27 February 2020

A Match Made in Heaven?
Climate Smart Hazard Planning
Welcome

Housekeeping
- Please mute
- Use the question function
Today’s Speakers

Sascha Petersen, Adaptation International

Kristin Baja, Urban Sustainability Directors Network

Eric Chapman, Lac du Flambeau Band of Lake Superior Chippewa Indians

Jonathan Olds, FEMA Region 10
A Match Made in Heaven?
Climate Smart Hazard Planning

National Adaptation Webinar Series
February 27, 2020
Central Texas has seen three 100-year floods in 5 years. Now thousands are destined to flood

Once every 100 years. That's the mark of a major flood. That means homes have a one percent chance of experiencing a flood in any given year. We've had three 100-year flood events in five years. Scientists say it's a sign of the times. Thousands more families in Central Texas are destined to flood.

Author: Terri Gruca
Published: 12:41 PM CST November 19, 2018
Updated: 10:22 PM CST November 20, 2018

CENTRAL TEXAS — Halloween 2013, Wimberley 2015, Hill Country 2018. Three 100-year flood events in five years' time.
Changes to 100-yr 24 hour Rainfall in Austin

https://www.noaa.gov/media-release/noaa-updates-texas-rainfall-frequency-values
Hazard Mitigation Planning and Climate Adaptation

https://www.ncdc.noaa.gov/billions/
• How can we move beyond “Cookie Cutter” Hazard Mitigation Planning?

• What constitutes meaningful community engagement?

• Does “mainstreaming” climate concerns into hazard plans make sense?
Flow of the Webinar
Panelists
We Build Resilience Together
Panelists
Thank You!!!

Sascha Petersen
Adaptation International
www.adaptationinternational.com
Sascha@adaptationinternational.com
CHANGE IS THE NEW NORMAL
INTEGRATING CLIMATE CHANGE & EQUITY INTO AHMP’S

K.Baja, Program Director, Climate Resilience
Urban Sustainability Directors Network
kristinbaja@usdn.org
REJECTING THE COOKIE CUTTER
RESILIENCE & ADAPTATION
CENTER WORK ON PEOPLE
INTEGRATION
CHANGE IS THE NEW NORMAL
Lac du Flambeau Band of Lake Superior Chippewa Indians
“A Match Made in Heaven”
National Adaptation Forum Webinar
February 27, 2020
Lac du Flambeau Band of Lake Superior Chippewa Indians: Location

Lac du Flambeau Ojibwe
Lac du Flambeau Indian Reservation (Waaswagoning)
Lac du Flambeau
Indian Reservation

86,500 Acres
260 Inland Lakes
71 Miles of Stream/Rivers
24,000 Acres of Wetlands
42,000 Acres of Forest
ENERGY REDUCTION PLAN
The Tribe is identifying ways to reduce energy use, save money, and decrease greenhouse gas emissions.

HAZARD MITIGATION PLAN
Through hazard mitigation planning the Tribe will reduce both natural and man-made risks that our community might face now and in the future.

VULNERABILITY ASSESSMENT
The Tribe will use a community assessment process to determine the vulnerability of concerns within our tribal environment, health, and infrastructure.

ADAPTATION PLAN
Through adaptation planning, the Tribe will identify actions the community can take to prepare for climate change.
Why Do We Need a Hazard Mitigation Plan?

“Developing and Implementing a Plan would help the Lac du Flambeau Tribe create a Healthier, Safer and more Resilient Community for the next 7 Generations”
Hazard Mitigation Planning Process

Phase I: Community Engagement and Identification of key Hazards (Months 1-6)

Phase II: Analysis of Current and Future Risk (Months 7-11)

Phase III: Development of Mitigation Actions (Months 12-14)

Phase IV: Plan Review and Adoption (Months 15-18)
Seasonal Temp and Precip Projections

**SPRING**
- Average spring temperature projected to increase 1.9 to 5.6°F
- Spring precipitation highly variable -26% to +69%

**SUMMER**
- Average summer temperature projected to increase 5.0 to 7.1°F
- Limited change in summer precipitation -23% to +16%

**FALL**
- Average fall temperature projected to increase 2.3 to 5.9°F
- Limited change in fall precipitation -19% to +22%

**WINTER**
- Average winter temperature projected to increase 2.3 to 5.3°F
- Slight increase in winter precipitation 0% to 103%
Partnerships: Tribal Emergency Planning Committee (TEPC)

- Land Management
- Police Department
- Water and Sewer Utility
- Community Health
- Planning and Development
- Lake of the Torches Casino
- Facilities/Buildings

