

Introduction to Natural Hazards Mitigation Planning



FEMA Region 10 Mitigation Planning Program Coffee Break Webinar Series

January 27, 2017

Brett Holt, FEMA Region 10 Mitigation Planning Program Manager
Amanda Siok, FEMA Region 10 Mitigation Planner
Tim Cook, Washington State Hazard Mitigation Officer
Stacy Fawell, Natural Resources Analyst, Lummi Nation



FEMA



Housekeeping

- Attendees may be muted to reduce background noise
- Please do NOT put your phone on “hold”, it plays the hold music for everyone else on this call.
 - If you have to step away, mute your phone or hang up and rejoin the call later.
- To increase efficiency and so that we can end on time,
 - Use “Q&A” feature to ask a question
 - Q & A will be open for 10 minutes following the training

CFM Continuing Education

- For full credit (1 CEC) you must be attentive and participate in the polls and activities
- Credit eligibility is based on attendance and participation
- STARR reports to ASFPM once per month for the previous month
- If eligible, you will receive a Certificate of Attendance via email that you can forward to other agencies

Introduction to Natural Hazards Mitigation Planning



FEMA Region 10 Mitigation Planning Program Coffee Break Webinar Series

January 27, 2017

Brett Holt, FEMA Region 10 Mitigation Planning Program Manager
Amanda Siok, FEMA Region 10 Mitigation Planner
Tim Cook, Washington State Hazard Mitigation Officer
Stacy Fawell, Natural Resources Analyst, Lummi Nation



FEMA



At the end of this webinar, participants will be able to:

- **Explain the value** of mitigation in improving community resilience
- **Identify the steps** in the mitigation planning process
- **Identify the different stakeholders** to involve in the mitigation planning process
- **Locate resources** to develop and implement mitigation plans

Objectives



Resilience

Resilience is the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption caused by a hazard

“Instead of repeated damage and continual demands for federal disaster assistance, resilient communities proactively protect themselves against hazards, build self-sufficiency, and become more sustainable”

—Godschalk, et al., 2009

A Resilient Community

- Makes proactive investment and policy decisions
- Communicates risk and vulnerability to all
- Builds public and private sector capabilities and partnerships
- Resumes normal operations and recovers rapidly after hazard events

What are other features of a resilient community?



Mitigation

Mitigation is the reduction or elimination of long-term risk to human life and property from hazards

ONGOING

DISASTER

DAYS

WEEKS-MONTHS

MONTHS-YEARS

Preparedness

*Short-Term
Response*

*Intermediate
Recovery*

*Long-Term
Recovery*

M I T I G A T I O N

M I T I G A T I O N

Emergency Management Activities

Mitigation Increases Resiliency



Natural Hazards

Hazards are sources of harm or difficulty



FLOODING



WILDFIRE



EARTHQUAKE



TORNADO



LANDSLIDE



SUBSIDENCE



TSUNAMI



EROSION



HAIL



VOLCANO



AVALANCHE



OTHER

Mitigation Plans

- FEMA Natural Hazard Mitigation Plans
- Community Wildfire Protection Plans (CWPPs)
- Climate Adaptation Plans
- Comprehensive Plans
- HUD Consolidated Plans
- Watershed Plans

Leavenworth Area Community Wildfire Protection Plan

2014 Update

Greater Redmond Community Wildfire Protection Plan



October 14, 2011



Prepared by Kate Liphart, Project Wildfire 543-322-7129 kate@wildfire.com

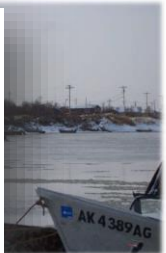
Kittitas County Comprehensive Plan December 2016



Adopted by Ordinance No. 2016-023 | Effective Date: December 6, 2016



City of Kwethluk, Alaska Local Multi-Hazard Mitigation Plan



August 2009

Prepared by:
City of Kwethluk
WHPacific
and
Bechtel Planning and Development



SHOALWATER BAY INDIAN TRIBE HAZARD MITIGATION PLAN 2014

THE MITIGATION ACTION PLAN

THE CITY OF PORTLAND'S PATH TO RESILIENCE

Agency Review Draft

September 2016

TETRA TECH



Forest and Water Climate Adaptation
A Plan for the Nisqually Watershed

Nisqually River Council
Model Forest Policy Program
Continental River Council

What's in a Mitigation Plan?

- Vision/Goals
- Identifies Key Stakeholders
- Public Engagement Process
- Risk Assessment
 - Maps, Impacts, Future Probability, History
- Current Capabilities
- Current policies addressing natural hazard risk reduction
- Action Plan/Strategies -
 - Primary and Support Stakeholders, Timeframes, Funding Sources
- Maintenance Process
- Continued Public Outreach



Federal Planning Requirements

- Disaster Mitigation Act of 2000
 - Establishes eligibility for FEMA Hazard Mitigation Assistance (HMA)
 - Requires Tribal, State, and local governments to submit plans to FEMA for review
- Title 44 Code of Federal Regulations (CFR) 201.6 or 201.7
 - Publishes requirements for approval of a local or Tribal mitigation plan
- Purpose is to reduce:
 - Loss of life and property
 - Human suffering
 - Economic disruption
 - Disaster assistance costs
- Requires mitigation plan approved by FEMA for mitigation grant eligibility
- Requires plan update every five years

