Strategic Disaster Planning for Native American Communities & Housing Program Training

October 1-2, 2024

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Day One Agenda

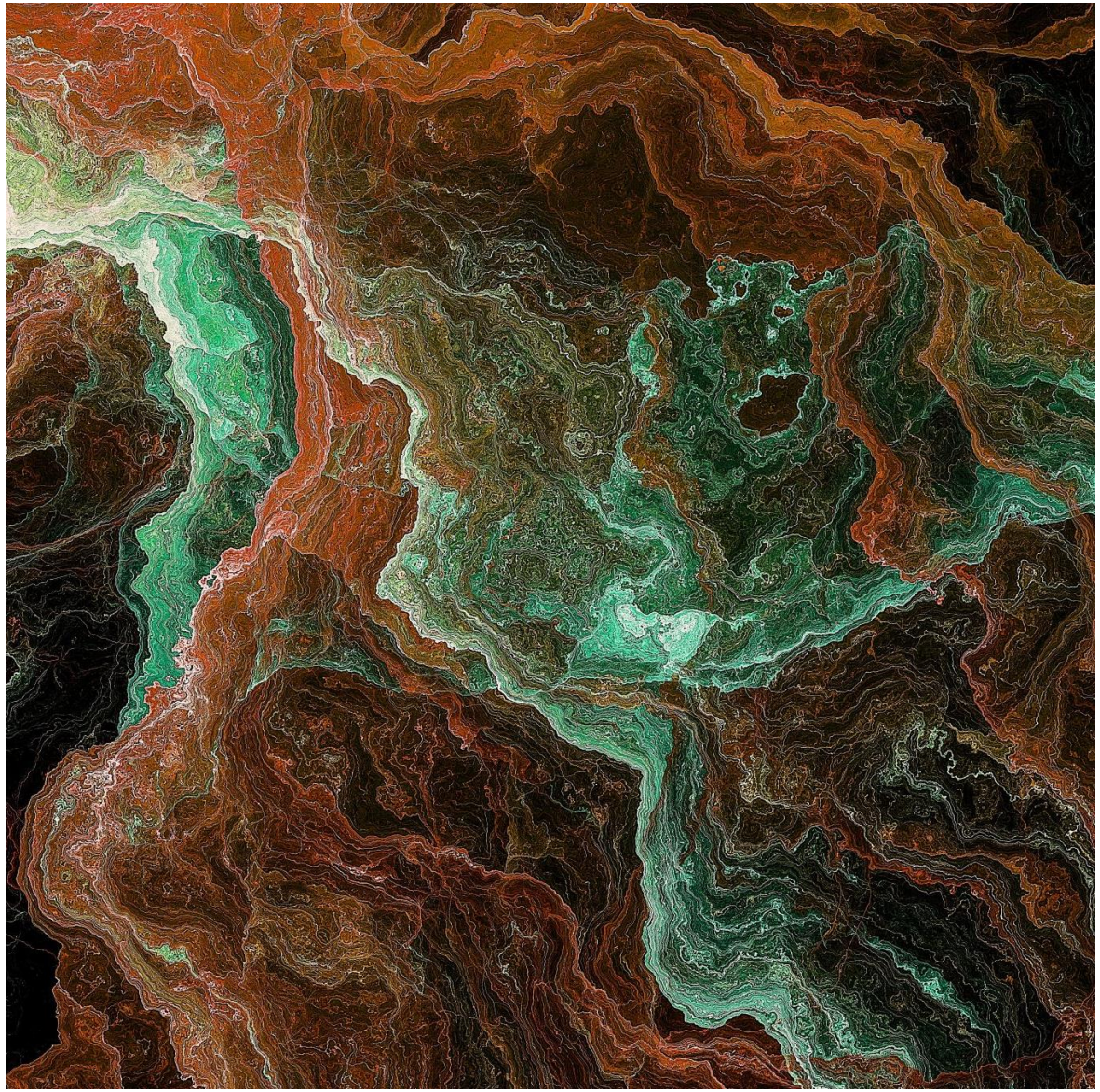
Welcome

Overview – Emergency Preparedness

Overview - Strategic Planning

Risk Assessment

Strategies – Epidemics and Natural Disasters



Welcome and Introductions

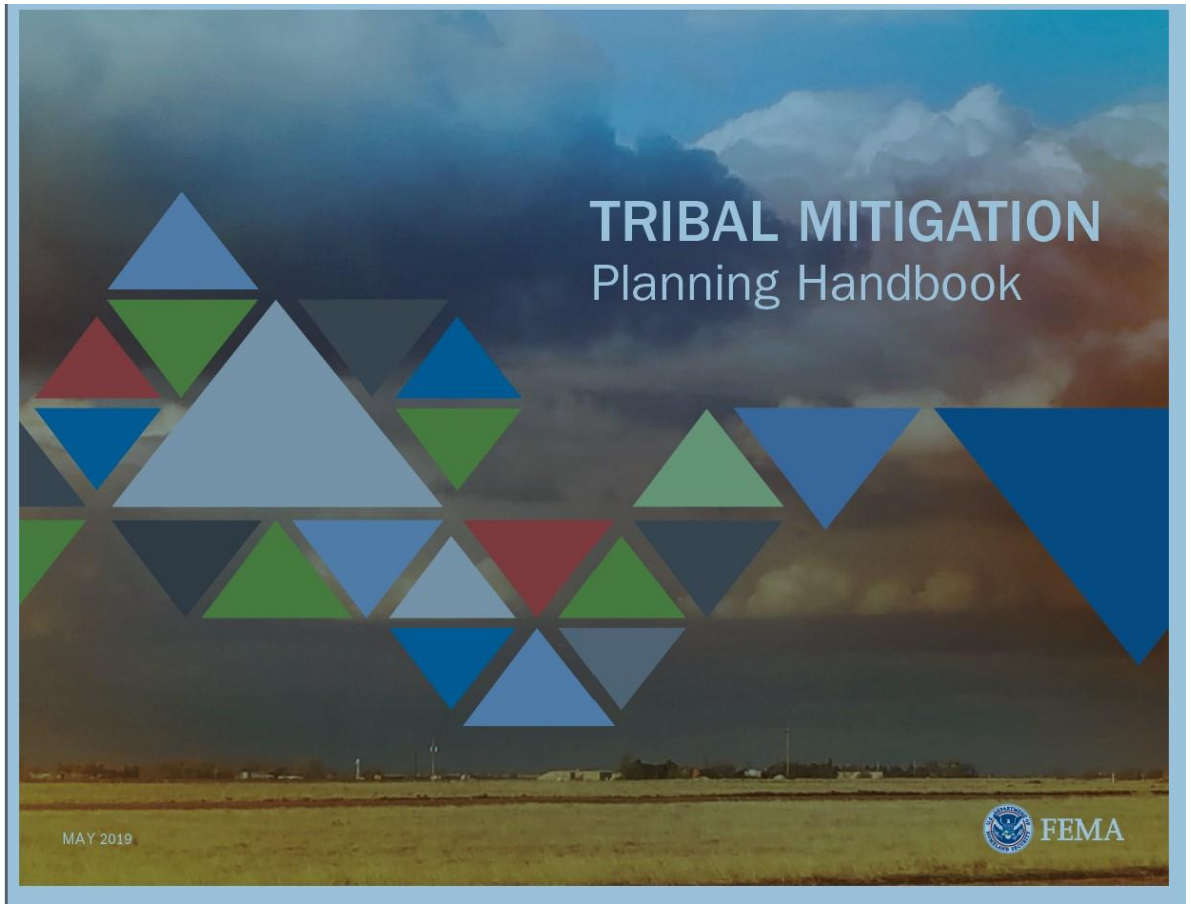
Instructor: Charles Anderson (Northwest Housing Consultants, LLC)

Course Objectives

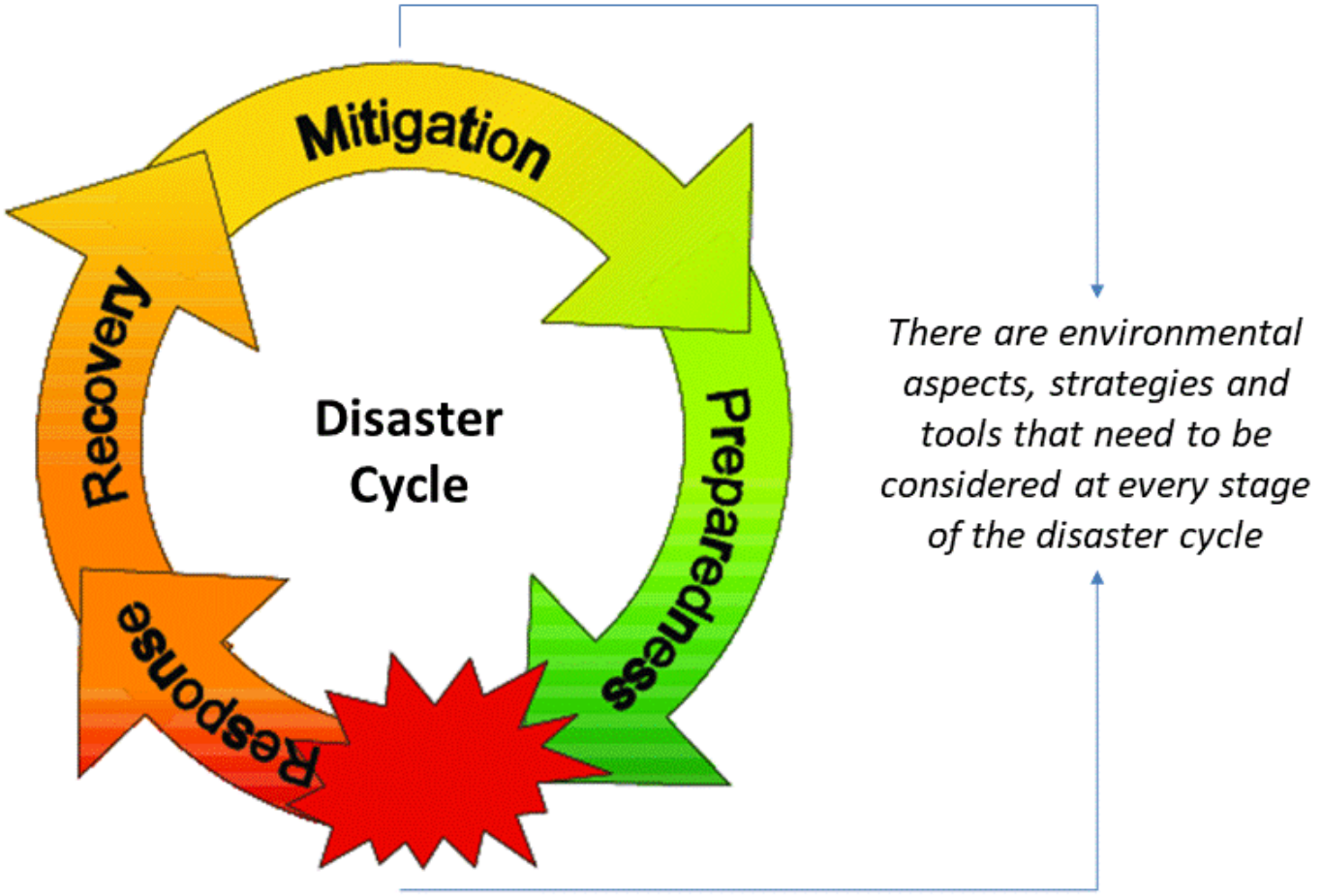
- ✓Understand the basics of the strategic planning process and how it can be utilized in the development of an emergency mitigation plan
- ✓Understand the difference between “risk” and “hazard”, and the process to develop a risk assessment based on the tribe’s capabilities and needed resources
- ✓Develop the skills needed to develop a risk management strategy encompassing the four phases of emergency management: mitigation, preparedness, response, and recovery.
- ✓Understand the three approaches to planning: Scenario, Functional, and Capabilities
- ✓Using Case Studies and tribal examples, gain and understanding of the critical steps in Emergency Plan development.

Primary Resources

- FEMA Tribal Mitigation Planning Handbook
- WHO Strategic Framework for Emergency Preparedness, 2017
- Emergency Management, Concepts and Strategies for Effective Management, Lucien G. Canton, 2019
- Tribal Hazard Mitigation Plans
  - Lummi Nation
  - Siletz Tribe
  - Tulalip Tribes
  - Shoalwater Bay



Overview of Emergency Preparedness



Definition: Emergency Preparedness

"… the knowledge, capacities, and organizational systems developed by governments, response and recovery organizations, communities, and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging, or current emergencies."

World Health Organization, Framework for a Public Health Emergency Operations Centre, 2015.

Definition: Hazard Mitigation Planning

State, local, tribal and territorial governments use the mitigation planning process to understand natural and epidemic hazard risks and develop long-term strategies to reduce the impacts of future events on people, property and the environment.

Hazard mitigation is most effective when it is implemented under a comprehensive, long-term mitigation plan. Having a mitigation plan increases awareness of hazards, risks and vulnerabilities; identifies actions for risk reduction; and focuses tribal resources on the greatest risks and mitigation priorities

Mitigation Planning Framework

A Continuous Process

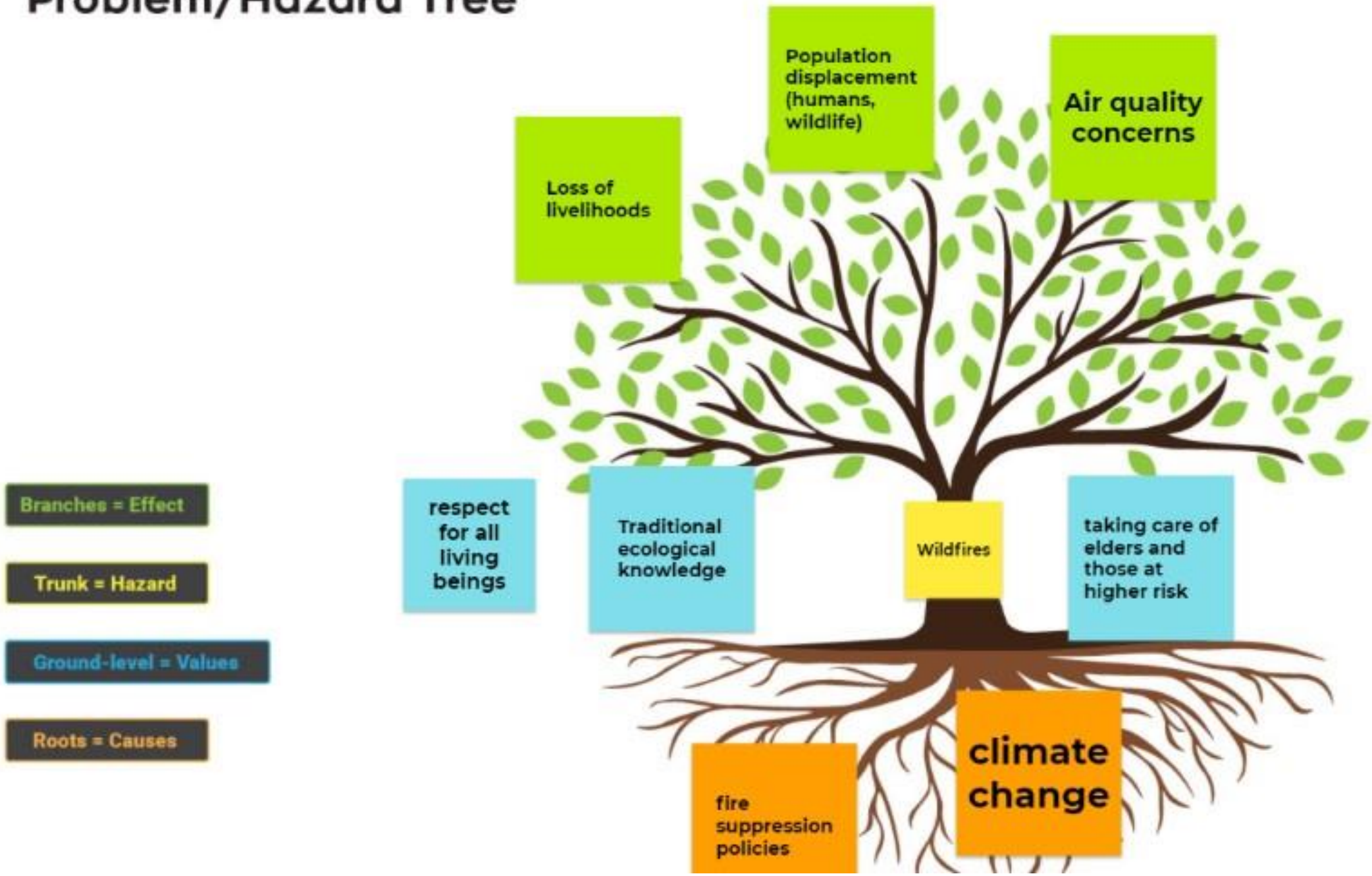
To be successful, all components must be sustained:

- Action
- Funding
- Partnerships
- Political Commitment

Stakeholders must consistently work together effectively to:

- Plan
- Invest
- Implement

Problem/Hazard Tree

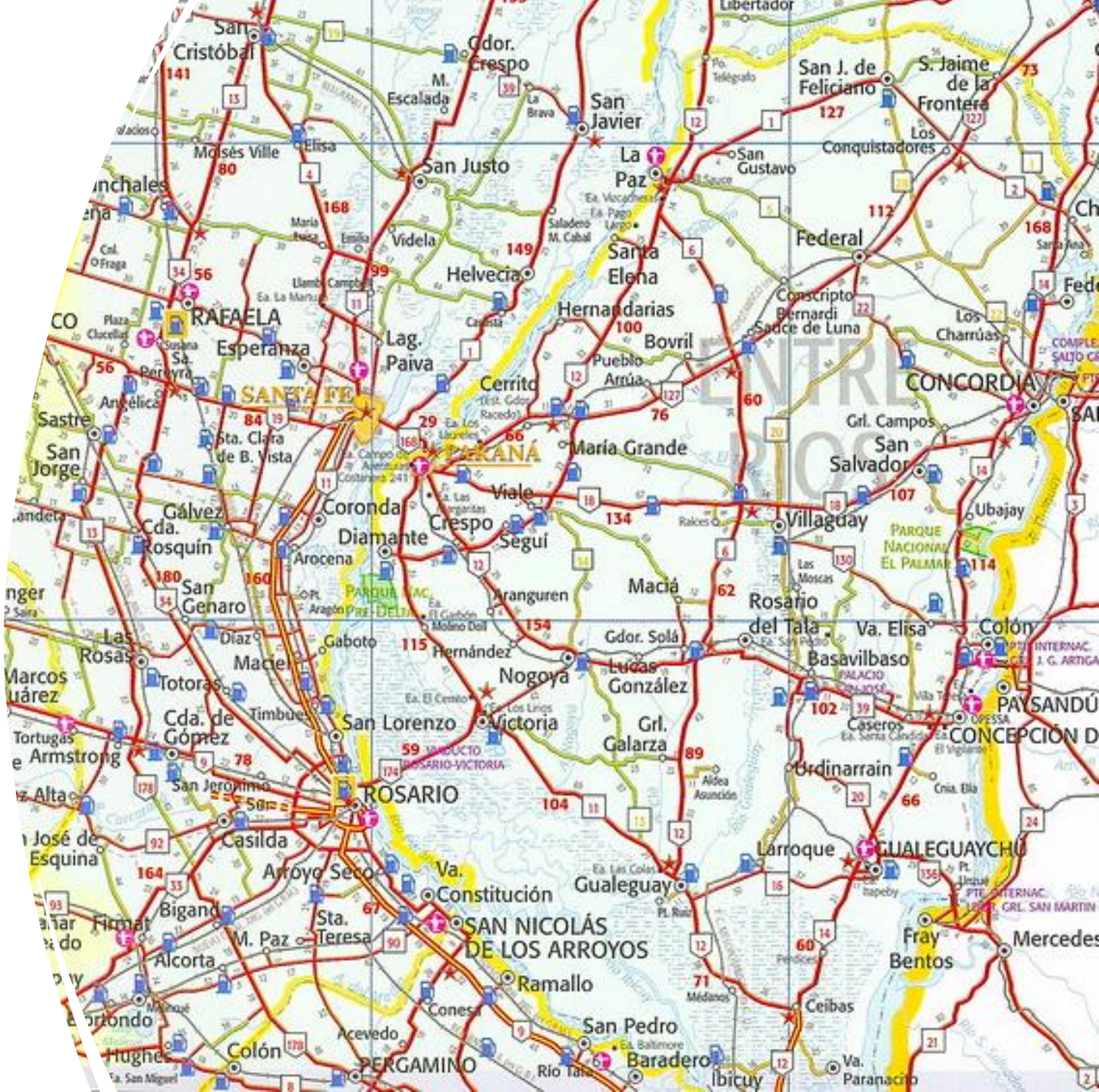


Using Strategic Planning

Developing Emergency Mitigation Plan

What is Strategic planning?