- Communications/PR
- Administration
- State of Emergency
- Forestry
- Dental Facility
- Housing Authority
- Public School*
- Fire Department*
<table>
<thead>
<tr>
<th>LDF Hazard Risk Assessment Tool</th>
<th>Probability</th>
<th>Trend</th>
<th>Health and Public Safety</th>
<th>Home and Property Damage</th>
<th>Livelihood Impacts</th>
<th>Cultural Wellbeing</th>
<th>Environmental Harm</th>
<th>Damage to Infrastructure</th>
<th>Recovery Costs</th>
<th>Services</th>
<th>Government</th>
<th>Damage to Facilities / Agriculture</th>
<th>Risk Acceptability</th>
<th>Mitigation Potential</th>
<th>Overall Hazard Ranking</th>
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<td>Illegal Drug Crisis</td>
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<td>Severe Thunderstorms / Lightning / Hail</td>
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<td>Flood (flash flood, lake, river, stormwater)</td>
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<td>Severe Winter Storms / Ice Storms</td>
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<td>Forest / Wildland Fire</td>
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<td>Hazardous Materials Release / Contamination / Run-off</td>
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<td>Tornado / High Wind</td>
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<td>Extreme Heat</td>
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<td>Extreme Cold</td>
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<td>School Violence / Armed Attack / Workplace Violence</td>
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<td><strong>ILLEGAL DRUG CRISIS</strong></td>
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<td>Continue to update the Tribal Action Plan developed in response to the illegal drug crisis on a continuous basis.</td>
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<td>Continue and enhance existing counseling efforts.</td>
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<td>Enhanced police enforcement on drug interdiction and education on illicit/misused drugs and paraphernalia.</td>
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<td>Continue and support DEC (Drug Endangered Children) and adult response team that will coordinate with other tribal programs.</td>
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<td>Review mental health screening process during regular check-ups at the health clinic.</td>
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<td>Build a Safe House for children in families dealing with an emergent drug situation.</td>
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Completed and FEMA Approved Hazard Mitigation Plan

For Review:

www.ldftribe.com

*Other Pages

*Hazard Mitigation Plan
Climate Change Impacts on Lac du Flambeau Reservation
“Miigwech” Thank You!
On behalf of our TEPC

Eric Chapman, Sr.
echapman@ldftribe.com
Emergency Management Coordinator
FEMA Hazard Mitigation Project Lead
Climate Resilience Project Director
Lac du Flambeau Band of Lake Superior Chippewa Indians
Hazard Mitigation and Climate Adaption Planning

National Adaptation Forum Webinar

Jonathan Olds
Lead Hazard Mitigation Assistance Specialist
Region X
February 27, 2020
Federal Hazard Mitigation Planning

- **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**
  - Plans shall include information on the probability of future hazard events
  - Requires plan update every five years

- **Hazard Mitigation Assistance Guidance (updated 2015)**
  - Resilience and Climate Change Adaptation Commitment
  - Risk reduction for specific vulnerabilities from natural hazards and climate change

- **Tribal and State Mitigation Plan Review Guide (updated)**
  - Clarifies need to include considerations of future conditions, including long-term changes in weather patterns
2080s: New return interval for the Historical 10-yr flood

Figure 10-6 2080s: Projected return interval for the Historic 10-Year Flood on Snohomish County Rivers.
Cal-Adapt temperature projections for the Santa Cruz area

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Temperature</th>
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<tr>
<td>Historical Average</td>
<td>56.8°F</td>
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<tr>
<td>Low-Emissions Scenario</td>
<td>60.0°F</td>
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<tr>
<td>High-Emissions Scenario</td>
<td>62.3°F</td>
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FIGURE 10: URBAN/WILDLAND FIRE HAZARD AREAS
Quinault Indian Nation – Taholah Village Relocation

Figure 12-1. Map of Existing Condition from Taholah Village Relocation Master Plan (QIN 2016)
How to be Successful

Leadership and community support for integrating climate adaptation planning into the Hazard Mitigation Plan.

Identify who will lead the planning effort and what resources are available.

Determine information needed to identify, prioritize and generate support for effective hazard mitigation/climate adaptation strategies.

Determine methods of analysis to be used.

Determine community engagement methods and actions.

Develop scope of work, cost estimate and schedule.

When do you need this information?
Support Tools

Adaptation Clearinghouse: http://www.adaptationclearinghouse.org/
Alaska Climate Change Information: https://climatechange.alaska.gov/
Alaska Sea Grant: https://seagrant.uaf.edu/map/climate/
Climate Adaptation Knowledge Exchange: http://www.cakex.org/
Oregon Climate Change Research Institute: http://www.occri.net/
Oregon DLCD Planning for Climate Change: http://www.oregon.gov/LCD/CLIMATECHANGE/Pages/index.aspx
Oregon State University Climate Impacts Research Consortium: http://pnwcirc.org/circteam
NOAA Digital Coast: https://coast.noaa.gov/digitalcoast/
UW Climate Impacts Group: https://cig.uw.edu/
WA Coastal Hazards Resilience Network: http://www.wacoastalnetwork.com/
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
- Local Mitigation Planning Guidance
  https://www.fema.gov/media-library/assets/documents/23194
- Tribal Multi-Hazard Mitigation Planning Guidance
  http://www.fema.gov/media-library/assets/documents/18355
- California HMP & Climate Adaptation Guidance
- ICLEI: “Integrating Hazard Mitigation & Climate Adaptation Planning”

TRAINING

- Climate Adaptation Training Opportunities
  https://toolkit.climate.gov/training-courses

WEBSITE

- FEMA Mitigation Planning
  https://www.fema.gov/hazard-mitigation-planning
Questions & Discussion

USDN urban sustainability directors network

National Adaptation Forum

FEMA

adaptation international
Thanks for joining us!

All webinars are announced on social media:

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