The Act focuses on:

- Natural hazards
- Reducing the potential for damage to existing and future structures and infrastructure

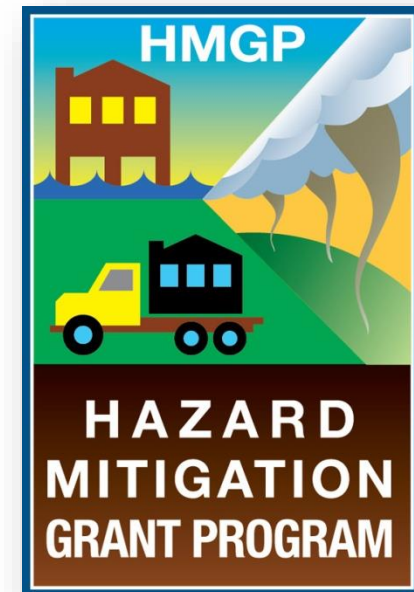
Hazard Mitigation Assistance (HMA)



Pre-Disaster
Annual
Nationally competitive
Natural Hazards



Pre-Disaster
Annual
Nationally competitive
NFIP participation
Flood Hazard



Post-Disaster
Statewide
Natural Hazards

WA EMD is responsible for updating the State Plan

- EMD's mitigation section includes
 - State Hazard Mitigation Officer
 - Mitigation Strategist (planner)
 - Mitigation Program Managers and Grant Coordinators
- EMD's mitigation programs include:
 - Hazard Mitigation Assistance grants
 - HMGP, PDM, FMA
 - Geologic hazards: earthquake, tsunami, volcano

WA State's Enhanced Hazard Mitigation Plan

- Looks at 9 natural hazards and 8 tech. hazards
- Identifies mitigation strategies to reduce risk
- Find it on WA EMD's website:
<http://mil.wa.gov/other-links/enhanced-hazard-mitigation-plan>
- The current State Plan will be updated by 2018



State of Washington

Tim Cook

State Hazard Mitigation Officer



Washington State Enhanced Hazard Mitigation Plan

The Washington State Enhanced Hazard Mitigation Plan provides policy guidance for hazard mitigation in the State of Washington. The Plan identifies hazard mitigation goals, objectives, actions and initiatives for Washington state government that will reduce injury and damage from natural hazards.

This plan meets requirements for an Enhanced State Plan under Interim Final Rule 44 CFR parts 201.4 and 201.5, published in the Federal Register by FEMA on February 29, 2002. The Washington State Enhanced Hazard Mitigation Plan was approved by the Federal Emergency Management Agency (FEMA) Region 10 office on October 1, 2013.

Meeting the requirements of the regulations cited above keeps the State of Washington as well as all eligible local jurisdictions and non-profit organizations that provide like-government services qualified to obtain disaster assistance including hazard mitigation grants available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended. The enhanced portion of the plan allows the state to seek significantly higher funding for the Hazard Mitigation Grant Program following Presidentially-declared disasters (20 percent of federal disaster expenditures versus 15 percent with a standard plan).

As of 2014:
Element A: Planning Process (1 MB)

State Overview (4 MB)

WA State's overall vision for mitigation:

- **AWARENESS:** we envision a resilient state with full understanding of the risks posed by natural hazards throughout the state
- **ACTION:** we envision a state that's committed to risk reduction through collaborative mitigation efforts

WA State's mitigation planning efforts seek to...

- Provide current information on hazards in WA
- Analyze the risks posed by these hazards
- Find viable mitigation actions to reduce the risks
- Identify possible funding sources for those actions
- Encourage involvement and build an inclusive process

WA supports tribal/local planning efforts

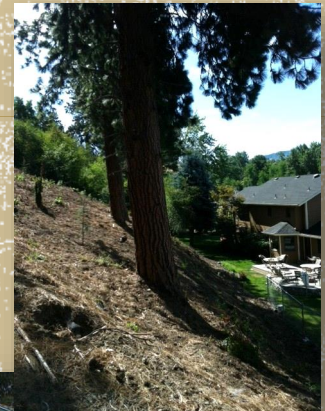
- WA EMD helps explore funding options
- WA EMD reviews tribal/local Plans and offers feedback
- The State Plan offers relevant hazard info & risk tools