- A formal roadmap describing how a long-term plan will be executed
- One destination with many ways to get there



What is strategic planning?

A structured process that helps organizations turn a vision into reality by:

- Identifying the organization's goals for a certain period (3-5 years)
- Determining the operational and programmatic steps to get there
- Aligning resources and staff to achieve goals in the community and/or in the organization

CURRENT STATE

Where are we now?

Celebrate

SWOT Scan

PESTLE Analysis

FUTURE STATE

Where are we going?

3-year visioning exercise

3-year mission exercise

VALUES & RISKS

What will get in our way?

Values & behaviors

Risk Analysis

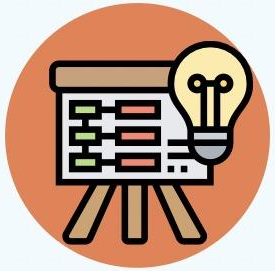
PRIORITIES & GOALS

What do we need to do?

Setting 3 Strategic Priorities

SMART goals

ACTION PLANNING



How will we implement our plan?

Action & Comms Planning

Critical Capacities

Why strategic planning?

- Drives organizational excellence
- Establishes priorities, direction and desired outcomes for the future
- Identifies changes that are occurring in the community
- Identifies changes that are needed in the community
- Improves efficiency and effectiveness
- Coordinates with partners and residents
- Becomes proactive instead of reactive

- Stakeholder Feedback
- Strategy Management
- Process Improvement
- Performance Measurement
- Portfolio Investment Management
- Change and Execution Management

Core concepts of strategic planning

"Change comes more from managing the journey than announcing the destination" – William Bridges

Strategic planning vs project planning

Strategic planning focuses on long term strategic planning inclusive of all initiatives, stakeholders, and projects

Project planning focuses on a specific set of tasks for a defined project with limited stakeholders and typically for a shorter duration

How can strategic planning be used?

Flexible planning approach to define and coordinate activities for example:

- Organizational development
- Housing program creation
- Community development planning
- Goal-focused planning
- Contingency planning
- Emergency preparedness – mitigation plan

How can strategic planning be used?

In the community:

- Create a comprehensive community plan
- Identify infrastructure needs
- Identify the best use of land
- Target land use for housing, schools, employment, recreation, services, etc.
- Identify cultural and natural resources for protection
- Identify potential hazards and associated risks to plan use of resources

How can strategic planning be used?

For an organization including a tribe or a housing entity to:

- Establish the mission of an organization
- Set objectives for an organization
- Lay out a strategy to achieve these objectives

Strategic planning for organizational capacity development

- Identify capacity and performance gaps
- Analyze causes
- Develop strategy to transform organization
- Coordinate with leadership to obtain support for plan
- Identify support services/resources needed to assist in implementation

Example: strategic planning for organizational development

Example: staff turnover has resulted in poor performance and a lack of capacity

Strategic plan goals:

- Professional level staff are needed to properly operate the housing program and train staff
- Staff need to be supported with training and policy guidance
- Staff need to have career opportunities with competitive benefits and pay

Strategic planning for Program Development

- Visioning and Goal Setting
- Getting Organized
- Data Gathering & Analysis
- Plan Development
- Roll Out and Implementation

Example: strategic planning for increasing homeownership opportunities

Strategic Plan Data and Analysis:

- Tribe's economic development activities provides opportunities for higher income jobs
- Insufficient number of single-family homes available for purchase
- Savings of rental housing residents is insufficient to quality for the purchase of homes at market value
- Mortgage assistance program budget estimate:
  - $25,000: Soft second mortgage required for each participant
  - $65,000: Annual program cost to operate the program

Strategic planning for increasing homeownership opportunities

- Define target market for the project
- Analyze the needs and capacity of that market
- Identify location, housing type and needed support services of the target market for the program
- Evaluate the feasibility of the project
- Develop program policy and staffing plan
- Coordinate with leadership to obtain support for plan
- Identify strategies to develop support, resources, and partnerships for the new program

What are the benefits of Strategic Planning?

What are the benefits of strategic planning?

Understanding Needs

- Whose Needs?
  - Council
  - Residents
  - Organizations
- What Needs?
  - Culture
  - Financing
  - Land and Environment
  - Infrastructure

What are the benefits of strategic planning?

Facilitating Financing

- Leveraging resources
- Leveraging existing funding
- Partnering with financial entities

What are the benefits of strategic planning?

Developing Partnerships

- Tribal Council
- Local and County government agencies
- Other tribes
- Vendors
- Service providers
- Community members

What are the benefits of strategic planning?

Assessing Capacity

- An understanding of the desired capacity of a resource vs. the existing capacity
- An understanding of capacity assets and needs

What are the benefits of strategic planning?

Setting Priorities

- Identifying priorities leads to proper allocation of resources and finances
- Also shows where you should be dedicating the most time

What are the benefits of strategic planning?

Establishing Goals

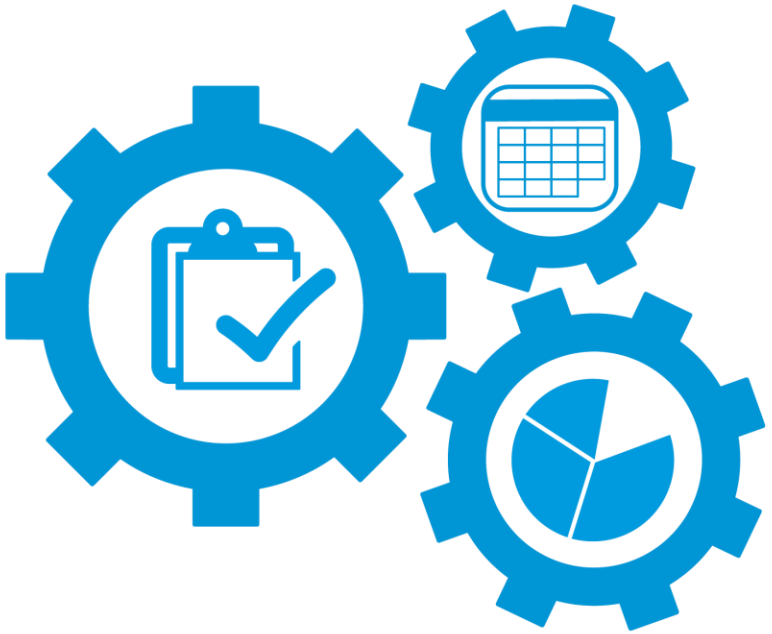
- Important to staying in line with the overall vision of the organization
- Provide measurable objectives to keep track of progress

What are the benefits of strategic planning?

Identifying Desired Outcomes

- Is a combination of achieving your goal and reaching it in an acceptable way
- Identifying desired outcomes will help you determine how you want to achieve your goal

What are the benefits of strategic planning?



Allocating resources

What are the benefits of strategic planning?

Obtaining Public Support

- Similar desired outcomes
- Public is going to care about achieving outcomes

What are the benefits of strategic planning?

Establishing a Management Strategy

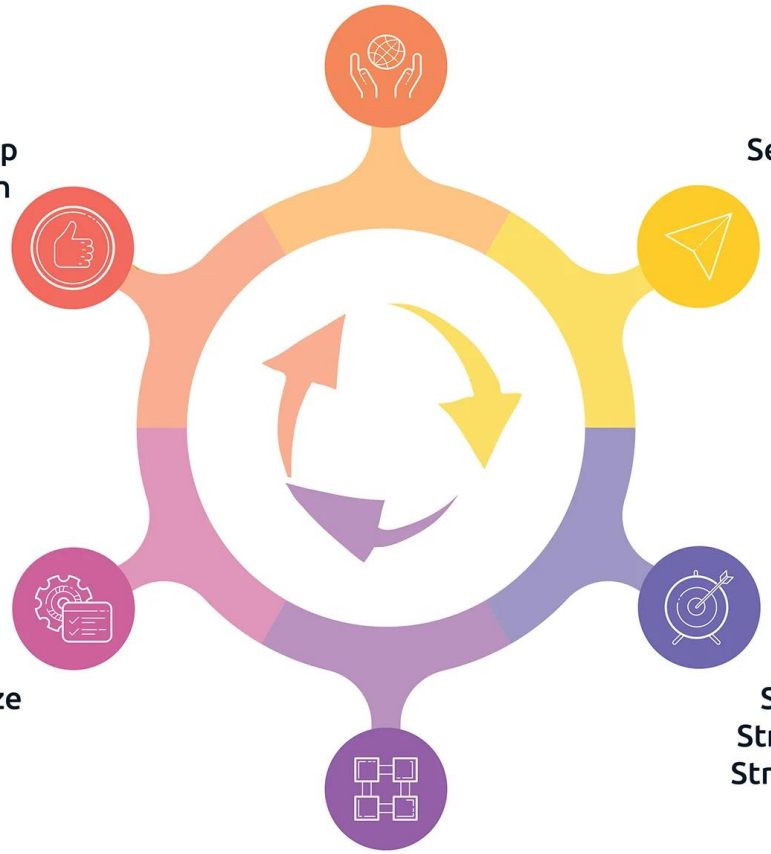
- Use goals, priorities, and resources to develop a plan
- A plan will consist of multiple strategies that will take you to your overall goal

What are the benefits of strategic planning?

Identifying values, mission, purpose

- Important for an organization to stay true to its character
- Establish a mission by thinking of long-term goals
- Purpose and values define what your organization stands for

STRATEGIC PLANNING PROCESS



01
Analyze your Business Environment

02
Set your Strategic Direction

03
Set and develop Strategic Goals and Strategic Objectives

04
Drill down to Department-Level Objectives

05
Manage and Analyze Performance

06
Review and develop your Strategic Plan

Digital Leadership

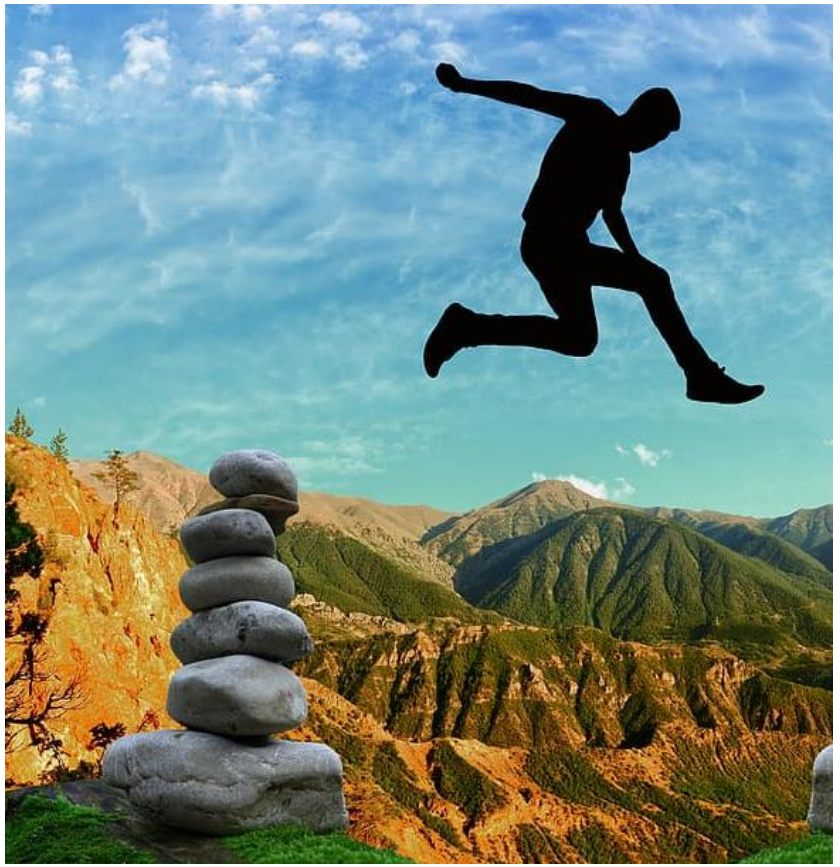
Risk Assessment

Risk vs. Hazard

The Nature of Risk

Risk is the foundation of the emergency management program

- Starts with risk appraisal
- Based on realistic assumptions
- Provides justification for commitment of program resources
- Highlights opportunities for mitigation
- First step in problem-solving: a realistic definition of the problem



Hazard vs. Risk

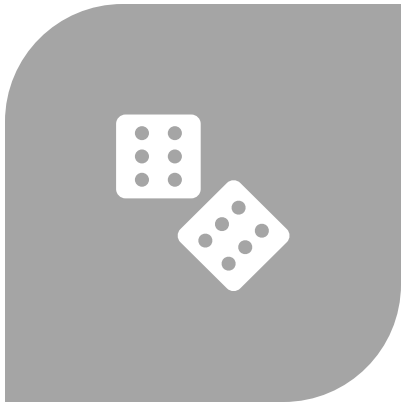
A **hazard** is a source or a situation with the potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.

Risk is the probability of an event occurring and the estimate of the impact of the event.

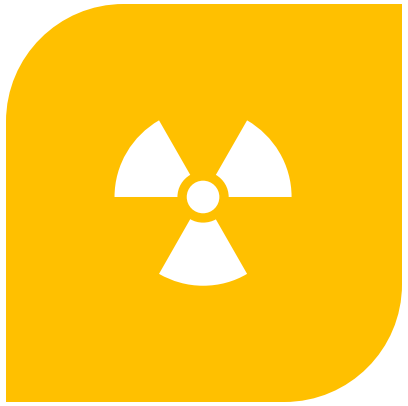
For example, a tornado is a type of hazard, but the risk of a tornado is much greater in the Midwest than in the Northwest. However, the risk of an epidemic might be more based on the population (elderly for example) than on geography.

How is risk created?

