

	Number	# Properties (Mean)	# Properties (Median)
Non-Tribal Recipient and No Tribal Subrecipients	9,463	14.34	1.00
Non-Tribal Recipient and Tribal Subrecipient(s)	13	5.46	5.00
Tribal Recipient and No Tribal Subrecipients	1	1.00	1.00
Tribal Recipient and Tribal Subrecipient(s)	31	7.16	1.00

Table H.5: Median Grant Value by Region

Region	1	2	3	4	5
Number	1,397	1,983	1,738	7,242	2,094
Non-Tribal Recipient and No Tribal Subrecipients	$99,975	$193,535	$154,787.50	$118,028	$ 104,548.30
Number	1	0	0	6	11
Non-Tribal Recipient and Tribal Subrecipient(s)	$119,133	-	-	$33,783	$63,000
Number	0	0	0	2	2
Tribal Recipient and No Tribal Subrecipients	-	-	-	$15,913.50	$56,149.67
Number	8	2	0	12	25
Tribal Recipient and Tribal Subrecipient(s)	$48,366.50	$166,447.20	-	$17,341.70	$64,690

Region	6	7	8	9	10
Number	3,944	2,226	1,655	1,533	1,130
Non-Tribal Recipient and No Tribal Subrecipients	$193,614.00	$97,566.50	$86,005.00	$222,899	$145,297.00
Number	12	2	9	4	17
Non-Tribal Recipient and Tribal Subrecipient(s)	$40,255.00	$85,587.00	$31,334.00	$54,549.00	$115,144.00
Number	0	0	3	1	1
Tribal Recipient and No Tribal Subrecipients	-	-	$66,225.33	$38,820.00	$185,000.00
Number	48	10	21	115	120
Tribal Recipient and Tribal Subrecipient(s)	$152,229.00	$71,278.50	$66,000.00	$65,350.00	$83,653.38

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