State of Washington

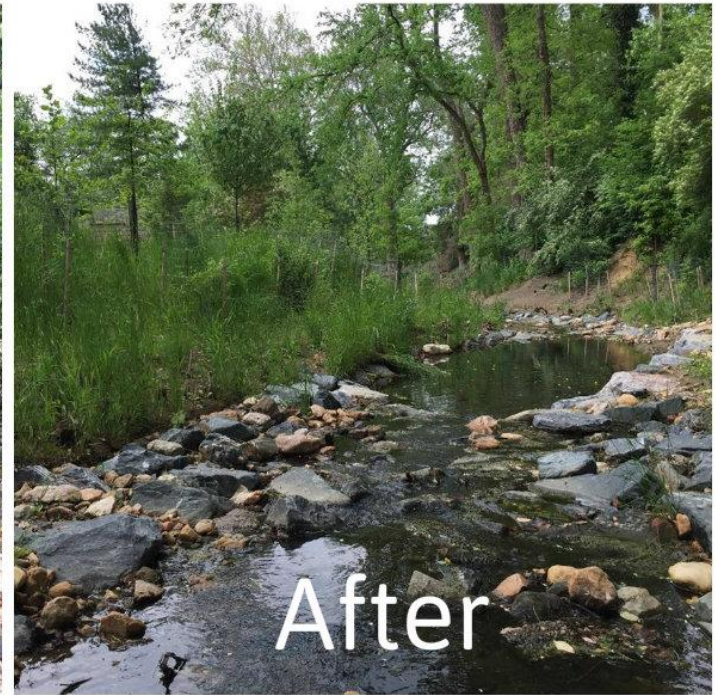
Tim Cook

State Hazard Mitigation
Officer



Poll

- Did you participate in the current or past development/update of your local/tribal mitigation plan?



Mitigation Planning Process

Purpose of the Mitigation Planning Process



To **identify policies** and actions that will permanently reduce the risk of damage and loss



To **improve the welfare** of people and their communities



To **enhance the ability** of communities to recover from disasters



To **establish partnerships** for community resilience

The Deschutes County Natural Hazards Mitigation Plan is intended to serve many purposes. These include the following:

- **Provide a methodical approach** to mitigation planning;
- **Enhance public awareness** and understanding of natural hazards;
- **Create a decision--making tool** for policy and decision makers;
- **Promote compliance** with state and federal program requirements;
- **Assure coordination** of mitigation--related programming;
- **Create specific hazard mitigation initiatives** that can be incorporated into Deschutes County's Comprehensive Plan to assist with implementation;
- **Document resources** for risk reduction and loss prevention.

Deschutes County, Oregon

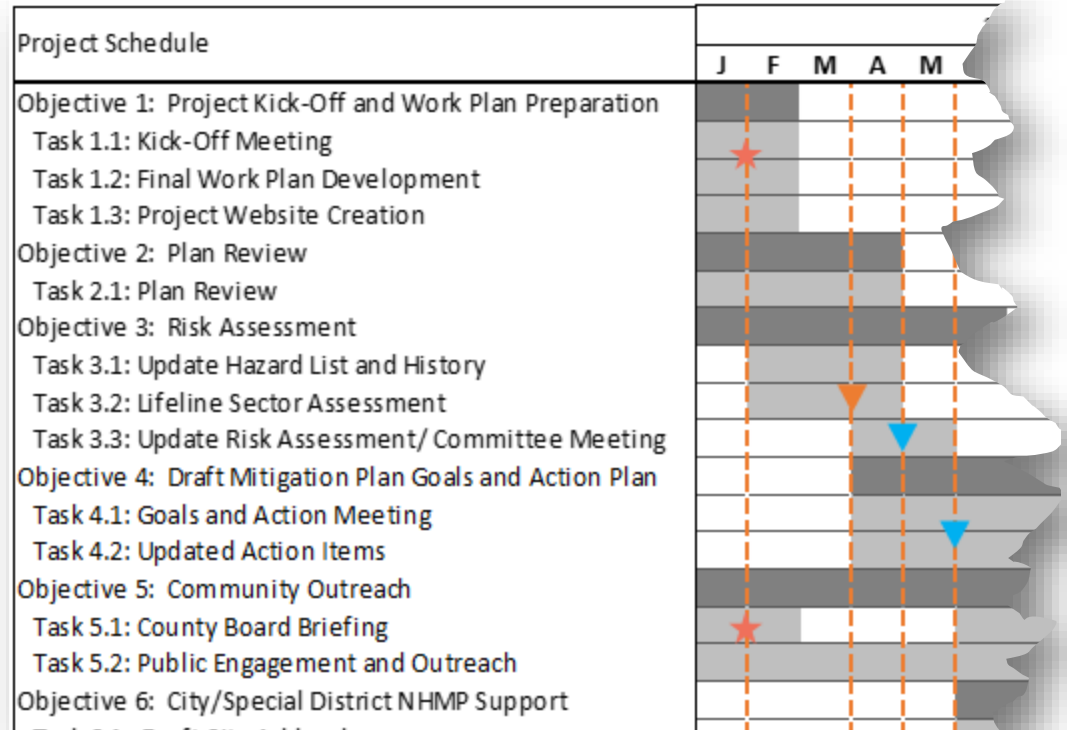
2010 Deschutes County Natural Hazards Mitigation Plan

Report for:
Deschutes County Emergency Management,
Oregon Emergency Management, and
Federal Emergency Management Agency (FEMA)

Prepared By:
Deschutes County
Natural Hazards Mitigation Committee
61150 SE 27th Street
Bend, OR 97702

The mitigation planning process is not new, not different

1. **Build** on existing data
2. **Involve** the public
3. **Identify** problems
4. **Propose** solutions
5. **Adopt** the plan
6. **Implement** and monitor
7. **Evaluate** and update



Mitigation Planning Outcomes

Direct Outcomes

- ✓ Understanding of risk and vulnerability
- ✓ Action plan for reducing risk
- ✓ Eligibility for FEMA mitigation assistance grants

Indirect Outcomes

- ✓ Improve communication and coordination
- ✓ Increase public awareness of risks
- ✓ Enhance opportunities for other project grants
- ✓ Increase capacity

1. Facilitate the Planning Process

- Participate in all aspects of mitigation planning from goal setting through implementation of proposed mitigation actions
- Determine ways to coordinate with other local agencies and departments
- Ensure opportunities for public involvement are provided



Poll

What organizations or stakeholders in the community might be a valuable planning team member?