VULNERABILITY



PROBABILITY

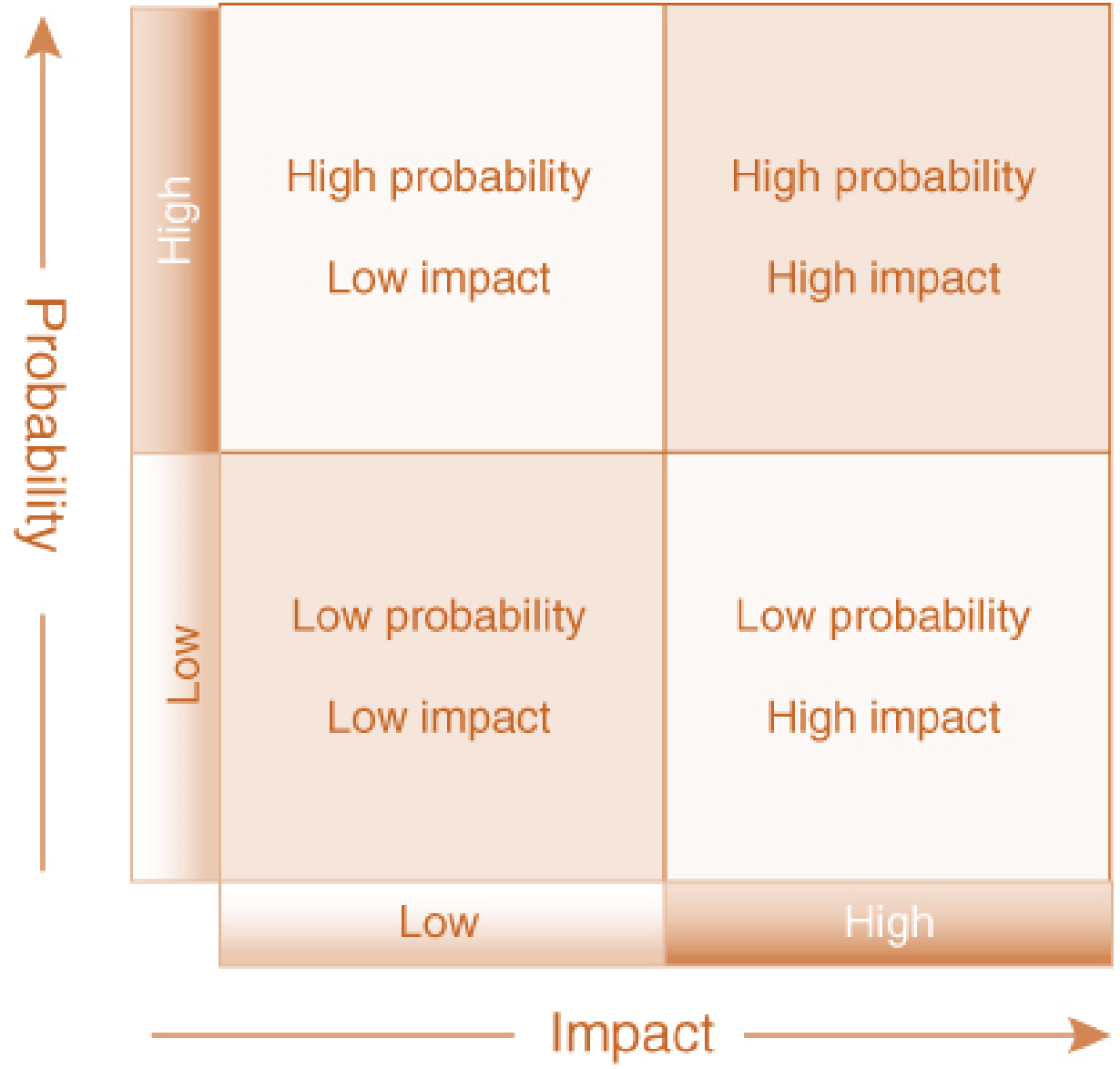


RISK

Example Threats and Hazards by Category

Natural	Technological	Human-caused
Avalanche	Dam failure	Active shooter incident
Drought	Hazardous materials release	Armed assault
Earthquake	Industrial accident	Biological attack
Epidemic	Levee failure	Chemical attack
Flood	Mine accident	Cyber-attack against data
Hurricane/Typhoon	Pipeline explosion	Cyber-attack against infrastructure
Space weather	Radiological release	Explosives attack
Tornado	Train derailment	Improvised nuclear attack
Tsunami	Transportation accident	Nuclear terrorism attack
Volcanic eruption	Urban conflagration	Radiological attack
Winter storm	Utility disruption	

Hazard Analysis Matrix



Hazard analysis and risk assessment matrix with proposed actions					
	HAZARD SEVERITY				
HAZARD LIKELIHOOD	**Critical Illness or Injury**	**Severe Illness or Injury**	**Moderate Illness or Injury**	**Minor Impact**	**Negligible Impact**
Very Likely	Requires Control	Requires Control	Requires Control	Manageable	Manageable
Likely	Requires Control	Requires Control	Manageable	Manageable and Tolerable	Tolerable
Possible	Requires Control	Manageable	Manageable and Tolerable	Tolerable	Acceptable
Unlikely	Manageable	Tolerable	Tolerable	Acceptable	Acceptable
Highly Unlikely	Tolerable	Acceptable	Acceptable	Acceptable	Acceptable

Risk assessment form

RISK	LIKELIHOOD	IMPACT	RISK RATING	RESPONSE (ACTION)
Absence of warning signs on the heavy machinery can cause severe accidents	3	4	12	Warnings signs must be placed and explained to the employees.
Water leakage can cause injuries due to falls (bruises, broken limbs)	1	3	3	Equip employees with slip-resistant boots and place "Wet floor" warning signs.
Noise level coming from the quipment is above acceptable criteria and can cause hearing loss and stress	2	4	8	CE markings must be requested for equipment. Noise level must be checked. The level must not be higher than 85 dBA.
Non-qualified machinery operators with insufficient experience can cause injuries and fatalities	2	5	10	Qualifications of the operators must be checked.
Electrical leakage can cause severe accidents and fatalities	5	5	25	Wiring of equipment must be inspects before each use. Damaged or frayed electrical cords must be replaced immediately. Enforce safe work practices every time electrical equipment is used.

The THIRA Process

Threat and Hazard Identification and Risk Assessment

THIRA Overview

Helps communities to answer the following questions:

1. What threats and hazards can affect our community?
2. If they occurred, what impacts would those threats and hazards have on our community?
3. Based on those impacts, what capabilities should our community have?

Three Steps in the THIRA Process

Step 1: Identify threats and hazards of concern

Develop

- Develop a list of threats and hazards that could affect the community, based on a combination of experience, forecasting, subject matter expertise, and other available resources.

Consider

- Consider only those threats and hazards that challenge the community's ability to deliver at least one core capability more than any other threat or hazard

Output

- Output: List of threats and hazards of concern

Step 2: Give threats and hazards context

Describe

- Describe the threats and hazards identified in Step 1, showing how they may affect the community and create challenges in performing the core capabilities.

Identify

- Identify the impacts a threat or hazard may have on a community.

Output

- Output: Context descriptions and impact numbers

Step 3: Establish capability targets

Determine

- The level of capability that the community plans to achieve over time in order to manage the threats and hazards it faces.

Create

- Capability targets for each of the core capabilities based on this desired level of capability by identifying impacts, objectives, and timeframe metrics.

Output

- Capability targets based on standardized target language.

Hawaii THIRA

Strategies: Epidemics

Developing Risk Management Strategy for Pandemics: Using what we have learned

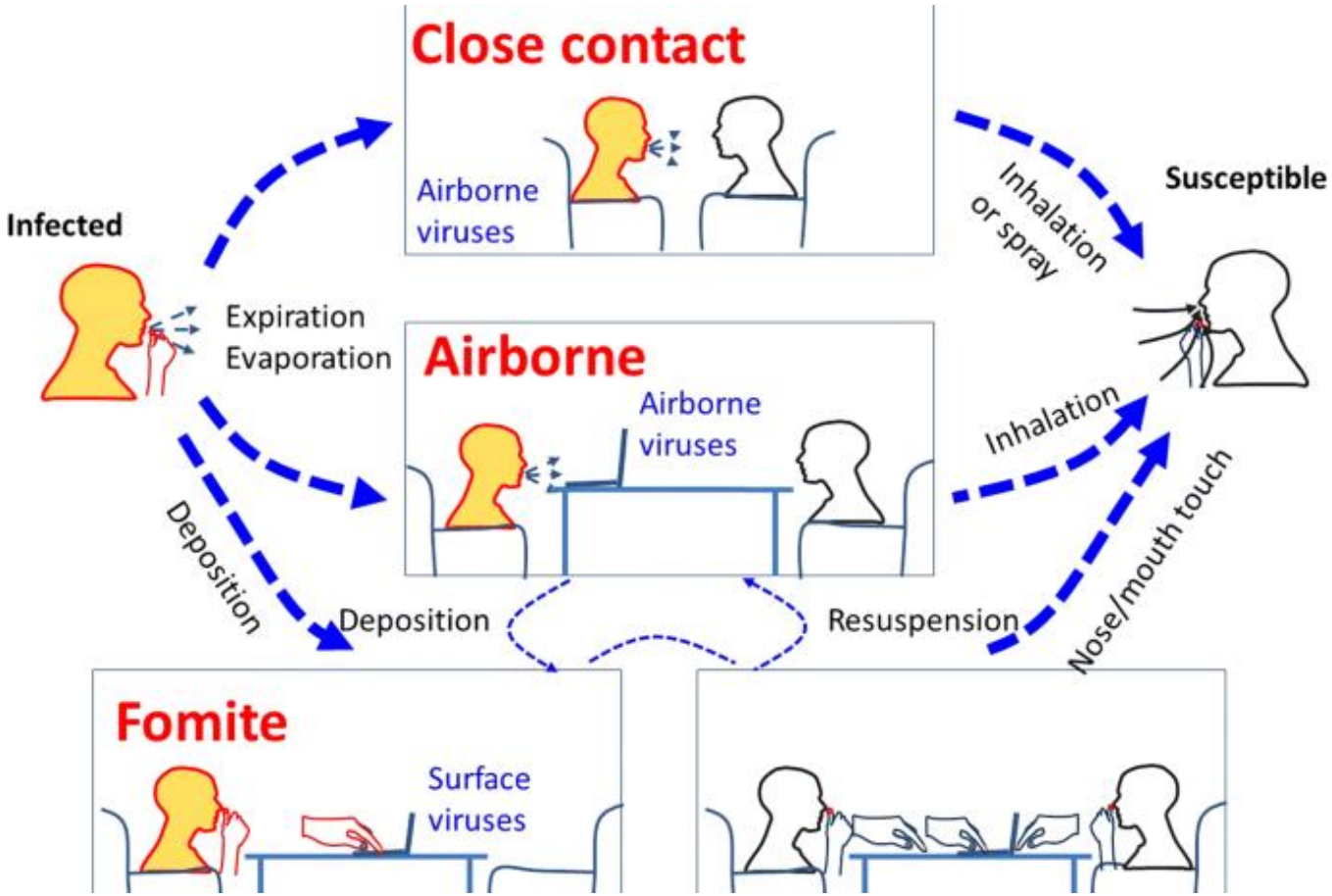
Role of the Tribe/TDHE

Tribes and TDHE's can play a key role in preventing and slowing the spread of infectious diseases within the workplace. Employers' preparedness, response, and control plans should consider workplace factors such as

- feasibility of social distancing in the workplace
- ability to stagger employee shifts
- degree to which employees interact with the public in person
- feasibility of accomplishing work by telework
- geographical isolation of the workplace, whether employees live in congregate housing, proportion of employees at increased risk for severe illness
- policies regarding sick leave for staff, and
- priority for continuity of operations.

Tribes and TDHE's should also consider the level of disease transmission in their communities.

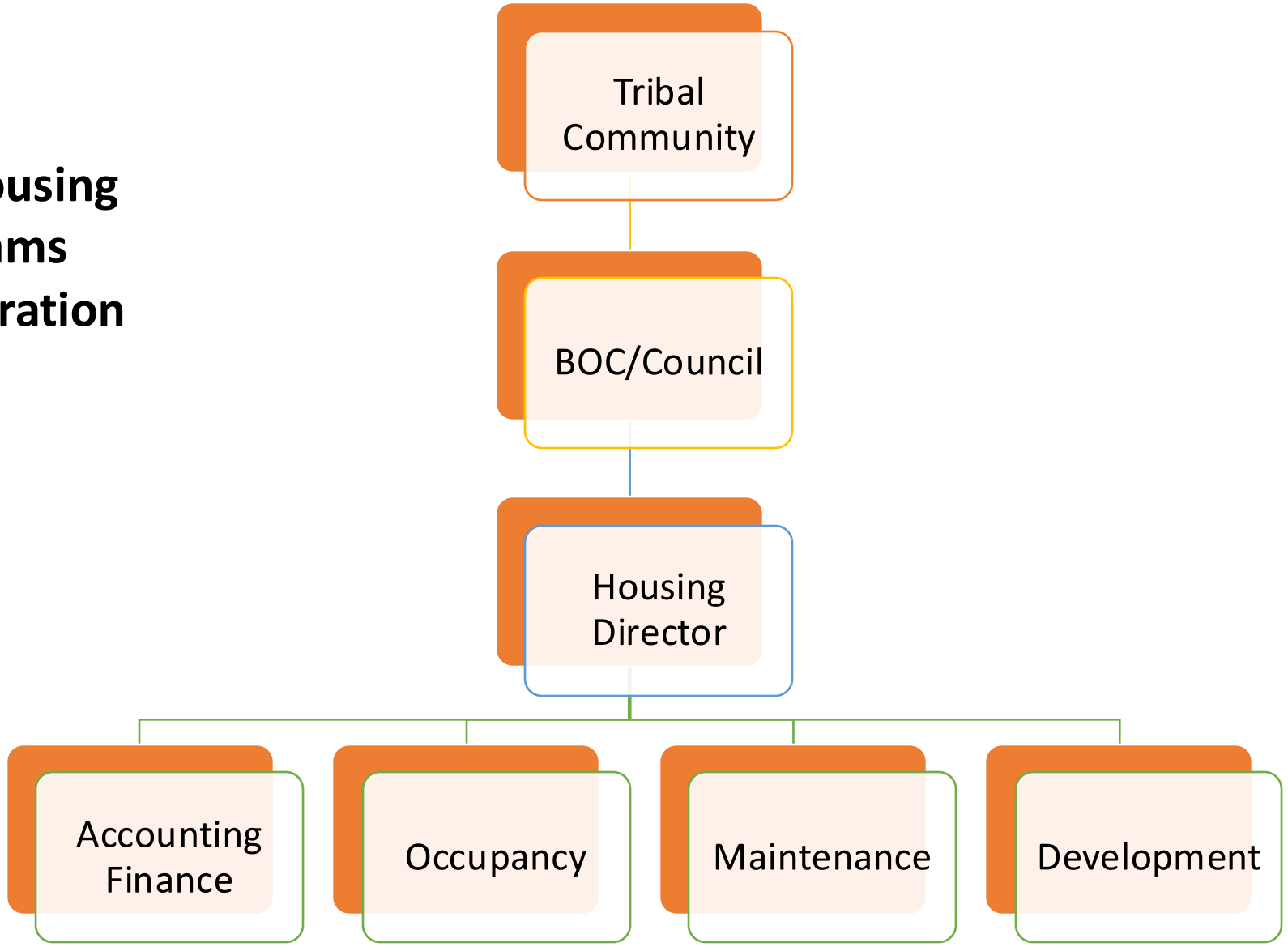
How Does a Virus Spread?



Assess Essential Functions

- Be prepared to change your business practices, if needed, to maintain critical operations (e.g., identify alternative suppliers or temporarily suspend some of your operations).
- Identify alternate supply chains for critical goods and services. Some goods and services may be in higher demand or unavailable.
- Talk with contractors and others providing services about the importance of sick employees staying home and encourage them to develop non-punitive leave policies.
- Identify and prioritize job functions for continuous operations. Minimize the number of workers present at worksites by balancing the need to protect workers with support for continuing operations.

Tribal Housing Programs Administration



Staff Communication is Key

Messaging service: keep lines of communication open with a messaging service which might work better than email for quick conversations, project management, and sharing files quickly with your whole team.

Email: email should still be used for formal communications such as leave requests, formal assignments, company resources, etc.

Video conferencing: in addition to chat, use video conferencing for staff meetings and to retain the human element of teamwork.

Implementing a Workplace Prevention Program – Key Elements

1. Hazard assessment
2. Identify measures to limit the spread
3. Ensure infected workers are separated
4. Implement protections from retaliation

Workplace Risk Assessment

- **Lower exposure risk** – jobs that do not require contact with suspected viral cases. Minimal contact with public and coworkers. (Some office workers; working at home)
- **Medium exposure risk** – jobs that require frequent and/or close contact with suspected viral cases. May have contact with public or work indoors with poor ventilation. (Some office workers, maintenance, construction)
- **High risk** – jobs have high potential for exposure to known or suspected viral cases. (Some office workers, healthcare workers, maintenance, construction)
- **Very high exposure risk** – high potential for exposure and conducting specific procedures that increase exposure. Healthcare workers conducting aerosol generating procedures on known or suspected viral cases.

Recommendations for In-home Service/Repair

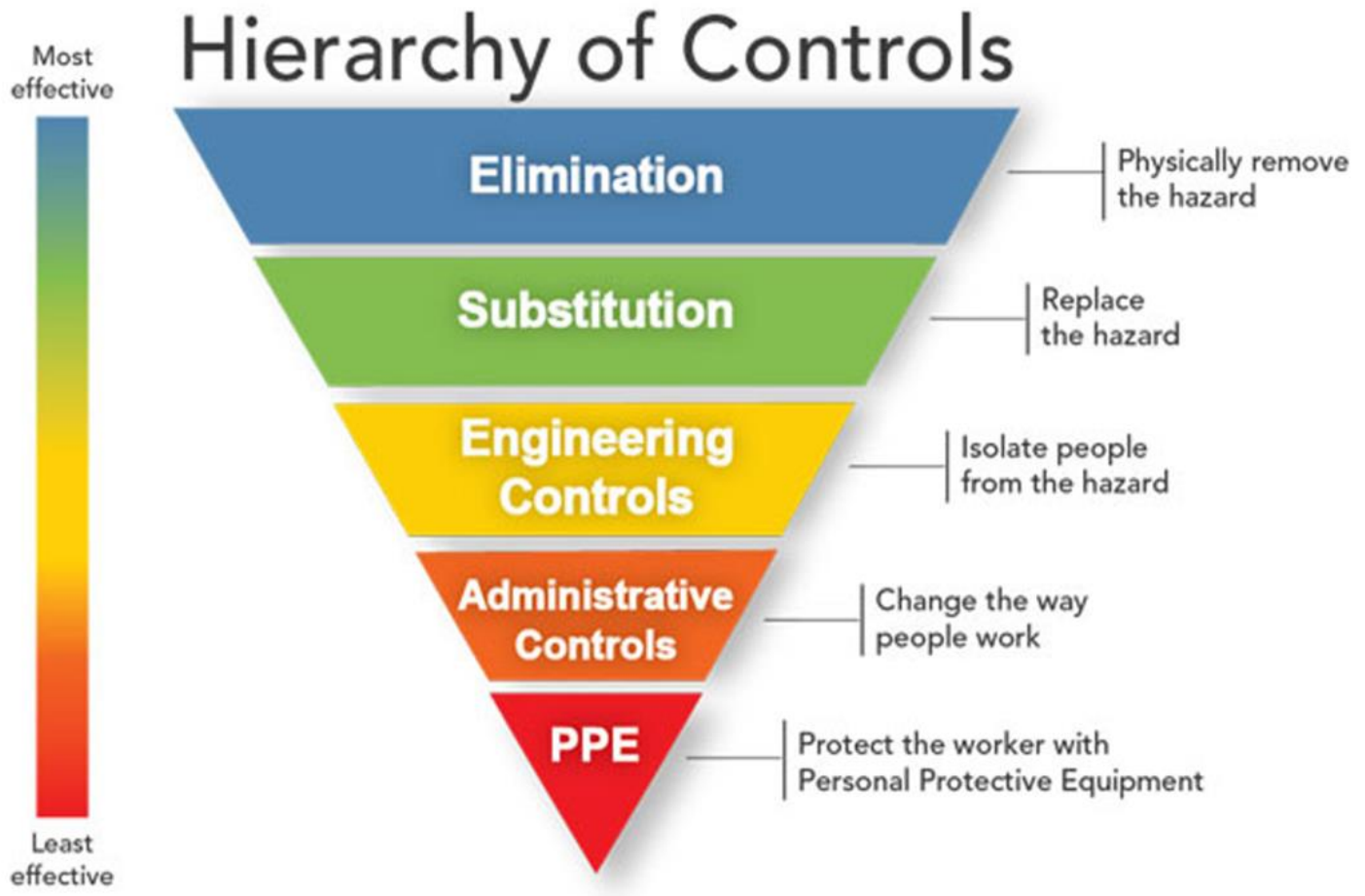
- **Updated**: OSHA Protecting Workers Guidance
- **Medium risk**- Housing workers conducting in-home services with ongoing community spread when the household members have been pre-screened for viral signs and symptoms.*
- **High risk** – Housing workers conducting in-home services with ongoing community spread without household member pre-screening or when entering the home of a known case.*