Walla Walla County, WA Defensible Space Project

Stakeholders Role in Risk Reduction

- Emergency Manager
- Community Planner
- Tribal Leaders
- Elected Officials
- Community Members
- Elders
- Public Works Director
- Public Information Officer
- GIS Specialist
- Natural Resources Manager
- Engineer
- Firefighter
- Police Officer
- Historians
- Scientists
- Businesses
- Non-Profits
- Health Professional
- Wildfire Mitigation Professionals
- Stormwater Manager
- Others



Planning Team

City of Albany Natural Hazard Mitigation Steering Committee

City of Albany Steering Committee

- Wes Hare
- Ed Hodney
- Jeff Blaine
- Chris Bailey
- David Shaw
- Mario Lattanzio
- John Bradner
- Marilyn Smith
- Ed Gallagher
- Stewart Taylor
- Jorge Salinas
- Kate Porsche

Organization Representing

City Manager
Parks & Recreation
Public Works Engineering and Community Development
Public Works Operations
Human Resources
Albany Police Department
Albany Fire Department
Management Assistant/Public Information Officer
Library
Finance
Assistant City Manager/Chief information officer
Economic Development & Urban Renewal

Albany, Oregon



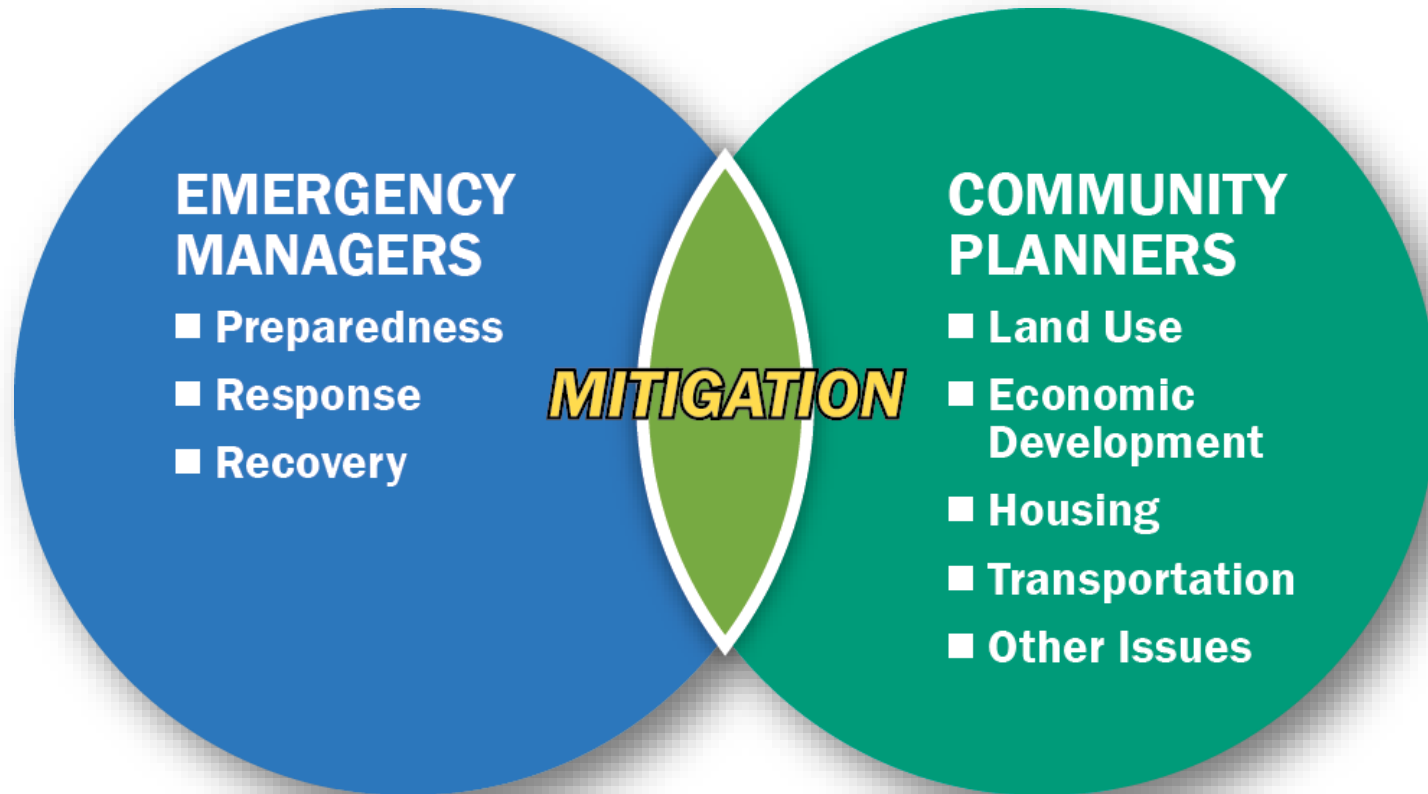
City of Albany, Oregon
Natural Hazard Mitigation Plan

Final Report for:
Albany City Council

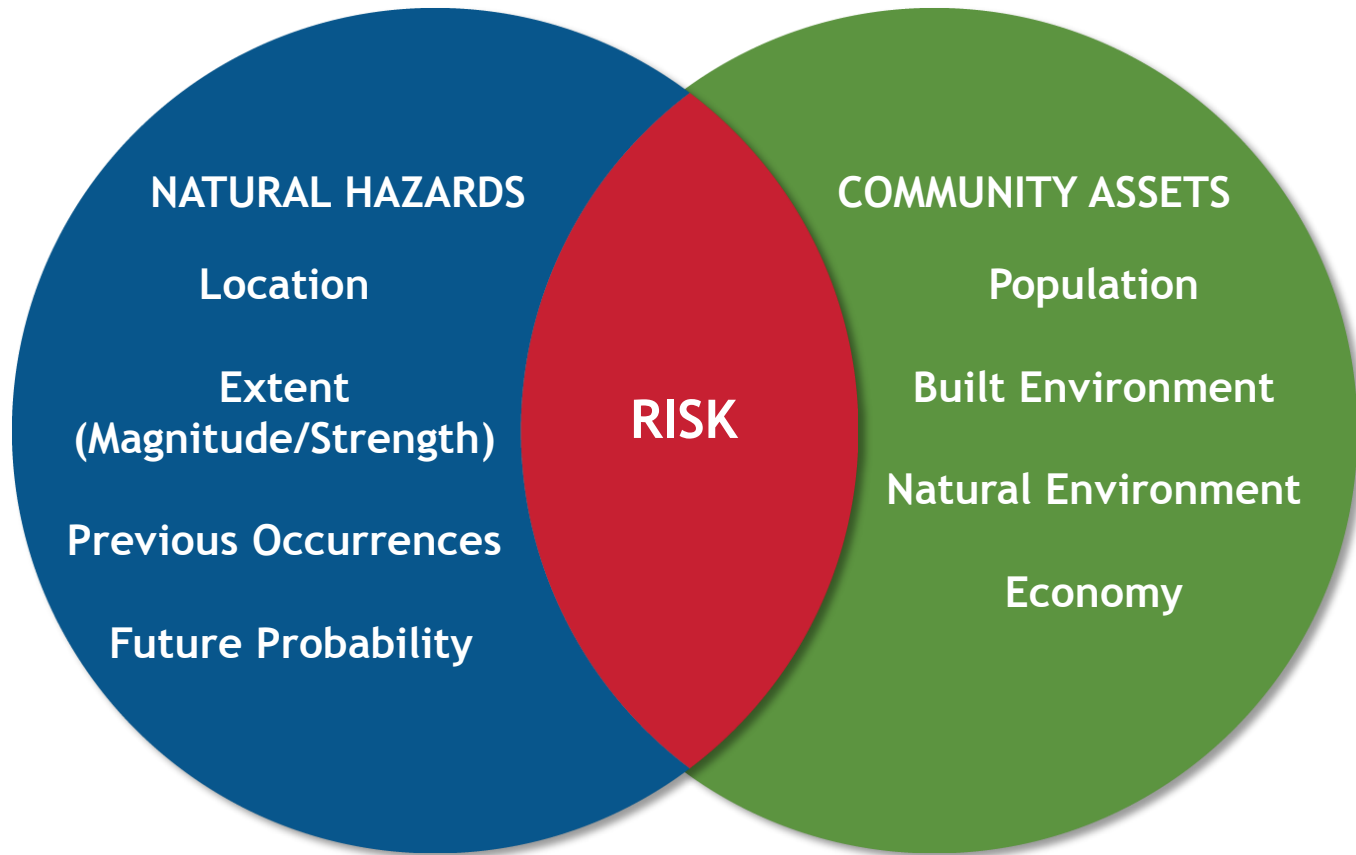
Prepared by:
Emergency Management
Albany Fire Department
John Bradner
P.O. Box 490
Albany, Oregon 97221
Phone: (541) 917-7701