**Updated guidance on OSHA recognized risk levels pending CDC updates*

Infectious Disease Prevention Programs

- Vaccination following CDC recommendations
- Alternative work schedules
- Staff and visitor virus screening
- Social distancing
- Masking updates for vaccinated people
- Ventilation in buildings
- Hand hygiene
- Cleaning and disinfection
- Personal protective equipment

Image 1: Hierarchy of controls



Employee Training

- Workplace infection risk
- Protective measures
- Self-screening at home
- Cleaning and disinfection
  - List of high-touch surfaces and frequency
  - Safety data sheet review, and disinfectant label instructions
- When PPE is required

Social Distancing Strategies for the Workplace

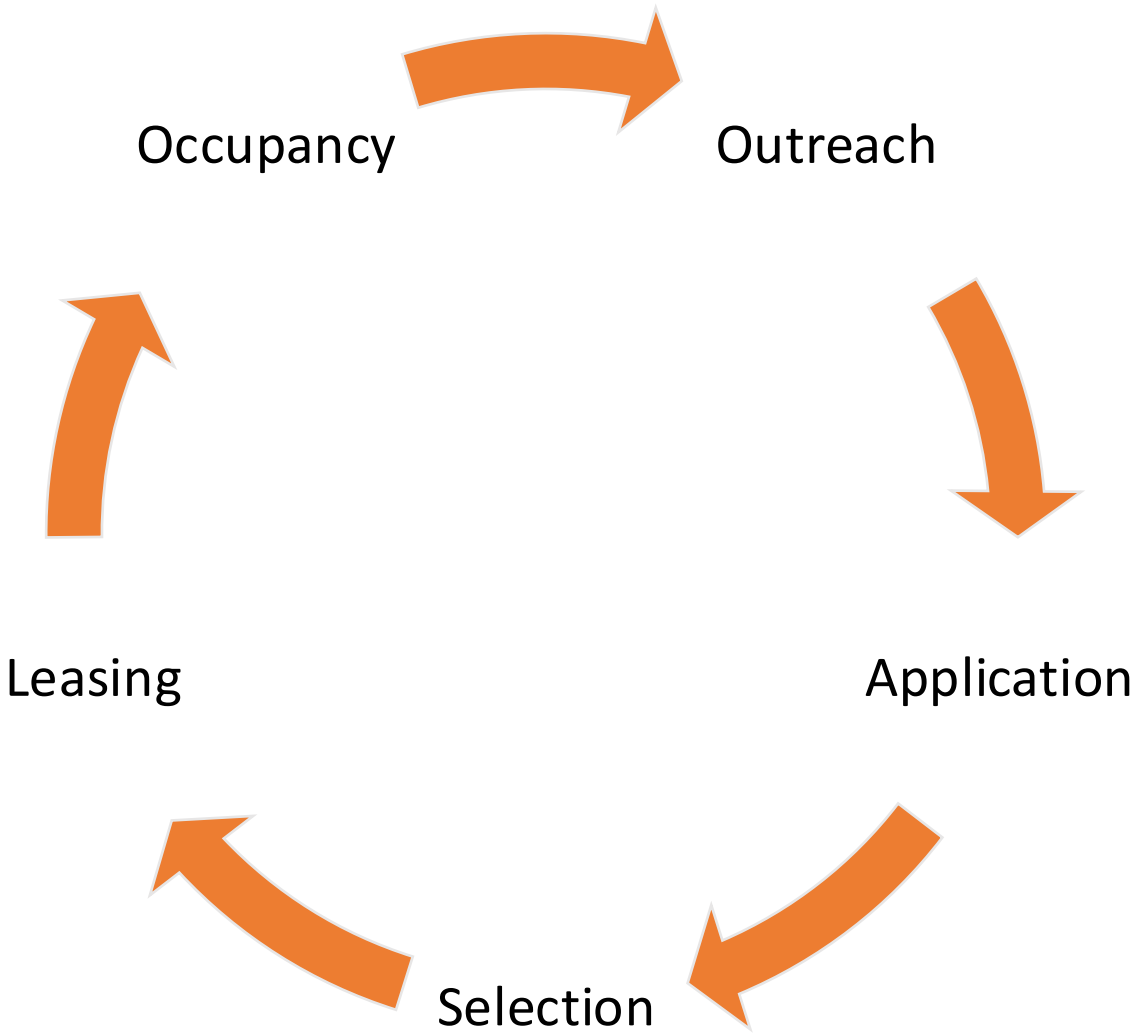
Alter your workspace to help workers and clients maintain social distancing and physically separate employees from each other and from clients, when possible. Here are some strategies that businesses can use:

- Implement flexible worksites (e.g., telework).
- Implement flexible work hours (e.g., rotate or stagger shifts to limit the number of employees in the workplace at the same time).
- Increase physical space between employees at the worksite by modifying the workspace.
- Increase physical space between employees and customers (e.g., drive-through service, physical barriers such as partitions).

Social Distancing Strategies for the Workplace (continued)

- Use signs, tape marks, or other visual cues such as decals or colored tape on the floor, placed at least 6 feet apart, to indicate where to stand when physical barriers are not possible.
- Implement flexible meeting and travel options (e.g., postpone in-person non-essential meetings or events in accordance with state and local regulations and guidance).
- Close or limit access to common areas where employees are likely to congregate and interact.
- Prohibit handshaking.
- Deliver services remotely (e.g., phone, video, or web).

Program Activities



Counselors Provide Financial Assessment & Planning

Housing Counseling can help households address their financial situation and avoid deepening financial losses and debts due to the epidemic.

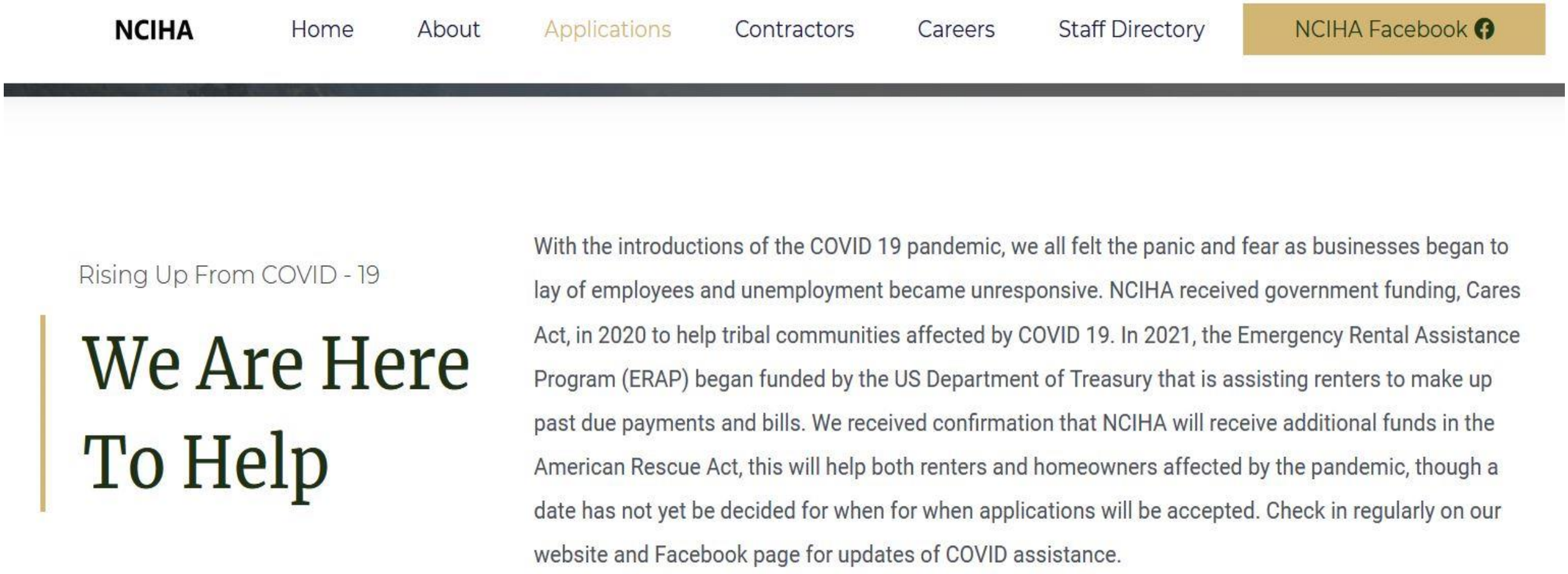
Counselors assess the client's financial situation so they can begin the process of negotiating credit card payments and collections, addressing income, credit and debt issues, and student loan options and ensuring the client is safeguarded against fraud, scams and identify theft.

Agencies are also offering virtual financial classes specific to those seeking financial security — searching for real-time information on how to maneuver the maze of financial products and services, establish or rebuild credit, reduce debt and save for the future.

Assistance for Homeowners, Renters & the Homeless

- Housing Counselors work with lenders and landlords to negotiate mortgage or rent forbearance and eviction avoidance.
- Counselors work closely with the various lenders and communities of government and are knowledgeable of rules and regulations so they can offer first-hand experience to help advise clients of their options prior to entering into any agreement.
- Counselors will also help the client to understand the State/local foreclosure laws and how to navigate the current moratorium on foreclosures and evictions.
- Housing Counselors also coordinate with landlords, Continuum of Care (CoC) bodies and other social service providers to offer specialized rental and homeless counseling services to avoid eviction and ensure successful placement.

Northern Circle Indian Housing Authority



https://nciha.org/applications/

Policy Revisions

Families may be reluctant to move during an epidemic, and therefore it may be necessary to relax requirements for accepting offers

Preferences might need to be revised for families that are suffering from the impact of the epidemic

Temporary Housing and Shelters

- Tribes/TDHEs may house low-income non-Indian families or over-income Indian and non-Indian families in NAHASDA-assisted units, including FCAS units, to shelter-in-place those families to protect the Tribal community from the further spread of the epidemic, regardless of income or Indian status.
- IHBG funds may also be used to provide temporary rental assistance to otherwise ineligible persons or families in privately owned units, hotels/motels, and similar facilities designed to shelter-in-place or isolate infected persons from others, if the criteria under this waiver and alternative requirements are met.
- The use of NAHASDA-assisted units, including FCAS, or funds for the temporary shelter-in-place or isolation of any individuals shall be temporary and no individual shall be isolated longer than medically necessary.

If Policy Requires Recertifications

Option 1: conduct recertification remotely

- Mail or email form, to be completed and returned by mail or email.
- Conduct by phone, documented by written record
- Use online form or fillable PDF

Option 2: consider revising policies to stop requiring recertifications

- For all programs
- For certain programs (homeownership, for example)
- For certain families (elderly, for example)

Policy Changes - Communications

Seek opportunities to streamline procedures for reporting changes to income. For example, tribes may relax verification requirements for reporting income reductions.

Provide the ability for residents to submit a simplified income reduction form online and send proof of reduced income. Rents are then reduced without immediate documentation from the tenant.

In addition, where the sole source of household income is lost, rents are reduced to the program's minimum rent or hardship rent.

Outreach to families behind on payments

- Identify the families who are behind on rent and determine the cause of non-payment. In tandem with this effort, identify the range of options and resources available to promote housing stability.
- Share information and discuss how families who are behind on rent can assess their eligibility for various resources.
- Key benefits that may enable families to catch up on rent include unemployment benefits, economic impact payments (commonly referred to as stimulus payments), tax refunds such as the Earned Income Tax Credit (EITC), utility assistance or payment plans, and local rent and utility assistance resources.
- Information on resources can be included with rent reminder notices, discussed at income reexaminations or rent conferences, and discussed as part of other direct outreach and one-on-one conversations with residents.

Outreach to families behind on payments

- Remind tenants that the federal economic impact payments (stimulus payments), income tax refunds, and the child tax credit are NOT included in their income calculation. There may be a concern among tenants that if they pursue an interim reexamination these income sources will be included in the calculation of income.
- Tribes and TDHEs may also consider using emergency federal funds (if available and allowable) to hire additional staff to respond to epidemics, such as an Eviction Prevention Coordinator or Service Coordinator.

Inspection Requirements

- NAHASDA does not speak to the scheduling and/or frequency of inspections; however, inspections are necessary to ensure that FCAS units are maintained as required in order to continue receiving subsidy.
- Because regulations do not address inspections, tribes/TDHEs must look to and follow their policies regarding inspection requirements.
- During the epidemic, it may be necessary to amend policies to provide some flexibility. For example, if policy states, “all units shall be inspected at least annually”, it may be preferable to say, “every effort shall be made to inspect every unit at least annually.”

HUD Protocols for Inspections during Epidemics

- The inspection of high priority/risk properties before other properties (existence of threat to health or safety of occupants);
- Evaluation of known property-specific health conditions prior to the inspection;
- Regular testing of inspectors and efforts to facilitate the vaccination of inspectors;
- Travel and quarantine guidelines for inspectors;
- Detailed operational protocols for inspectors' pre-inspection, during the inspection, and post-inspection reviewed by the CDC;
- Ability for residents to opt-out of unit inspections when inspectors arrive on-site.

In-Person Payments (cash or check)

- In-Person payments require that the family come into the housing office and make their payment, subjecting both the tenant and the staff person receiving the payment to infection.
- This method can be used if there are steps taken to increase physical space between employees and tenants (e.g., drive-through service, physical barriers such as partitions) and by requiring that both the tenant and the staff person where masks.

Alternatives to In-Person Payments

- Bank Transfers
- Payroll Deductions
- Per Capita Deductions

Repayment Agreements

- Consider reviewing and potentially revising the policy on repayment agreements. For example, due to an epidemic event, you could possibly broaden the policy on repayment agreements, allowing residents to enter into a longer-term repayment agreement without the need to pay a lump sum.
- Amend repayment agreement language to include an exception for "extreme circumstances."
  - *"Due to the extreme circumstance of an epidemic, the tribe is allowing residents to enter a longer-term repayment period without the need for a lump sum payment*."
- Allowing a longer-term repayment period, and removing the lump sum requirement, provides additional relief to residents owing larger amounts.

Implementing virtual meetings

- Implement flexible meeting and travel options (e.g., postpone in-person non-essential meetings or events in accordance with tribal, state, and local regulations and guidance).
- For BOC or Council meetings, ensure that allowed by Bylaws – make amendments if necessary
- Ensure that participants have necessary technology available
  - Laptop, desktop, or tablet (not smartphones)
  - Video camera
  - Microphone

Summary: Housing Management Strategies

- Work now to improve broadband capability throughout your communities
- Develop occupancy standards
- Implement remote working policies
- Implement self-sufficiency programs
- Flexible work schedules
- Satellite offices for larger reservations

Strategies: Natural Disasters

Developing Risk Management Strategy for Natural Disasters

Emergency Preparedness

… the knowledge and capacities and organizational systems developed by governments, response and recovery organizations, communities, and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging, or current emergencies.

WHO, Framework for a Public Health Emergency Operations Centre, 2015

Emergency Preparedness Principles

1. Safeguarding, maintaining, and restoring the health and well-being of communities are the highest priorities for emergency preparedness.
2. Communities are critical to effective emergency management.
3. Preparedness requires sustained political commitment, partnerships, and funding.
4. Achieving emergency preparedness has a cost, but this is an investment in health, safety, security, and development.
5. Health systems and emergency preparedness reinforce one another, and along with other systems, contribute to the resilience of communities.

(continued next slide)

Emergency Preparedness Principles

6. Emergency preparedness should be addressed with an all-hazards approach.
7. A risk management approach underpins the assessment, planning, and implementation of emergency management actions including prevention and mitigation of risks, preparedness activities, coordinated response, and recovery and reconstruction.
8. A whole-of-society approach is critical for emergency preparedness.

Climate Change

New challenges facing tribes across the country

The Northeast

Climate change impacts in the Northeast—including extreme precipitation events, sea level rise, coastal and riverine flooding and heat waves—will challenge its environmental, social, and economic systems, increasing the vulnerability of its residents, especially its most disadvantaged populations.

The Southeast

Ecosystems are subject to changing air and ocean temperatures and sea levels. Extreme weather events are expected to redistribute species and greatly modify ecosystems that people depend on for their livelihoods, protection from storms, and well-being.

The Midwest

At-risk communities in the Midwest are becoming more vulnerable to climate change impacts including flooding, drought, and increases in urban heat islands. Tribal nations are especially vulnerable because of their reliance on threatened natural resources for their cultural, subsistence, and economic needs.

The Southwest

- Over time, climate change is altering the timing and amount of water available for nature and humans in the Southwest.
- Tribes in the Southwest are implementing adaptation measures and emissions reduction actions to protect their traditional foods, natural resource-based livelihoods, cultural resources, and the spiritual well-being of Indigenous peoples.

The Northwest

- Existing infrastructure already faces challenges from flooding, landslides, drought, wildfire, and heat waves. Adaptation strategies that have social and environmental co-benefits, or address more than one sector, can increase resilience.
- Communities on the front lines of climate change—tribes and Indigenous peoples, those most dependent on natural resources, and the economically disadvantaged—experience the first, and often the worst, effects.

Alaska & the Arctic

- Dramatic reductions in Arctic sea ice threaten ecosystems and fisheries, disrupt traditional lifestyles, and erode coastlines. Increasing development activities may boost the region's economy, but they also increase risks to ecosystems and the environment.
- The cumulative effects of climate change in the Arctic strongly affect Native communities and the ecosystems on which they depend. Though these communities have a deep cultural history of adapting to change, they are highly vulnerable to these rapid changes and intensifying impacts.

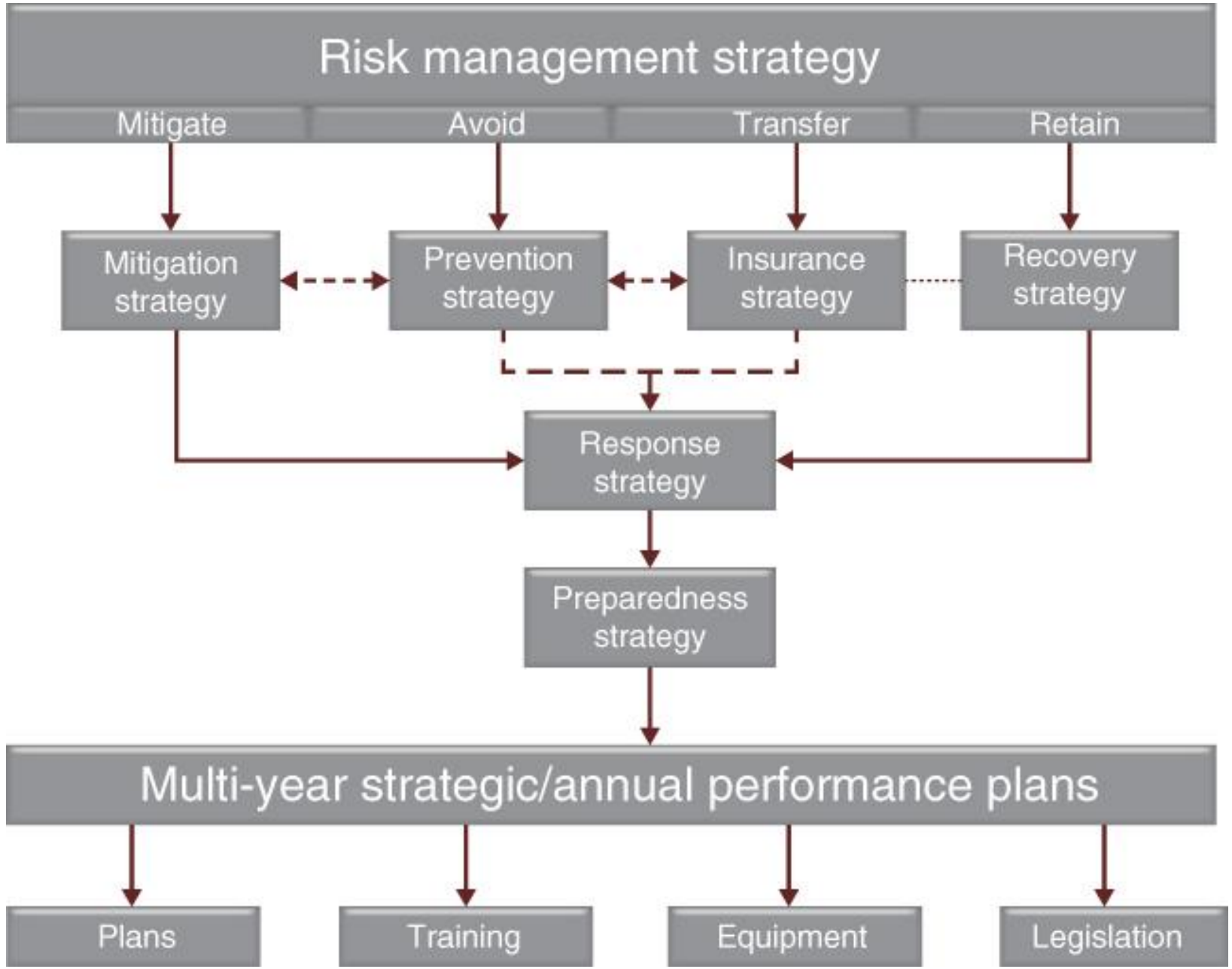
Operationalizing Emergency Preparedness

Assessing Risk and Capacity

The development of an emergency preparedness program and associated plans should be based on all-hazards assessment of risk, and of the available capacity to manage the priority of risks.

Managing Risk: Four Methods

1. The organization can choose to simply avoid a risk by not taking an action that carries the potential for liability.
2. The organization can transfer the risk through insurance.
3. The organization can mitigate the risk through structural or nonstructural methods of risk reduction.
4. Finally, the organization can choose to retain the risk by self-insuring, ignoring the risk, or developing the capacity to respond to the impacts if the risk occurs.


Risk management strategy
Mitigate
Avoid
Transfer
Retain
Mitigation strategy
Prevention strategy
Insurance strategy
Recovery strategy
Response strategy
Preparedness strategy
Multi-year strategic/annual performance plans
Plans
Training
Equipment
Legislation


Day Two
Mitigation – Roaring River Case Study
Best Practices

Mitigation

Identifying actions for reducing risk to natural hazards and disasters

Types of Mitigation Actions

LOCAL PLANNING AND REGULATIONS

STRUCTURE AND INFRASTRUCTURE PROJECTS

NATURAL SYSTEMS PROTECTION

EDUCATION AND AWARENESS PROGRAMS

Drought – Mitigation Actions

Require

- Require mandatory water conservation measures such as:
  - Developing an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, etc.
  - Adopting ordinances to prioritize or control water use, particularly for emergency situations like fire fighting

Improve

- Improve water supply and delivery systems to save by:
  - Designing water delivery systems to accommodate drought events.
  - Developing new or upgrading existing water delivery systems to eliminate breaks and leaks.

Encourage

- Encourage drought-tolerant landscape design through measures such as:
  - Incorporating drought tolerant or xeriscape practices into landscape ordinances to reduce dependence on irrigation.
  - Using permeable driveways and surfaces to reduce runoff and promote groundwater recharge.

Mitigation Strategy

Mitigation - Long term measures focused on reducing or eliminating the impacts of a hazard as opposed to enhancing the capacity to respond

Three separate mitigation options:

Prevention – avoiding or stopping a potential hazard	Protection – safeguarding people and assets against potential hazards	Mitigation – lessening the impact of potential hazards

Flood – Mitigation Actions

Local planning and regulations

- Comprehensive planning and floodplain management can mitigate flooding by influencing development.
- Partnerships between local, state, and regional entities help expand resources and improve coordination.
- Limit or restrict development in floodplain areas

Structure and infrastructure projects

- Communities may remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners and preserving lands subject to repetitive flooding.
- Improve stormwater drainage system capacity.
- Structures and utilities can be elevated to reduce flood damage.

Wildfire – Mitigation Actions

Identify

Identify wildfire hazard areas and assess overall community vulnerability

Regulate

Regulate development in wildfire hazard areas through land use planning.

Encourage/ require

Encourage and/or require fire-resistant construction through local regulations and the permitting process.

Implement

Implement defensible space programs to reduce risk to structures and infrastructure.

Risk Management Strategy – Example Situation

- As part of its hazard assessment, a tribe identifies a portion of its population (1,000) that is at risk of being displaced by a potential flood.
- **Mitigation Strategy**
  - Reduce the number of homes in the at-risk area, reducing the at-risk population from 1,000 to 700 who will need to be evacuated
  - Buyout repetitive damage properties using federal funding
  - Modify evacuation route, reducing time from 8 hours to 5 hours.
- **Recovery strategy**
  - Tribe needs authority for emergency debris removal and better plans for reentry of residents
  - Tribe estimates that 100 persons will need to be permanently relocated.
- **Response Strategy**
  - Of the 700 persons needing evacuation, tribe has capacity to shelter 400, leaving 300 persons who will need to be transported to an adjacent community.
- **Preparedness Strategy**
  - Coordinate sheltering plan with adjacent community
  - Interim housing will be needed for 300 persons, and long-term housing for 100 persons.
  - Training will be needed for 100 shelter workers
  - A public awareness program is needed for the new evacuation measures.

Risk Management Strategy – Strategic Plan

1. Propose new legislation for emergency debris removal authority.
2. Develop elements of the mitigation plan for evacuation routes and the buyout of destroyed property.
3. Develop a shelter plan and mutual aid agreement with the adjacent jurisdiction.
4. Develop an addition to the emergency response plan's shelter annex.
5. Develop an evacuation plan identifying routes and transportation assets.
6. Develop a reentry plan.
7. Develop a public awareness campaign for new evacuation control measures.
8. Conduct training for 100 shelter workers in conjunction with the Red Cross

Risk Management Strategy - Intent

The intent of the process is to develop response concepts that are based on community vulnerabilities to identified hazards and that are consistent with community values.

Emergency management is a mechanism by which the community manages risk.

It is the interrelationship among the four concepts of mitigation, preparedness, response, and recovery that makes the comprehensive emergency management model such a powerful strategic tool.

Risk Management Strategy: Conclusion

Ensure that the emergency management program reflects the tribe's values, priorities and risk tolerance.

Avoid the tendency to base program elements on the priorities set by the outside influences (grant requirements) rather than by community (tribal) need.

To be effective, emergency management program decisions such as training development, procurement, legislation, and even whether to accept grant funding, must be driven by a cohesive strategy that truly addresses community need.

Rising Sea Levels Quileute Tribe

The Tribe’s Response


Courtesy of Summit Entertainment

Planning Approaches and Concepts

Creating the Emergency Operations Plan (EOP)

Emergency Operations Plan

The ultimate expression of strategy

Not an end in itself – ineffective unless accompanied by:

- Operational procedures
- Logistical and financial structures

Must not be limited to life-safety response, but also continuity and recovery

Plan vs. Planning

"… I have always found that plans are useless, but planning is indispensable."

- Dwight D. Eisenhower

Plan definition: a physical document developed to meet a requirement or need, either as the result of legislation or by public demand; a snapshot of an organization's intent at a specific point in time.

Plans are not an end-product, but merely one component of the emergency management program.

The Planning Continuum

Focus on coordination instead of providing detailed command and control instructions.

Effective plans facilitate creative problem-solving, and provide for supporting structures that:

- Provide for supporting structures such as effective communications flow, and
- Eliminate potential barriers to improvisation.

Plans are best implemented simultaneously, beginning before the event and extending into long-term restoration.

Three Planning Methodologies

1. Scenario-Based Planning – designed around potential hazards
2. Functional-Based Planning – designed around the activities that will be needed during a crisis
3. Capabilities-Based Planning – focuses on the specific capabilities that will be needed in a crisis

Planning Assumptions

01

Assumptions are essential to any plan – no one knows exactly what crisis will occur, or the exact nature of the crisis.

02

Assumptions must be made on what is possible or likely to occur to define the scope of the plan.

03

Past performance is not always relevant (Katrina example: City of New Orleans based communications plan on the assumption that the telephone system would continue to function – it did not).

Scenario-Based Planning

Worst-Case Scenario

- Identify events having the greatest impact on the community
- Determine resources needed to respond to this event
- Gear program to reducing shortfalls

Most-Likely Scenario

- If worst case scenario is catastrophic and community is unable to manage, then opt to use scenarios that are most likely to occur
- Represents the maximum credible event with which the community can cope

Impact-Based Scenario

- A collection of assumptions based on the outcome of the hazard analysis to produce a generic worst-case scenario based on impacts rather than hazards
- Example impact: power outage. Length of outage will vary based on the scenario; impact-based scenario would select the maximum expected outage.

Functional Planning

An all-hazards approach to emergency planning

Looks at common tasks the community must perform in a time of crisis regardless of the scenario

Core of functional planning:

Defining the functions to be performed	Identifying the agency with responsibility for performing the function

Functional Planning Example: Evacuation

Implied tasks

- Traffic control
- Route reconnaissance
- Fuel and rest stops
- Reception centers
- Public information

Lead agency (tribe) cannot handle all the tasks so the plan must identify supporting agencies that can provide the services through strategic planning.

Tribe develops the plan with input from supporting agencies, and then coordinates the implementation of the plan.

Capabilities-Based Planning

Create an all-hazards capability while making more effective use of grant funds by answering the question: What capabilities will I need to perform my assigned functions?

- Personnel
- Planning
- Organization and leadership
- Equipment and systems
- Training
- Exercises, evaluations, and corrective actions

Capabilities-Based Planning

Combines elements of scenario- and functional-based planning

Offers advantages to using methodologies singly

- Focused on capacity development
- Based on a realistic assessment of hazards, i.e., most likely, high-impact events

Effective Planning Requirements

Understanding

- The nature of the disaster

Understanding

- The risks facing the community

Understanding

- The availability of community resources

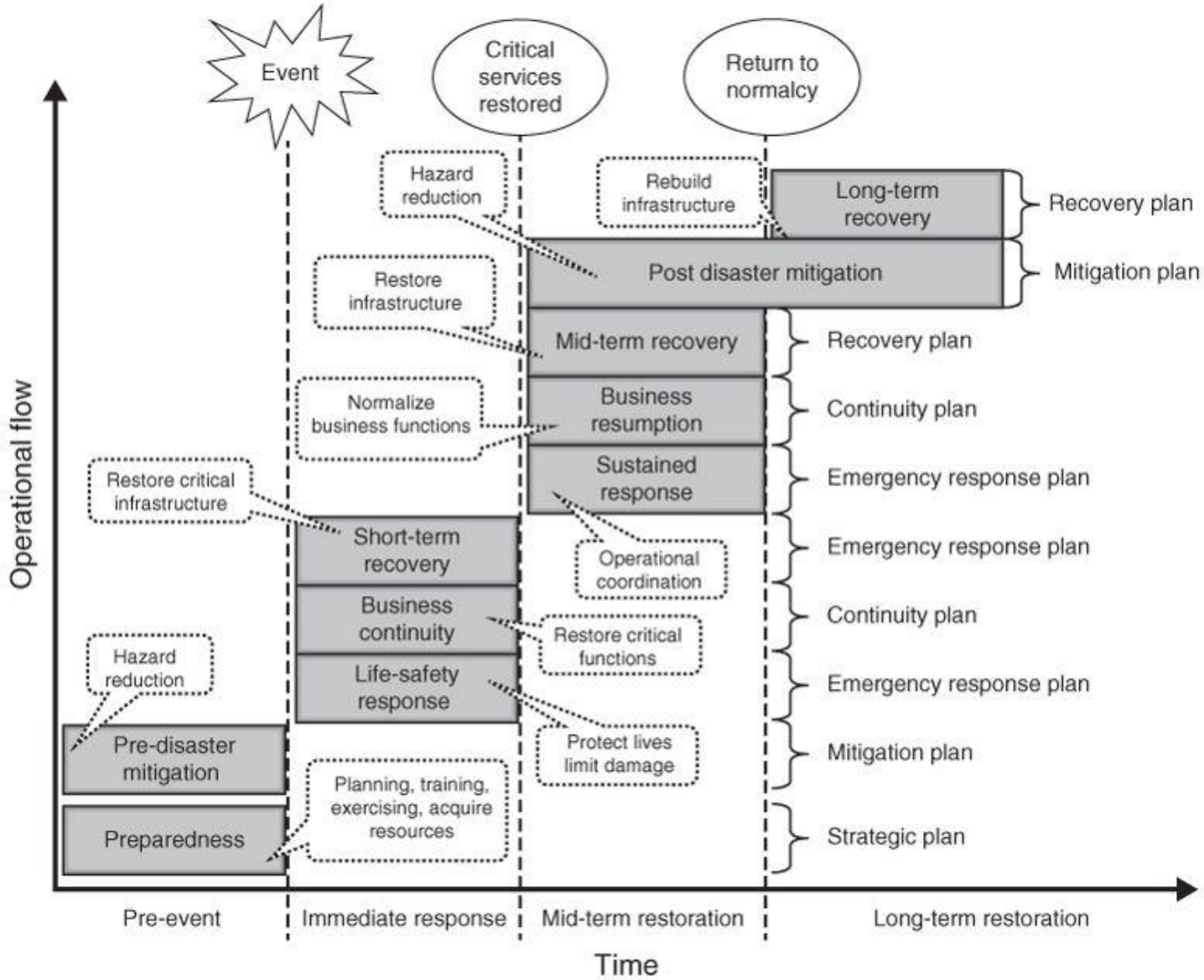


Figure 8.1 Planning continuum – Multiple plans may be implemented simultaneously, creating confusion over priorities and competition for scarce resources.

Sample Emergency Operations Plan (EOP)

[Coquille Indian Tribe]

The Mitigation Planning Process – Natural Disasters

Roaring River Case Study

(FEMA Tribal Mitigation Handbook)

Remember! Even after your Tribal plan is approved, the planning process continues through implementation of your mitigation strategy. In addition, your plan must be updated every five years to maintain eligibility for certain FEMA grants.

1 Describe your community.

Describe the planning area, Tribal assets, and any unique characteristics of your Tribe.

2 Identify your hazards.

Figure out what natural hazards could occur in your planning area.

3 Explain impacts that hazards can have on the community.

Describe what the natural hazards could do to your people, property, and land and determine the Tribe's biggest hazard concerns.

4 Review your current capability to mitigate the impacts.

Inventory your Tribe's plans, policies, and programs that could be used to protect your community.

5 Develop the strategy.

Keeping in mind your risks and your capabilities, identify your Tribe's mitigation goals and actions.

6 Develop an action plan.

Prioritize your actions and develop the details to assist with implementation.

7 Keep track of progress.

Observe and record progress in implementing your mitigation program using a defined method and schedule.

Mitigation Planning Process
Step 1: Describe your Community

- What do you want to protect?
- Who do you want to protect?
- How does your tribe operate?

What do you want to protect?