January 2016

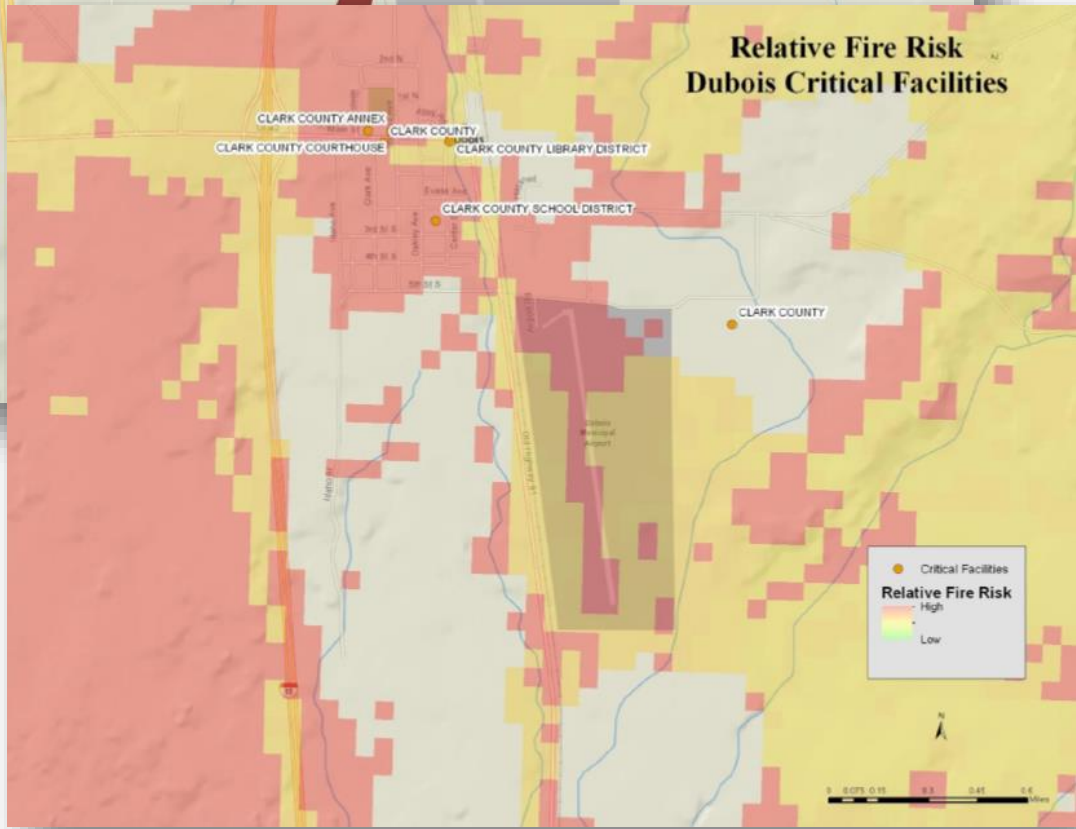
Mitigation Planning Provides Opportunities for Coordination



2. Assess Existing and Future Vulnerabilities



Note: Adapted from U.S. Geological Survey and Oregon Partnership for Disaster Resilience Models

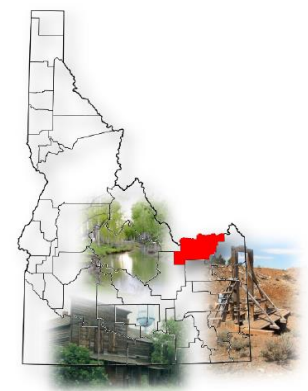


Clark County, Idaho

City of Dubois



CLARK COUNTY IDAHO
MULTI-JURISDICTION
ALL HAZARD
MITIGATION PLAN
NOVEMBER 2013



Critical Connection



Community Design



Natural Hazard Impacts

Risk

Risk is the potential for damage, loss, or other impact created by the intersection of natural hazards with development



Location

Construction



Site Design

Infrastructure

3. Assess Community Capabilities

Assess capabilities to understand:

- Existing capabilities that mitigate risk and contribute to resiliency
- Gaps or shortfalls in capabilities

Examples of capabilities:

- Plans
- Regulations
- Programs and policies
- Administrative
- Technical
- Financial
- Education/Outreach

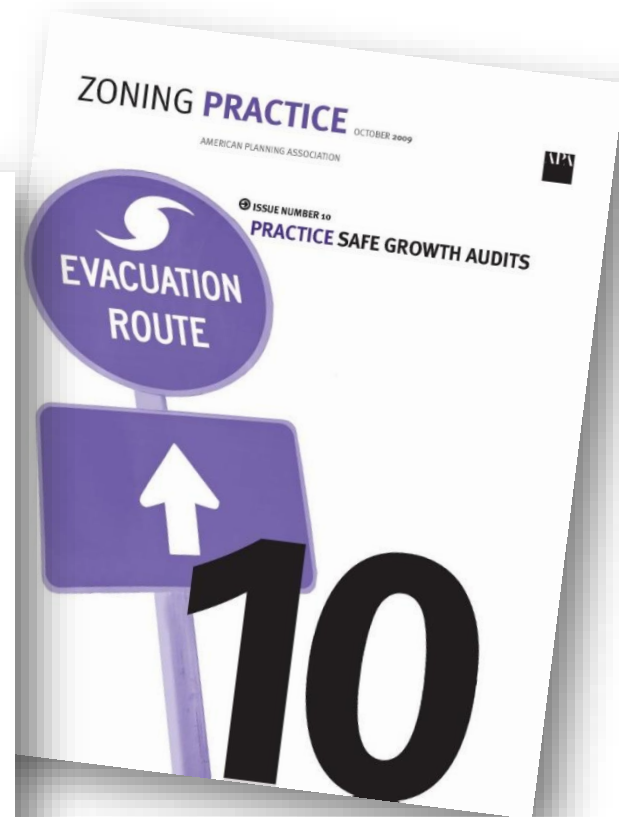
Worksheet 4.1
Local Capability Assessment Worksheet

Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resource	Access/ Eligibility (Yes/No)	Has this funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding		
Authority to levy taxes for specific purposes		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Storm water utility fee		
Incur debt through general obligation bonds and/or special tax bonds		
Incur debt through private activities		
Community Development Block Grant		
Other federal funding programs		
State funding programs		
Other		

How can these capabilities be expanded and improved to reduce risk?



4. Take Action to Reduce Long-Term Risk

Review Risk Assessment

Assess Capabilities

Evaluate and Prioritize Actions

Develop Action Plan for Implementation

Integrate with existing
planning mechanisms

Describe implementation
of actions



Evaluate a Comprehensive Range of Potential Solutions

Local Plans and Regulations

Structure and Infrastructure Projects

Natural Systems Protection

Education and Awareness Programs

Examples of Mitigation Actions: Local Plans and Regulations

Update
comprehensive plan



Revise
zoning ordinance



Enforce building code



Examples of Mitigation Actions: Structure and Infrastructure Projects

Construct
fire resistant roofs



Improve drainage
to reduce
flood threat



Acquire and demolish
structures in
hazard-prone areas



Examples of Mitigation Actions: Natural Systems Protection

Implement erosion control measures



Create defensible space regulations



Protect and preserve natural areas

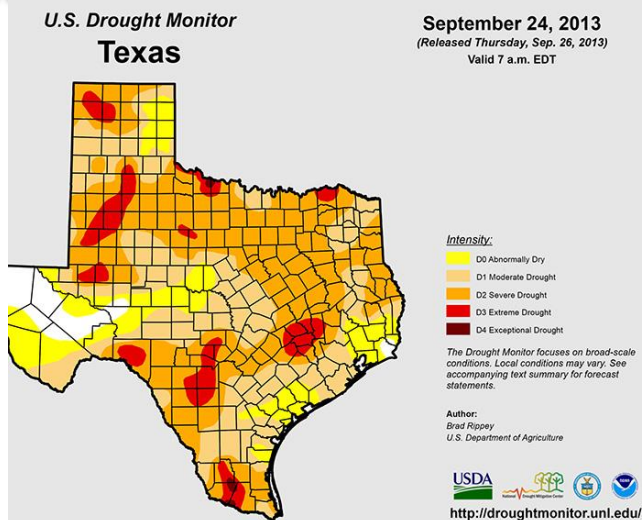


Examples of Mitigation Actions: Education and Awareness Programs

Incentivize drought tolerant landscaping



Publish Web sites and maps



Educate the public about risks



5. Evaluate Progress and Keep Plan Current

Develop a coordinated process to determine:

- How changes in development affect risk
- If mitigation activities are being implemented as planned
- If community priorities have changed
- When the plan should be updated

Observed Challenges for Mitigation Planning

Lack of active participation in the process by

- ✓ Local land use planners
- ✓ Local leaders

Proposed mitigation measures often

- ✓ Focus on emergency preparedness and response
- ✓ Not connected to other local planning efforts or ongoing programs

Multi-Hazard Mitigation Planning: The Lummi Nation's Experience

Presentation to:
**“Introduction to Natural Hazards Mitigation
Planning”
webinar**
January 27, 2017

**Lummi
Nation**



Stacy Fawell, CFM

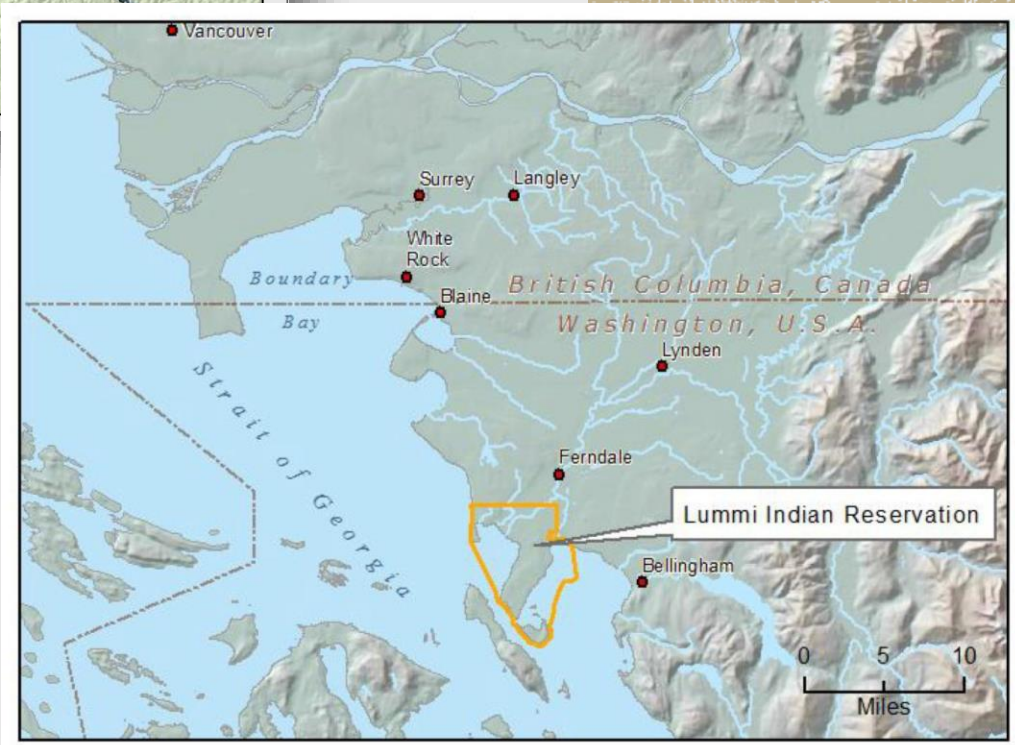
Natural Resources Analyst

Lummi Nation Water
Resources Division



Lummi Nation

Overview



Lummi Nation



Vulnerability Assessment: Hazards

- Floods
 - Riverine
 - Coastal
- Earthquake
- Severe winter storms
- Windstorms
- Coastal erosion
- Drought
- Wildfires
- Landslides
- Tsunami
- Volcanic eruptions
- Tornadoes