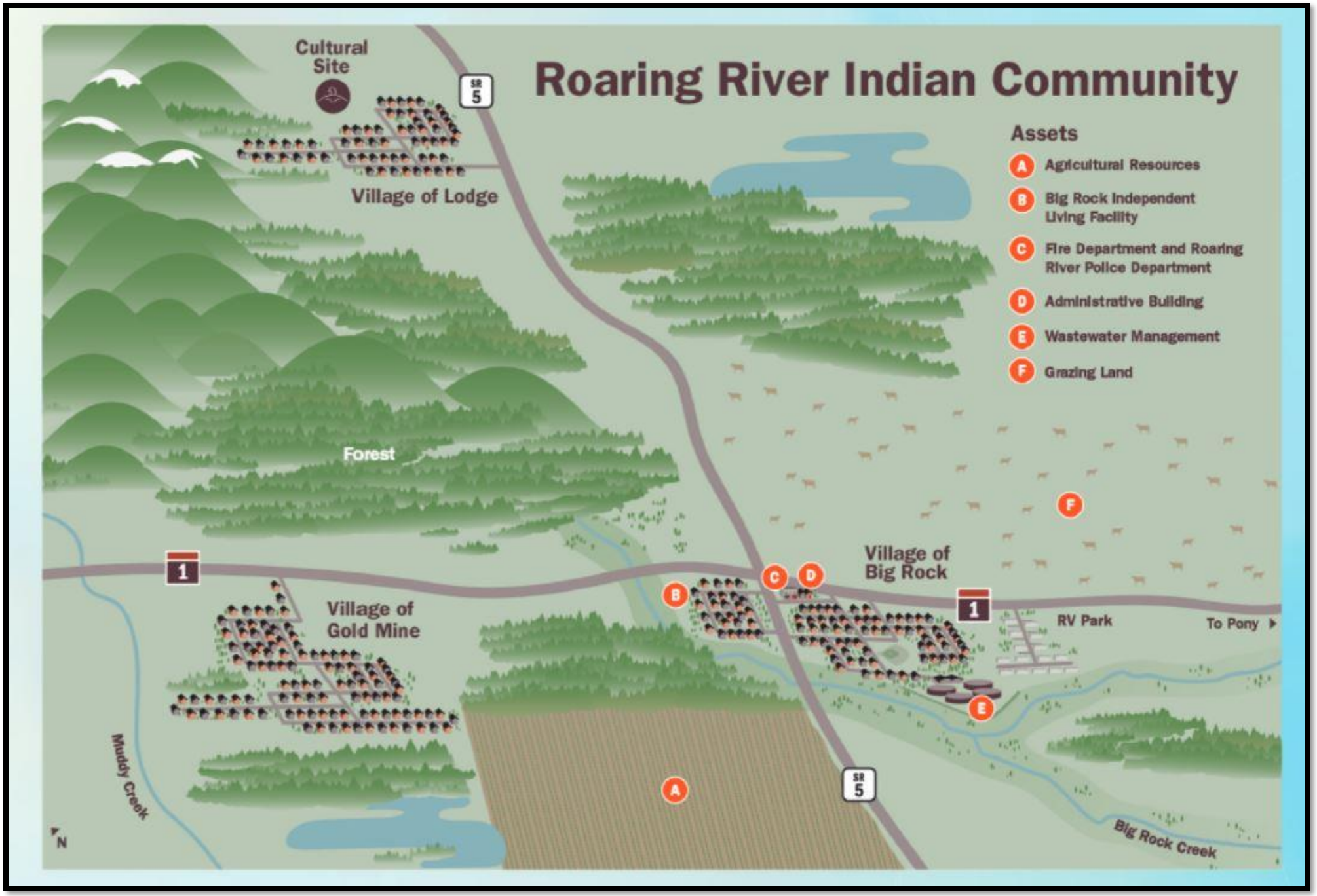
- Describe physical boundaries
  - Reservation lands
  - Noncontiguous lands
  - Areas targeted for future growth
- Describe structures (if not tribally-owned, describe coordination needed with other agencies and entities)
  - Residential, commercial, and public buildings
  - Roads and bridges
  - Infrastructure
- Sacred and cultural sites

Who do you want to protect?

- Describe the overall population
- Identify concentrations of residents and employees
- Describe people with unique needs
  - Elderly
  - Disabled
  - Children
- Consider seasonal events bringing in visitors

How does your tribe operate?

- Describe the overall governance structure
  - Establishes how planning process is set up
  - How the plan is maintained
  - What the tribe has the authority to mitigate
- Describe districts and/or assets outside the tribe's authority
  - Utility districts
  - School districts
- Have representatives from these districts on the planning team


Roaring River Indian Community
Cultural Site
SR 5
Village of Lodge
Forest
1
Village of Gold Mine
Muddy Creek
N
Assets
A Agricultural Resources
B Big Rock Independent Living Facility
C Fire Department and Roaring River Police Department
D Administrative Building
E Wastewater Management
F Grazing Land
Village of Big Rock
RV Park
To Pony
Big Rock Creek

Mitigation Planning Process **Step 2**: Identify your hazards

- Data, reports, studies, and plans used to set up the planning process
- Tribal knowledge and tradition
- Historical information
- Tribe's collective experience
  - Interview planning team members
  - Interview tribal elders
- Review nearby community, county, and State plans

Hazard identification

Location: where can each hazard occur?

Extent:

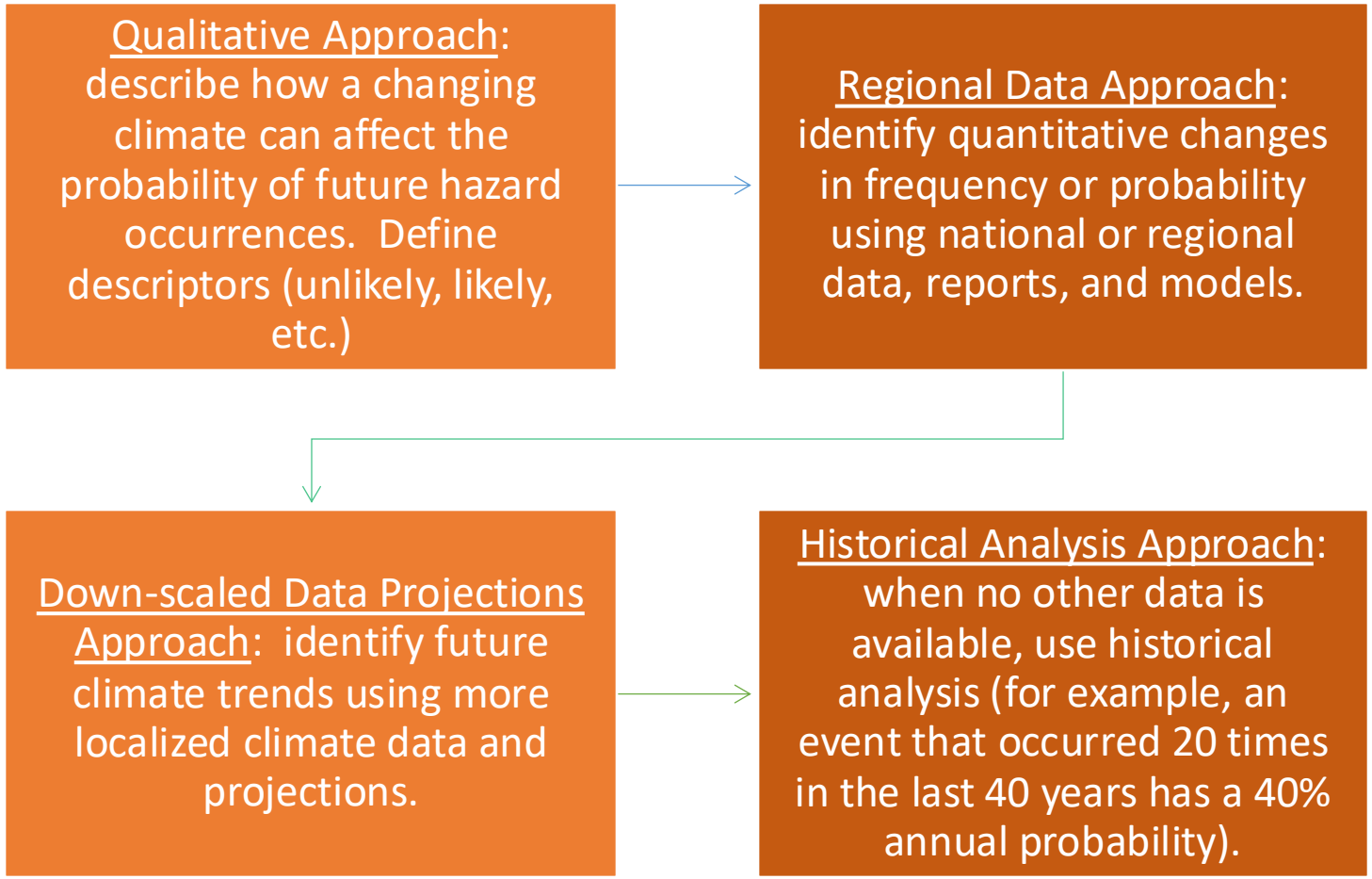
- What is the range of how bad the event could be?
- What is the destructive strength of each hazard?

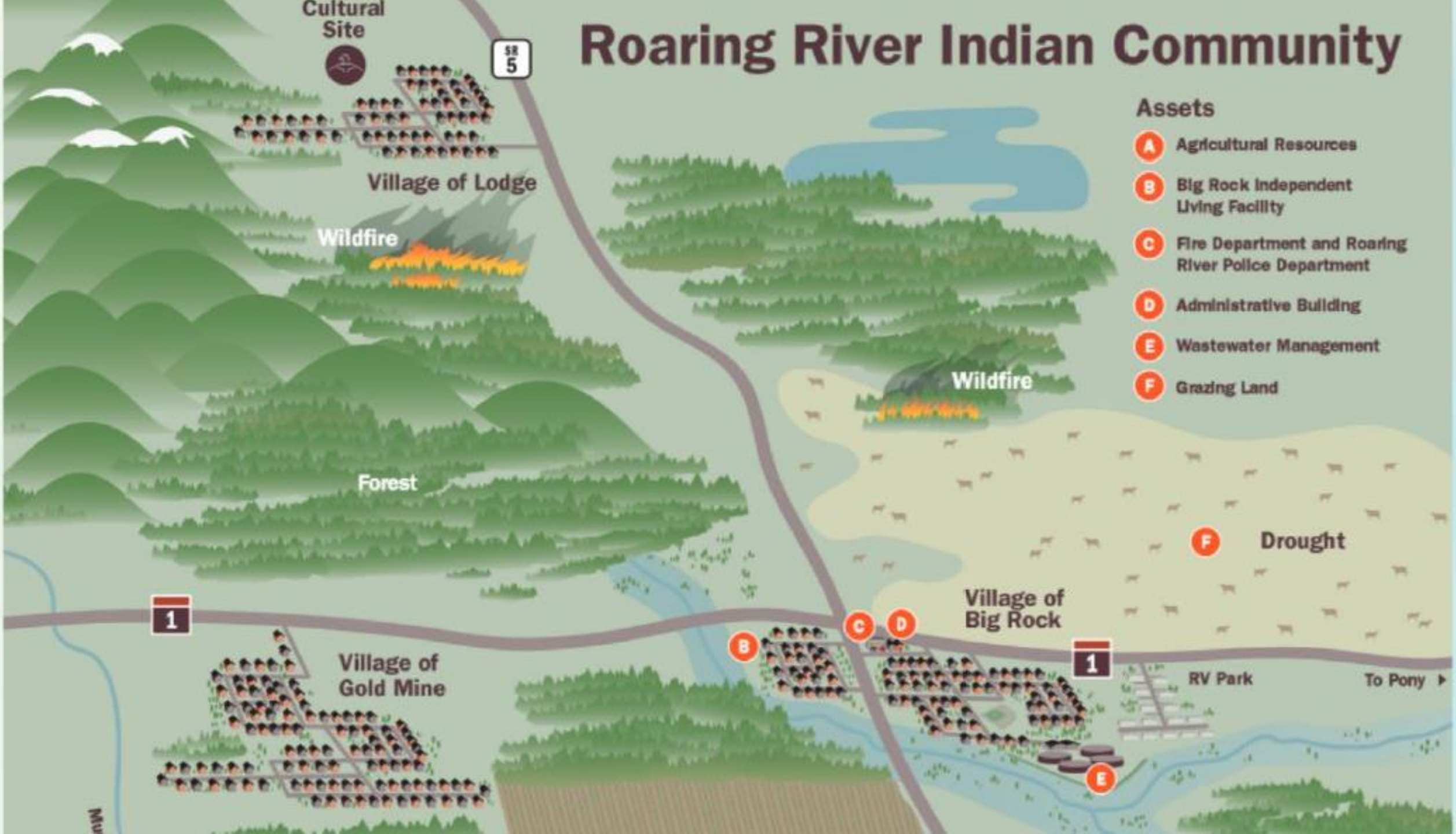
Previous occurrences: when and where have the identified hazard events happened in the past?

Future probability

- How often do you expect these events to occur in the future?
- Will the location, extent, intensity, and/or frequency of the hazards identified change?

Determining Probability: four approaches




Roaring River Indian Community
Cultural Site
SR 5
Village of Lodge
Wildfire
Forest
Wildfire
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D Administrative Building
E Wastewater Management
F Grazing Land
F Drought
1
Village of Gold Mine
Village of Big Rock
B
C
D
1
RV Park
To Pony
E

Roaring River Hazard: Drought

Location, Extent, and Previous Occurrences:

Drought can affect the entire reservation at once, but the Planning Team is most concerned about the impacts of drought in the southeastern parts of the reservation, where the agricultural and grazing lands are located.

Extended periods of reduced rainfall can have an impact on the grazing lands. The reservation relies on the production of food from these areas. A drought could affect the ability of these lands to produce the livestock and crops.

The Tribe also relies on groundwater wells for some of its residential water supply. In times of drought, water may be scarce and conservation measures may be necessary.

Roaring River Hazard: Drought

Location, Extent, and Previous Occurrences:

- Drought can affect the entire reservation at once, but the Planning Team is most concerned about the impacts of drought in the southeastern parts of the reservation, where the agricultural and grazing lands are located.
- Extended periods of reduced rainfall can have an impact on the grazing lands. The reservation relies on the production of food from these areas. A drought could affect the ability of these lands to produce the livestock and crops.
- The Tribe also relies on groundwater wells for some of its residential water supply. In times of drought, water may be scarce and conservation measures may be necessary.

Roaring River Hazard: Drought

Probability:

- Two severe droughts have occurred over the past 15 years, but the Planning Team has observed that the number of droughts, even minor ones, appears to be increasing.
- The location of droughts is not projected to change in the future, but according to the National Climate Assessment, droughts are projected to increase in intensity. NOAA's Climate Explorer data indicates that average daily precipitation will be more volatile.
- This means that summers can become dryer and less precipitation will fall. Because of this, the Planning Team felt that the probability of a drought happening in the future is likely.

Roaring River Hazard: Flood

Location, Extent, and Previous Occurrences

YEAR	EVENT TYPE	ESTIMATED MAGNITUDE	REPORTED DAMAGE
2015	Riverine Flood	Heavy rain caused flooding on Big Rock Creek, forcing road closures	Flood damage to homes and commercial and public facilities in Big Rock with estimated losses totaling $3 million
2008	Thunderstorm	Abnormally heavy precipitation caused flash flood in the area surrounding Lodge	Damage to hiking and camping area Damage to cultural sites (including medicinal herb gathering areas)
2002	Thunderstorms	Extended period of rain and flooding along Big Rock Creek and its tributaries	Damage to homes and commercial buildings in Big Rock estimated at $2 million Crop damages and loss of livestock estimated at $1.5 million
1997	Thunderstorms – Flash Flood	Heavy rain, thunderstorms caused a flash flood on Big Rock Creek.	The wastewater management facility was inoperable for one week. Nearly half of the homes along Big Rock Creek were damaged, and a few were destroyed.

Roaring River Hazard: Flood

Probability:

- Risk MAP provides flood risk data that considers past flood events and shows the area that will be inundated during a 10-, 25-, 50-, 100-, and 500-year flood event. The regulatory Flood Insurance Rate Map data shows the 100-year flood, which has a 1-in-100 chance of happening in any given year. The FEMA data does not incorporate future climate or weather patterns.
- Looking toward the future, according to the National Climate Assessment, the Midwest region will face higher likelihoods of increasing heavy rainfall and snowfall events, even as droughts are expected to become more frequent. Because the difference will be in the amount of rainfall during each event, the size of floodplains is expected to grow. In Roaring River, the severity of flooding is not projected to change, but with more storms, everyday flooding not related to Big Rock Creek may increase.

Roaring River Hazard: Wildfire

Location, Extent, and Previous Occurrences:

Parts of the Roaring River Indian Community are adjacent to mountains and hilly terrain, forested areas, and grasslands. Any of these areas can be susceptible to a wildfire given the right conditions. A prolonged drought can lead to vegetation drying out and becoming a better fuel source waiting for an ignition. The primary areas on the reservation that are at risk to wildfire are the grazing lands, which are grasslands at the southern edge, and the forested areas located in the northern section. In a normal year, with regular rainfall, these areas are not at significant risk. Their risk is tied to long periods of dryness.