Figure 4.5 Topography, Surface Water Drains, Place Names, and Roads of the Lummi Reservation

- 2004 - First Standard State-Level Multi-Hazard Mitigation Plan approved by FEMA nationwide, funded by PDM planning grant
- 2007 - First update, three year cycle
- 2010 - Second update, Tribal MHMP, Tribal plan guidance
- 2015 - Third update, adopted by LIBC Sept, 2015, approved by FEMA November 2, 2015
- 2020 - Next update due

**Lummi
Nation**

MHMP Timeline



Successes

- Eligibility for HMA grants (PDM, HMGP, FMA)
- Completed mitigation actions
 - Reducing threats to public health and safety, structural damages, environmental impacts, and long term costs.
- Prioritized list of mitigation actions
- Increased understanding of hazards

Challenges

- Meetings, assembling MHMT
- Time/staffing - no dedicated hazard mitigation officer
- PDM road elevation project - increasing project costs, securing match

**Lummi
Nation**



Successes and Challenges

**Lummi
Nation**



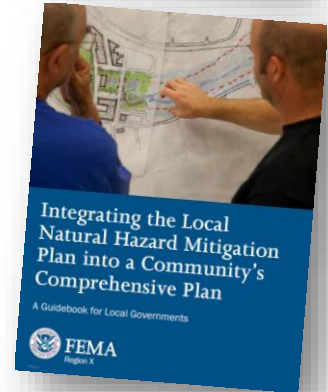
Find the Lummi Nation MHMP at:

<https://www.lummi-nsn.gov/Website.php?PageID=72>

Resources

DOCUMENTS

- **Local Mitigation Planning Handbook**
<http://www.fema.gov/library/viewRecord.do?id=7209>
- **Mitigation Ideas** <http://www.fema.gov/library/viewRecord.do?id=6938>
- **Region 10 Integrating Natural Hazard Mitigation into Comprehensive Planning** <http://www.fema.gov/media-library/assets/documents/89725>
- **Tribal Multi-Hazard Mitigation Planning Guidance**
<http://www.fema.gov/media-library/assets/documents/18355>



TRAINING

- **IS-318 - Mitigation Planning for Local and Tribal Communities**
Online training: <http://training.fema.gov/EMIWeb/IS/is318.asp>

WEBSITE

- **FEMA Mitigation Planning**
<https://www.fema.gov/hazard-mitigation-planning>



Review Learning Objectives

At the end of this course, participants will be able to:

- Explain the value of mitigation in improving community resilience
- Identify the steps in the mitigation planning process
- Identify the different stakeholders to involve in the mitigation planning process
- Locate resources to develop and implement mitigation plans

- **January:** *Introduction to Mitigation Planning*
- **February:** *Building the Mitigation Planning Team*
- **March:** *Effective Public Engagement in Mitigation Planning*
- **April:** *Developing FEMA Mitigation Planning Grants*
- **May:** *Performing Natural Hazard Risk Assessments*
- **June:** *Integrating Natural Hazard Mitigation Plans and Community Wildfire Protection Plans*
- **July:** *Developing Natural Hazard Mitigation Strategies*
- **August:** *Climate Adaptation and Mitigation Planning*
- **September:** *Tribal Mitigation Planning*
- **October:** *Addressing Social Equity through Mitigation Planning*
- **November:** *Integrating Natural Hazard Mitigation Plans into Local Comprehensive Plans*
- **December:** *Bringing the Mitigation Plan to Life*



**2017
FEMA
REGION 10
COFFEE
BREAK
CALENDAR**

Building the Planning Team

- Does your community have a designated team focusing on community mitigation?
- How is your team organized?
- Is the team effective in advocating for mitigation throughout the community?

Developing the mitigation planning team is an important step to long term risk reduction.



NEXT MONTH

February 24, 2017

10am-11am

FEMA REGION 10 MITIGATION PLANNING TEAM

- Brett Holt, Mitigation Planning Program Manager, brett.holt@fema.dhs.gov
- Amanda Siok, Mitigation Planner, amanda.siok@fema.dhs.gov

ALASKA

- Kelly Isham, State Mitigation Planner, kelly.isham@alaska.gov

IDAHO

- Lorrie Pahl, State Mitigation Planner, lpahl@imd.idaho.gov

OREGON

- Joseph Murray, State Planner, joseph.murray@oem.state.or.us

WASHINGTON

- Tim Cook, State Hazard Mitigation Officer,
Tim.Cook@mil.wa.gov

CONTACT