YEAR	ACRES BURNED	NWCG CATEGORY	$ DAMAGES
2017	85	Class C	$2,500
2016	9	Class B	$1,000
2014	115	Class D	$100,000

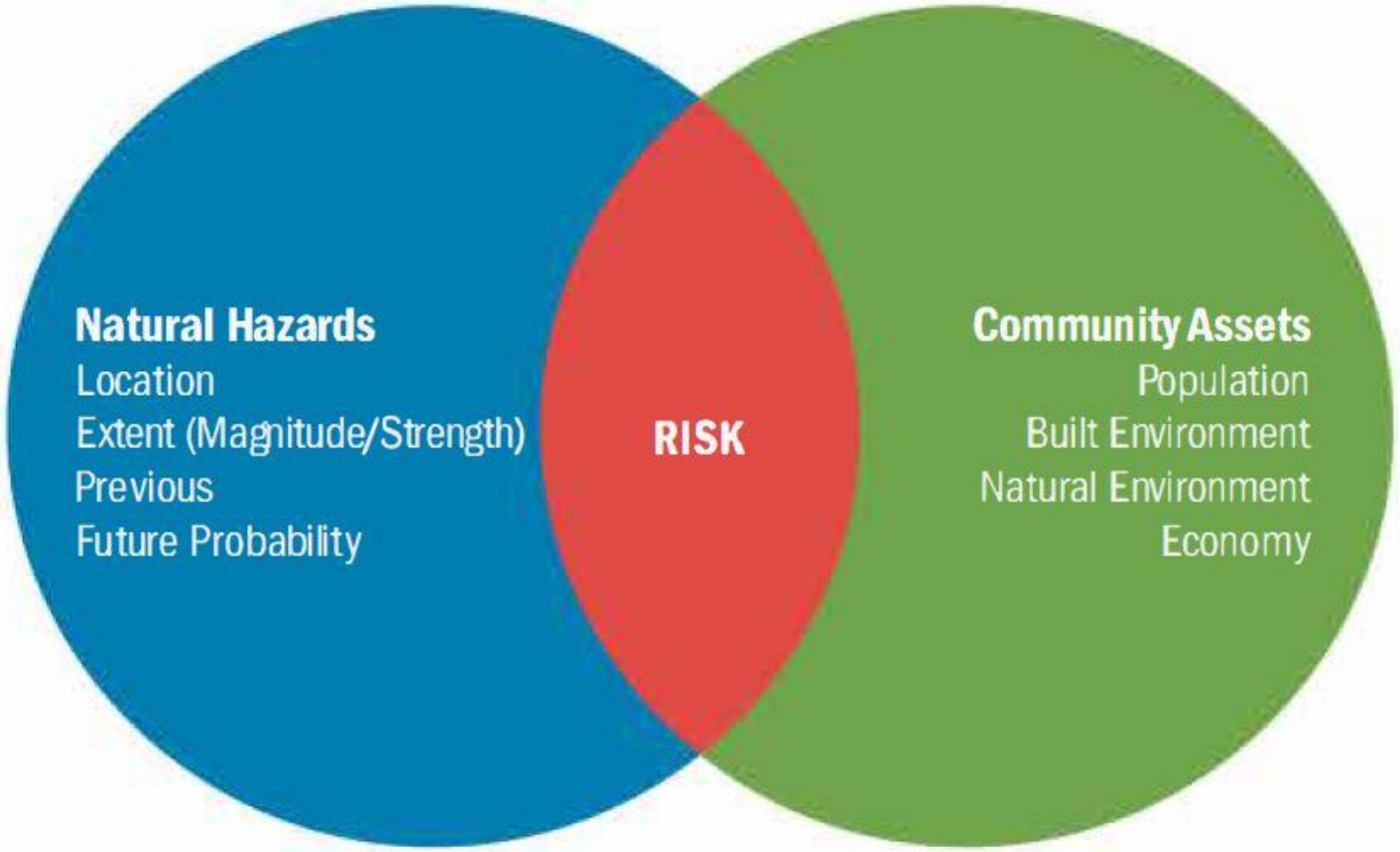
Roaring River Hazard: Wildfire

Probability

Three wildfires have occurred in the past 4 years. Paired with the increase in drought conditions, the probability of wildfire is expected to grow in the future. The location and extent of wildfires is not expected to change. Should Roaring River experience a wildfire in conjunction with drought conditions, it could be incredibly damaging for the reservation.

Mitigation Planning Process

Step 3: Explain impacts on the community



Impacts: what is at risk and happens when the community assets identified in Step 1 are in or near the hazard areas identified in Step 2.

Impacts: Questions

- Who in the Tribe could be affected the most by the hazard? Are there any groups of people who might be affected more than others? Often elders, people with disabilities, children, or anyone needing support to move around or go about their day fall into this category.
- What roads, infrastructure, Tribal facilities, systems, and/or buildings could be damaged or lost in a hazard event? Will any be unable to function, either for a short or a long period, because of a hazard? Consider the facilities that are essential for your Tribe, whether they are homes, schools, businesses, or administration buildings.
- Do you expect the hazard event to disrupt your economy or access to important lands like fisheries, timberlands, oil and gas holdings, casinos, or tourism sites?
- What natural, cultural, and sacred resources could be affected?
- Are there other capabilities or activities that have value to your Tribe that could be hurt by the hazard? Would any hazards affect your Tribe's ability to function?

Impacts: Describing

1. **Start with the past**. You can explain impacts by looking at historic impacts and losses from past events to describe what may be possible in similar future events.
2. **Overlay your assets and your hazards**. Usually done with maps and geographic information systems software, this may lead to a list of the number and type of assets in harm's way, and a dollar amount of potential losses for buildings, facilities, or infrastructure.
3. **Ask yourself "what if?"** You can use hypothetical scenarios to describe the impacts of an event. This can be helpful for events that do not have a defined hazard area, or that are infrequent but serious, like tsunamis or large earthquakes.

Drought Impacts: Roaring River

- The reservation faces the potential for great social and economic impacts due to drought. Extended periods without rain cause the Tribe to use expensive methods of providing for the crops and the herd. Without significant resources, the Tribe relies on the natural precipitation cycle to spur growth of the crops, and to provide drinking water and grow grazing grasses. Without that rainfall, the Tribe is forced to pay for the water required to develop these food sources.
- Drought does not have much impact on the physical assets or the essential facilities of the reservation.

Flood Impacts: Roaring River

- The reservation is susceptible to significant damage resulting from flooding events. Residential structures, as well as the wastewater management area, are located along Big Rock Creek.
- Excessive snowmelt coming down from the hilly country around Lodge can bring a lot of water moving past the populated areas of the reservation with little to no warning.
- The senior housing complex is in an area of poor drainage that is prone to stormwater flooding.
- In general, flooding can do significant damage to residential areas and affect access to other parts of the reservation related to agricultural uses.
- State Route 5 is a main artery used to move people and products throughout the reservations, and should it be lost or underwater, there could be significant impacts.

Wildfire Impacts: Roaring River

- The highest potential impacts from wildfire are expected in the grazing land.
- Should a wildfire occur in the forest adjacent and spread to the grazing area, the impact to the livestock could be severe.
- Most of the residential units are located far enough away to avoid the direct impacts of a wildfire, but there is always the possibility of airborne embers traveling long distances and igniting other parts of the reservation.
- Smoke may also affect air quality.

Mitigation Planning Process **Step 4**: Review Capability to Mitigate Hazards

Four Types of Capabilities

- Planning & Regulatory
- Administrative
- Financial
- Education & Outreach

Planning and Regulatory Capabilities

- What kinds of plans has your Tribe completed?
- Are there any Tribal laws or ordinances (e.g., not building in the floodplain, crop rotation, environmental protections, historic or cultural preservation) that mitigate hazards or support keeping people safe?
- What cultural practices or beliefs have been passed on by your Tribe through generations and relate to or translate into actions for development or non-development in high hazard areas?
- How do you protect your critical facilities such as police stations, fire stations, schools, and hospitals from natural hazards?
- How do you notify Tribal members about emergencies and evacuations

Linking Capabilities and Hazard Mitigation

- Does your Tribe have a comprehensive or master plan for Tribal lands? Does it include a future land use map that clearly identifies high hazard areas?
- Does the zoning ordinance discourage development or redevelopment within high hazard areas?
- Does the transportation plan limit access to high hazard areas and/or require multiple evacuation routes?
- Is safety explicitly included in the plan's growth and development policies?
- Do environmental polices maintain and restore important ecosystems?
- Are environmental systems that protect development from hazards identified and mapped?
- Does the capital improvement program include projects that will protect areas vulnerable to natural hazards?
- Is there a drainage plan to account for runoff from future development?
- Will the planned extension of existing facilities and services encourage development in areas vulnerable to natural hazards?
- Does your Tribe participate in the National Flood Insurance Program (NFIP)?

Administrative and Technical Capabilities

- Which Tribal staff are available to support the mitigation actions?
- Does the staff available have the capability and training to implement mitigation?
- Is there a need for outside expertise and resources to implement actions?
- What technical assistance is needed for your tribe to implement actions?
- Is your staff trained to write and administer grants?
- Are there agreements in place with other Tribes or non-Tribal agencies that provide regular administrative or technical assistance?
- Does you r Tribe retain any outside consultants to support planning or other technical work?
- Does you r Tribe work with any foundations or philanthropic organizations who are potential supporters of hazard mitigation?
- Does your Tribe have the physical resources available that could be used during implementation of mitigation actions?

Financial Capabilities

- Resources available to fund mitigation actions
  - Staff time
  - Operating budgets
  - Grants and/or outside assistance
- A description of existing and potential funding sources
  - How has the tribe funded mitigation in the past?
  - How has the tribe used tribal, private, and federal funding?
- An awareness of viable public and private funding resources
  - Potential tribal revenue
  - Federal funding
  - Other funding

Outreach and Education Capabilities

- What venues does your Tribe use for outreach activities (e.g., gatherings, feasts, festivals, celebrations, meetings) to communicate with Tribal members?
- How does your Tribe communicate new Tribal policies, ordinances, or resolutions with Tribal members (e.g., word of mouth, meetings, email)? Can those methods be used to communicate about mitigation?
- What new or additional outreach efforts would need to be considered to get the most public participation and support for mitigation?

Roaring River Planning/Regulatory Capabilities

TOOL/PROGRAM	STATUS			EFFECT ON LOSS REDUCTION	COMMENTS
	IN PLACE	DATE ADOPTED OR UPDATED	UNDER DEVELOPMENT		
Hazard Mitigation Plan	-	2018	Under Development	Supports	Plan will support hazard mitigation projects
Emergency Operations Plan	In Place	2016	-	Supports	-
Evacuation Plan	-	-	-	N/A	-
Master Plan	In Place	2001	-	Hinders	The master plan is old and does not account for hazards in the proposed growth areas
NFIP	In Place	-	-	Supports	-
Floodplain Regulations	In Place	2015	-	Supports	Floodplain development is closely covered by this
Zoning Regulations	In Place	2015	-	Supports	Zoned floodplain areas also covered by floodplain regulations
Economic Development Plan	In Place	2008	-	Hinders	The existing plan suggests economic activity in known hazard areas
Capital Improvement Plan	-	-	Under Development	N/A	
Building Code	-	-	Under Development	N/A	No building code for 1-3 family residences
Community Wildfire Protection Plan	In Place	2017	-	Supports	Supported by regional planning agency and completed in partnership with surrounding communities

Roaring River Admin/Technical Capabilities

STAFF/PERSONNEL RESOURCES	YES	NO	DEPARTMENT / AGENCY	COMMENTS
Planners (with land use or land development knowledge)	X		Community Development Office	Small staff
Geographic Information Systems Experience		X	Community Development Office	One staff member has a basic knowledge of mapping software, but the Tribe does not have a license for ArcGIS.
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)		X	N/A	Locally hired, no staff
Emergency Manager	X		Roaring River Emergency Management	One staff member, augmented by volunteers. The Tribe is in the process of standing up a Tribal Emergency Response Team.
Floodplain Manager	X		Roaring River Emergency Management	Emergency Manager is also a Certified Floodplain Manager.
Housing Specialists	X		Housing Authority	Staff is charged with the safety of housing on the reservation and could be helpful in outreach activities.
Grants Manager		X	Tribal Council	Position has been vacant for 6 months.

Roaring River Financial Capabilities

FINANCIAL RESOURCES	AVAILABLE FUNDING SOURCE?	EXISTING OR POTENTIAL FUNDING?	COMMENTS
Tribal operating budget	Yes	Existing	The operating budget has funded infrastructure improvements that reduced vulnerabilities in the past.
Capital improvement programming	Yes	Potential	By committee appointed by Council; Capital improvement budget has limited resources that are allocated based on need.
Bonds	Yes	Potential	Council has authority to file for these finances if desired.
Partnering arrangements or intergovernmental agreements	Yes	Existing	By contract and committees appointed by Council.
Fees for utility services	No	N/A	
FEMA Hazard Mitigation Grant Funds	Yes	Potential	Funding is only available after a disaster, which has not occurred on the reservation to date. If a disaster occurs outside the reservation, the State may decide to make HMGP funds available statewide. Consider coordination and planning with the State and FEMA before a disaster.
FEMA Pre-Disaster Mitigation Funds	Yes	Existing	Pre-Disaster Mitigation funds were granted to fund the development of this mitigation plan. They are available annually.
U.S. Department of Agriculture Rural Development Programs	Yes	Existing	Previous improvements at the wastewater management plant were funded under this grant program. Mitigation was a small part of the awarded grant.
BIA Housing Improvement Program	Yes	Existing	Roaring River manages this program, but it has not been leveraged for mitigation previously.
U.S. Environmental Protection Agency Water Quality Grants	Yes	Potential	The Tribe has not used this funding in the past, but it is eligible.
Private donations and non-profit grants	Yes	Potential	The Tribe has not explored or used private funding in the past, but it is worth researching.

Roaring River Education and Outreach Capabilities

- The Roaring River Tribal government has a strong outreach program that has been used for other projects and can be leveraged to communicate the Tribe's risk assessment and mitigation strategy. For example, the Housing Authority maintains information boards in its housing facilities, and it has a quarterly newsletter to residents that could be used to educate Tribal members on hazards and mitigation.
- The Tribe has numerous opportunities each month to come together to discuss pressing issues. The planning committee will add a recurring hazard mitigation agenda item to some of these meetings to help facilitate the education and outreach goals found within this plan. Word of mouth is also a powerful communication tool on the reservation; the community is small but close-knit.

Mitigation Planning Process **Step 5**: Develop the Strategy

Setting

Setting Goals

- Consistent with hazards and vulnerabilities
- Express who and what to protect

Considering

Considering Actions

- Plans and regulations
- Structure and infrastructure projects
- Natural systems protection projects
- Education and awareness programs

Considering Actions

- Consider mitigation actions for every hazard described in the plan
  - Reduce possible impacts of every hazard
  - May or may not prioritize and implement every action
- Consider actions for existing and planned structures
  - Existing structures can be made safer by relocation, for example
  - Planned structures can be safer by adopting building codes, for example
- Choose the best solutions
  - Based on tribe's capabilities
  - Based on access to funding

Roaring River Hazard: Drought

1. Aquifer level fluctuates due to frequent droughts. This limits the availability of water for agricultural uses.

   Potential Actions:

   - Implement an aquifer storage and recovery project to improve the availability of groundwater during droughts.
   - Implement rainwater retention and other conservation methods such as line ditches, bioswales, natural infrastructure, and establish an education and awareness program.

2. There is a need for additional housing, but this may stress future water resource availability.

   Potential Actions:

   - Implement an ordinance to reduce water use throughout the reservation.
   - Require new Tribal housing and other facilities to use low-flow water fixtures.

Roaring River Hazard: Flood

1. The wastewater management plant is in the floodplain. The facility loses power during flooding. This has the potential to cause pollution downstream.

   Potential Actions:

   - Build a dike around the facility to prevent inundation.
   - Relocate the facility.

2. Repetitive flooding of BIA Route 1 limits evacuation routes and cuts off the southern Tribal population center from the north, where the critical and essential facilities are located.

   Potential Actions:

   - Install a culvert to improve flow.
   - Elevate the road.
   - Create low-impact swales/bioswales within the right of way on either side of the road.

Roaring River Hazard: Wildfires

1. Traditional burial grounds are in areas subject to wildland fires.

   Potential Actions:

   - Create defensible space around the cultural site.
   - Stabilize land to prevent mudslide after fire.
   - Conduct a prescribed burn around the cultural site.
   - Use goats for vegetation management.

2. Current building practices do not include fire-resistant materials for residential structures in high wildfire risk areas.

   Potential Actions:

   - Develop brochures on fire-resistant building materials and practices.
   - Revise building codes to require fire-resistant materials to be used on all new structures.
   - Retrofit Tribal-owned structures.
   - Increase wildfire mitigation education through programs like Firewise.

Mitigation Planning Process Step 6: Develop an Action Plan

PRIORITIZE ACTIONS

IDENTIFY DETAILS

Prioritizing Actions (what to do)

Life and Safety

- What impact will the project have on the safety of businesses, residents, and properties within the Tribe?
- Will the proposed action adversely affect any one segment of the population within the Tribe?
- Will the project proactively reduce natural hazard risk?

Administrative/ Technical Assistance

- Is there sufficient staff currently to implement the project?
- Is training required for the staff to implement this project?

Prioritizing Actions (what to do)

- Project costs or other economic factors
  - What is the approximate cost of the project?
  - How will the project be funded?
- Support for tribal objectives
  - Does the action advance other Tribal objectives or plans, such as capital improvements, economic development, environmental quality, or open space preservation?

Identifying Details (how to do it)

- Who is responsible for working on completing this action? This should include the lead position, department, or agency for each action. You do not need to name a specific person.
- How soon can you start working on it? What is the timeline for the action, and can it start right away? Can the action be achieved in a year, or will it take 5 years to complete?
- How will you pay for it? Is it anticipated that Tribal funds would pay for the action, or should the tribe apply for a grant? You should consider all potential funding sources, not just those available from FEMA.

Roaring River Prioritization and Action Plan

ACTION	HAZARD ADDRESSED	RESPONSIBLE PARTY(IES)	POTENTIAL COST	FUNDING SOURCE(S)	TIMELINE TO IMPLEMENT	PROJECT PRIORITY
Install larger culverts under Interstate 2 to improve waterflow downstream in the event of flooding.	Flooding	Tribal Department of Transportation	$50,000	FEMA HMA Grant Programs, BIA Grants, Tribal Funds	1-3 years	High
Implement an ordinance to reduce water use throughout the reservation.	Drought	Tribal Council	Staff Time and Resources	Tribal Funds	<1 year	Medium
Divert water around the wheat fields.	Flooding	Tribal Council	$1 million	U.S. Department of Agriculture and BIA funds	3-5 years	Medium
Relocate the wastewater management facility.	Flooding	Wastewater Management Utility	$2 million	FEMA HMA Grant Programs, Tribal funds	5+ years	Medium
Join the Firewise Program.	Wildfire	Tribal Safety Forces	Staff Time and Resources	Tribal Funds	1-3 years	Medium
Develop an aquifer storage and recovery system for the reservation.	Drought	Tribal Council	$1.5 million	FEMA HMA Grant Funds, Tribal Funds	3-5 years	Low
Require new Tribal housing and other facilities to use low-flow water fixtures.	Drought	Tribal Council, Building Code Enforcement	Staff Time and Resources	Tribal Funds	3-5 years	Low

Roaring River Prioritization and Action Plan

ACTION	HAZARD ADDRESSED	RESPONSIBLE PARTY(IES)	POTENTIAL COST	FUNDING SOURCE(S)	TIMELINE TO IMPLEMENT	PROJECT PRIORITY
Install gage on Big Rock Creek to track when water is rising to flood levels.	Flooding	Tribal Council, U.S. Geological Survey, BIA	$35,000	U.S. Geological Survey, BIA	<1 year	Low
Use preventative measures to reduce potential for wildfires (goats, prescribed burns).	Wildfire	Tribal Fire Department Forces	$5,000	Tribal Funds	3-5 years	Low
Revise building codes to require fire-resistant materials to be used on all new structures.	Wildfire	Tribal Council	Staff Time and Resources	Tribal Funds	3-5 years	Low
Retrofit existing Tribal structures with fire-resistant materials.	Wildfire	Tribal Council, Tribal Safety Forces	$20,000-$40,000	Tribal Funds, BIA Grants	3-5 years	Low

Mitigation Planning Process **Step 7**: Keep Track of Progress

Mitigation plans are living documents

May change over time

Need to be actively maintained

Keep planning team engaged

Regular meetings

Guide implementation

Brief Council regularly

Monitoring Progress

1. Monitor progress
   - Hold regular meetings (frequency described in Plan)
   - Hold special meetings after disasters
   - Grants will often dictate monitoring process
   - Example: FEMA required quarterly reporting
2. Ask the following questions:
   - What was accomplished during the reporting period?
   - What obstacles, problems, or delays occurred?
   - What can you do to reduce the obstacles and celebrate success during the next reporting period?

Evaluating Effectiveness

Are the goals and objectives of the plan still relevant?

Are there adequate resources (funds, people, or programs) available to implement the plan?

Are there any technical or political issues with implementation? If so, can they be addressed?

What outcomes have occurred that can demonstrate progress? Were any outcomes different than you expected?

Updating the Plan

Minimum every five years (FEMA requirement)

After a disaster or simultaneous with post disaster recovery plan

Account for sufficient time

- Secure grant funding, if needed
- Contract for support services
- Establish update process timeline
- Review, adoption, and approval

Keep community involved

Notify community of plan changes/updates

Gain perspective of new community members

Regular outreach

Internally – tribal leaders and members

Externally – private businesses and partner agencies

Public participation process should be described in the Plan

Integrate Plan with overall tribal planning

PLANNING MECHANISM	OPPORTUNITY FOR INTEGRATION
Zoning Ordinance	• Include zones that limit development in areas you identified as facing hazard impacts. • Include requirements about keeping flood- or other hazard-prone areas as open space.
Building Code	• Include requirements for building design standards to withstand hazard events, such as elevating homes in the floodplain, fortifying roofs, or using earthquake-resistant materials.
Capital Improvement Plan, Long-Term Transportation Plan, and Housing Plan	• Include hazard vulnerabilities in the decision to invest in extending or building new roads and utilities. • Include prioritization or budgeting requirements that new community facilities be resistant to hazards.
Comprehensive, General, or Land Use Plan	• Review the risk assessment results and direct future growth into areas that are not likely to be damaged in a hazard event. • Include the mitigation plan goals in the future vision of the comprehensive plan.
Economic Development Strategy	• Review the hazard mitigation plan and guide private investment into areas that are safe from known hazards. • Incorporate the mitigation strategy's goals and actions to encourage a more resilient economy that can quickly recover from a disaster.

Roaring River Plan Maintenance

The plan will be monitored by the Roaring River Planning Team, with the ultimate responsibility for plan maintenance falling to the lead community planner. Each year, the Planning Team will:

1. Determine if the impacts of hazards described in the plan continue to be accurate, current, and relevant;
2. Review the goals for relevance with current priorities; and
3. Identify progress made on the mitigation strategy, including a description of any successes and challenges.

Roaring River Plan Maintenance

The plan will be monitored annually on the anniversary of plan adoptions and after any major disaster declaration. The system used to monitor the progress of mitigation actions is as follows:

- The lead community planner will review progress on the implementation of mitigation actions at least annually.
- The Planning Team members will coordinate with their respective departments. When a department responsible for a mitigation action is not represented by a Planning Team member, the Planning Team will select a member to work with that department.
- Each department responsible for an action will provide updates in a timely manner to the Planning Team and will provide documentation of progress for incorporation into the plan. If appropriate, the Planning Team liaison will conduct a site visit.
- Projects will be closed out according to the specific requirements of the funding source.If the source is Tribal funds or staff time, a closeout meeting will be held with the lead planner and/or the Planning Team to review the project in full and determine any opportunities to celebrate success.

Roaring River Plan Maintenance

- The Roaring River Indian Community Hazard Mitigation Plan remains valid for 5 years.
- Approximately 18 months prior to expiration, the Planning Team will convene to review the plan, identify where updates are needed, and determine if Roaring River will need a grant to assist with the plan update.
- Ultimate responsibility for the plan update will rest with the lead community planner.
- Future updates to the Tribal mitigation plan will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. It will also discuss changes in priorities and progress on mitigation actions.

Roaring River Plan Community Involvement

- Members of Roaring River will be invited to participate in all states of the plan maintenance process.
- The lead community planner will present on the status of the plan to the Tribal Council.
- The Planning Team will educate the broader Roaring River community annually at a community event.
- Any comments received will be logged and then addressed within the main document of the plan.

Roaring River Plan Updating

- Part of ensuring that the plan is current and useful to a community is integrating it into existing and future planning efforts.
- Each year before the annual plan maintenance meeting, the lead community planner will gather information on all planning mechanisms expected to be updated in the next year. Then, the Planning Team will determine into which plans it makes sense to incorporate the mitigation plan's goals and actions.
- The top priority plans for integration include the comprehensive plan, the economic development plan, and the transportation plan.

Best Practices

Responding to Hazards

Best Practices: Grand Portage Band of Lake Superior Chippewa

- The Grand Portage Band of Lake Superior Chippewa has seen the recent impacts from flooding events on their wild rice which are a cultural and important natural resource for the tribe.
- The tribe has invested in several planning efforts over the years to help mitigate/reduce the flooding risks to the wild rice lakes.
- Recently, the Grand Portage Ojibwe people reached out to Cook County, Minnesota and collaborated with other neighboring tribes to integrate their hazard mitigation, wetland and climate adaptation plans.

Best Practices - Lummi Nation

- The Lummi Nation's hazard mitigation planning began with the 2001 Flood Damage Reduction Plan. The Nation developed the plan to address ongoing flooding that turns a large portion of the Reservation, the Lummi Peninsula, into an island.
- The Nation formed a Multi-Hazard Mitigation Team to create a comprehensive and integrated plan that increases access to potential project funding.
- Over the last 2 decades, the Lummi Nation has experienced gaps in funding and resources to complete certain large-scale projects. Despite the gaps, the Lummi Nation continues to regularly review, update and implement their FEMA-approved hazard mitigation plan.
- Mitigation Plan

Best Practices Santa Clara Pueblo

How a tribal government with limited prior disaster management experience embraced a collaborative approach after a devastating fire and subsequent floods to successfully build back better

Background

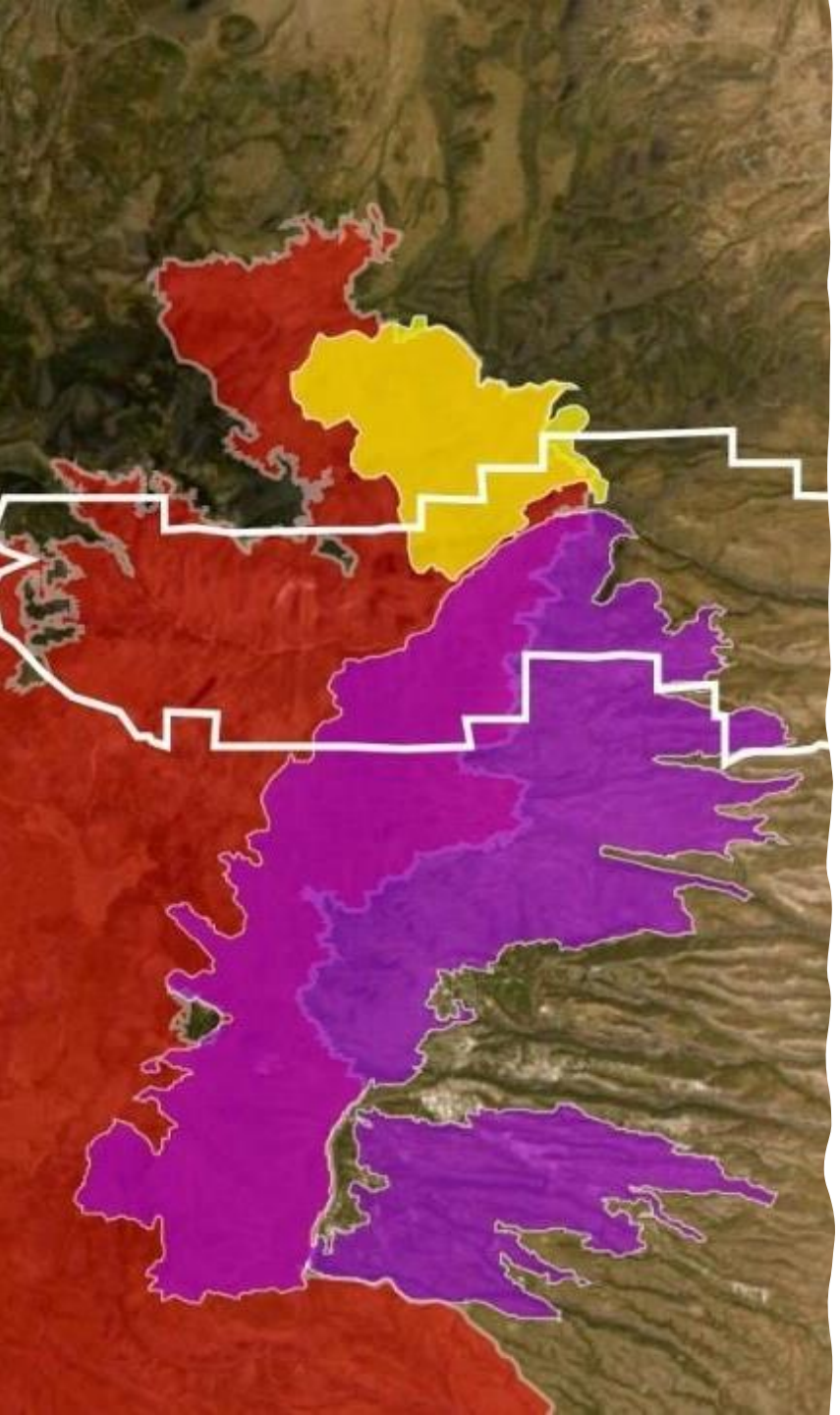
- The Santa Clara Pueblo (in Tewa: Kha'p'o Owingeh) is the native homeland of Tewa-speaking Pueblo peoples. Approximately 3,500 people live on the 90 square mile pueblo, located along the Santa Clara Canyon and Creek. The 26-mile-wide tribal boundary encompasses a steep elevation gradient, from an altitude of 11,000 feet in the Jemez mountains in the west to one of 5,500 feet in the Rio Grande Valley in the east.
- In 2011, the Las Conchas Fire destroyed over 150,000 acres in the southwest, including most of the the Pueblo's forested land, which were still recovering from previous major fires. The Las Conchas Fire loosened soil in the canyon and destroyed stabilizing vegetation along its slopes, creating the perfect conditions for dangerous erosion and flash flooding in the Pueblo's watershed - a threat realized during the 2012 – 2014 monsoon seasons.

Santa Clara Pueblo Fire Disaster

A view of the Santa Clara Canyon following the 2011 Las Conchas Fire. Source: U.S. Army Corps of Engineers.

Santa Clara Pueblo Fire Disaster

- Santa Clara Creek was rapidly inundated with debris flows carrying rocks, downed trees, and much of the canyon's exposed soils through the heart of the Pueblo's watershed. These flood events breached all four dams along the creek's tributaries and severely damaged roadways, recreation sites, and cultural assets. Nearly 100 percent of the fish habitat and population was wiped out by the debris flows.
- As a Federally Recognized Tribe, the Santa Clara Pueblo received federal assistance for recovery through five Presidential Disaster Declarations – three as a sub-grantee to the State of New Mexico, and two as a direct grantee (coordinating directly with FEMA). The Pueblo became the first tribe in FEMA Region VI to receive a direct disaster declaration, and the first to implement the National Disaster Recovery Framework (NDRF) during its recovery process.



Challenges

Together, the three major wildfires experienced since 1998 have burned nearly 80% of Santa Clara Pueblo forested lands and 28% of the entire reservation. The white outlines the boundary of the Santa Clara Pueblo Indian Reservation. The red represents the boundary of the Las Conchas Fire in 2011, the purple represents the boundary of the Cerro Grande Fire in 2000, and the yellow represents the Oso Complex Fire in 1998.

Source: Santa Clara Pueblo Forestry.

Santa Clara Pueblo - Challenges

- **Consequences**
  - Increase in flooding and erosion
  - Long-term loss of economic revenue from tourism activities
  - Closure of sacred areas
- **Logistical hurdles**
  - No designated emergency management department
  - No emergency warning system – had to communicate via radios and rely on local news station to get the word out to residents
  - Lack of experience with Presidentially-declared disasters
  - Project management a challenge due to extensive procurement review process and limited capacity

Santa Clara Pueblo - Actions

1. **Identified three recovery priorities**
   - Community protective measures for future flood events
   - Watershed stabilization
   - Internal capacity building
2. **Developed emergency management department administering:**
   - Creation of scopes of work
   - Determining periods of performance
   - Controlling cost matches
   - Managing execution
   - Completing close-outs

Intergovernmental Partners

- FEMA
- US Army Corps of Engineers
- US Department of Agriculture
- Forest Service
- Natural Resources Conservation Service
- US Department of Interior
- Bureau of Indian Affairs
- National Park Service
- U.S. Geological Survey
- U.S. Environmental Protection Agency
- San Manuel Band of Mission Indians
- Shakopee Mdewakanton Tribal Nation
- State of New Mexico
- Fish and Wildlife Service

Santa Clara Pueblo: Results

- Capacity built for disaster response and long-term recovery
- Completed Incident Action Plan (IAP) can be leveraged for the next major disaster
- Santa Clara Forestry has shifted emphasis to a preparedness approach
  - Mechanical thinning
  - Prescribed burns
  - Funded through BIA Hazardous Fuel Reduction and Resilient Landscape Programs
- Infrastructure improvements have mitigated potential from future flooding events

An example of a bride project along Santa Clara Creek. The wider span of the bridge will allow for higher volumes of water flow in future flood events. In addition, angled bridge components will redirect water flow to protect vulnerable infrastructure. Hesco bastions were also added and are visible in the foreground of this photo. These flood control barriers can help protect residential areas from dangerous floodwaters.

Declaration Management Viewpoint

Santa Clara Pueblo believes that managing its own declaration directly is more efficient as a tribal nation than as a subrecipient through the state, citing three reasons:

1. Quicker project close-outs as they can submit the close-out directly to FEMA;
2. The tribe can request lower federal matching requirements as a direct recipient, if applicable under the provisions in the Stafford Act for high per capita impacts; and
3. There is the ability for some of the federal funding to support some management costs, which allows the Pueblo to build internal capacity to manage disasters.

Santa Clara Pueblo: Lessons Learned

The Santa Clara Pueblo embraced continual learning, forward thinking, and innovation to build back better. The tribe's staff proactively educated themselves on their roles and responsibilities and built internal capacity to fulfill their obligations during and after emergencies.

A comprehensive understanding of the relationships between the tribe, the state, and the federal government partners involved in the recovery process as described in the NDRF was essential for driving progress on recovery initiatives that helped improve the tribe's environmental, infrastructure, and economic resilience.

Proactive collaboration using a team approach among tribal government officials and intergovernmental partners was essential for the Santa Clara Pueblo to achieve its restoration and resilience goals.

Santa Clara Pueblo: Additional Resources

- A Tribe's Collaborative Journey to Develop Forest Resiliency: A Story Map by Santa Clara Pueblo Forestry
- Santa Clara Pueblo and the Corps of Engineers: A Working Partnership between Two Nations
- FEMA.gov: Santa Clara Pueblo
- Santa Clara Creek: Headwaters Restoration
- IRC Case Study – Santa Clara Pueblo: Restoring Native Ecosystems to Build Resilience
- Promoting Nature-Based Hazard Mitigation Through FEMA Mitigation Grants


THE GREAT TRIBAL SEAL OF THE
BLUE LAKE RANCHERIA
MANDI KINDRED
GENERAL MANAGER BLUE LAKE CASINO & HOTEL

Funding Resources

Sample Plans, Websites, and Federal Resources

Sample Plans

- Tulalip Tribes
- Confederated Tribes of Siletz Indians
- Santa Ynez Band of Chumash Indians
- Quapaw Nation

Mitigation Planning and FEMA Grants

- Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), a tribal government must develop and adopt a FEMA-approved hazard mitigation plan to be eligible for certain types of non-emergency disaster assistance.
- The Code of Federal Regulations (44 CFR Part 201) establishes specific requirements for tribal mitigation plans, and FEMA's Tribal Mitigation Plan Review Guide (2017) assists agency officials in interpreting those requirements in their review and approval of plans.
- FEMA evaluates a tribal government's mitigation plan under the requirements of 44 CFR Section 201.7 (Tribal Mitigation Plans), even if the plan is part of a larger multi-jurisdictional mitigation plan developed together with nearby local governments.
- FEMA's Hazard Mitigation Grant Program (HMGP) grant programs can support federally recognized tribal governments in developing mitigation plans and implementing projects. These HMA programs include the Hazard Mitigation Grant Program, Building Resilient Infrastructure and Communities, and Flood Mitigation Assistance.
- Tribes can apply directly to FEMA for assistance as "applicants" or through a state as "sub-applicants." For more information, including eligibility information for individual grant programs, visit Mitigation Planning and Grants.

HUD Resources and Waivers

FR-6301-N-02 Regulatory and Administrative Requirement Flexibilities Available to Native American Programs During CY 2022 and CY 2023 to Tribal Grantees To Assist With Recovery and Relief Efforts on Behalf of Families Affected by Presidentially Declared Disaster

https://www.regulations.gov/document/HUD-2022-0001-0001

HUD Climate Action Plan (Nov 2021)

Through the Climate Action Plan, ONAP has committed to take many actions over the next several years on Climate and Environmental Justice, including:

- Awarding funds to Tribes for energy and water efficiency retrofits (contingent on funding)
- Targeting resources to make Indian Housing Block Grant-assisted housing more energy efficient and resilient, and to reduce energy and water consumption and utility burden
- Building capacity of tribes and federal agencies to develop efficient, coordinated environmental reviews and strengthen environmental compliance through the Tribal Housing and Related Infrastructure Interagency Task Force
- Providing technical assistance to HUD customers to support sustainable, net zero/next generation building that is reflective of tribal cultures and supports job creation
- Reference:

https://www.hud.gov/sites/dfiles/Main/documents/HUD-Climate-Action-Plan.pdf


Any
Questions