Hiouchi Local Hazard Mitigation Plan
PUBLIC OUTREACH

Mitigation Strategy Public Input Meeting

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Rebecca Crow  | GHD
Dagan Short   | GHD

July 27, 2017
Today’s Discussion

- The Planning Team
- The Disaster Mitigation Act
- Planning Process
- Hazard Risk Assessment
- Mitigation Strategy Review and Input
- Individual Disaster Preparedness
- Next Steps
The Planning Team

- Big Rock CSD awarded Hazard Mitigation Funds under Disaster Grant to fund this effort
  - 75% of this cost is federal, 25% is local
  - Local contribution will be “in-kind”

- GHD Inc. has been awarded the contract to facilitate this plan update process.

- The Planning Team Includes:
  - Craig Bradford, District Project Manager
  - Rebecca Crow, GHD (Lead Project Planner)
  - Dagan Short, GHD (Risk Assessment/HAZUS lead)
So why are you here?

- You live in Hiouchi
- You are an interested member of the public
- You all have been identified as a potential stakeholder in hazard mitigation
  - So what does it mean to be a stakeholder?
    - You can benefit by being a planning partner
    - Your facilities can benefit
    - Your constituents can benefit
    - Your agency has authority over development in Hiouchi
What is the Disaster Mitigation Act (DMA)?

Federal legislation that establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). The DMA:

- Encourages and rewards local and state pre-disaster planning
- Promotes sustainability
- Strengthens statewide hazard mitigation through encouraging the integration of State and local planning
- Provides for faster more efficient allocation of funding and more effective risk reduction projects
Why is a LHMP Required?

- Section 201.6 44CFR states that approved local HMP’s must be updated at least every 5 years to remain eligible for Hazard Mitigation Grant Funding.

- Effective plans are those that remain relevant, which requires them to be reviewed and enhanced regularly.

- Maintaining an established HMP creates opportunities to integrate with other planning processes, and plans of adjacent jurisdictions.

- Hiouchi must complete a Local Hazard Mitigation Plan by August 23, 2017 to retain funds for the Hillside Stabilization Project.
The Planning Process

District personnel applied for and received a FEMA planning grant (75% Federal)

- Established a Planning Team
- Reached out to stakeholders and potential planning partners
- Assessed Risk to 6 Hazards of Concern
- Engaged the Public
- Identified goals, objectives and actions
- Identified a plan maintenance strategy
Phases of Plan Development

**Phase 1 - Organize Resources**
- Plan review
- Identify Planning Partners
- Agency Coordination
- Gather Public Input on Hazards

**Phase 2 - Risk Assessment**
- Update Hazards of concern
- HAZUS
- Utilize best available data

**Phase 3 - Engage the Public**
- Planning Partners
- Website
- Media releases
- Public meetings

**Phase 4 - Assemble the plan**
- Description of the process
- Risk assessment
- Mitigation Strategy
  - Goals/objectives
  - Review of alternatives
  - Action Plan
- Plan Maintenance

**Phase 5 - ADOPTION**
LHMP Risk Assessment

What would happen if a natural disaster occurred in Hiouchi?

• Hazard identification—The systematic use of all available information to determine what types of disasters may affect a jurisdiction, how often these events can occur, and the potential severity of their consequences.

• Vulnerability identification—The process of determining the impact of these events on the people, property, environment, economy and lands of a region
The Planning Area

The planning area for the effort encompasses the Service Boundary of the Big Rock Community Services District.
LHMP Hazards

Primary Hazards

• Earthquake

• Flooding

• Wildland Fire

Secondary Hazards

• Severe Weather

• Landslides

• Hazardous Materials
District Owned Critical Facilities

- 100,000 Gallon Redwood Water Storage Tank
- 50,000 Gallon Redwood Water Storage Tank
- Water Treatment Facility
- 4.2 Miles of Water Main (8, 6, and 4-inch pipelines)
- Transmission and distribution pipelines (6.9 miles of 2-inch lines)
- Water intake System
  - 2 Submersible 10 hp Single-phase Pumps
  - 3 Deeply Submersed Collection Galleries
  - Heavy Overhead Lift
- Main and Hillside Pump Houses
Hiouchi Critical Facilities

- Hiouchi Hamlet/ Chevron Station
- Highway 199
- Smith River Fire Protection District Fire Station No. 2
Earthquake Faults

The stuck, or ‘locked’ part of the interface between the North American and subducting plates - the fault that breaks in great earthquakes.

The seaward edge of the subduction zone, where the subducting plates begin their descent beneath the North American Plate.

Spreading ridges where plates separate and injected magma forms new oceanic crust.

Vertical faults oriented so plates move parallel to one another.

Credit: Cascadia Subduction Zone Earthquakes: A Magnitude 9.0 Scenario, 2013, CREW, FEMA, NEHRP
Earthquake Faults

The Cascadia Subduction Zone in Cross-Section:
New crust forms at spreading ridges between the Pacific Plate and the Juan de Fuca, Gorda, and Explorer plates. As these three plates are pushed eastward, they are forced to subduct beneath the North American Plate. Strain builds up where they have become stuck (locked) and will be released one day in a great earthquake.
Earthquake Planning Scenario for 9.0 Magnitude Cascadia Event

Credit: Cascadia Subduction Zone Earthquakes: A Magnitude 9.0 Scenario, 2013, CREW, FEMA, NEHRP
Flood Hazard

Flood Hazard Areas
- 1 Percent Annual Chance of Flood
- 0.2 Percent Annual Chance of Flood

Big Rock Community Services District Boundary
Fire Hazard

FIRE HAZARD SEVERITY ZONES in State Responsibility Area (SRA)
- Moderate
- High
- Very High

FIRE PROTECTION RESPONSIBILITY
- Federal Responsibility Area (FRA)
- Local Responsibility Area (LRA) - Unincorporated
- Local Responsibility Area (LRA) - Incorporated

[Map of fire hazard severity zones with different color coding for severity levels and responsibility areas.]
Landslide Hazard

Translational/ Rotational Slide

Big Rock
CSD
Severe Weather Hazard

- Extreme temperature (hot or cold)
- Precipitation
- High wind
Hazardous Materials Hazard

A **hazardous material** is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors and can include:

- Petroleum (gasoline, oil, etc)
- Cleaning solvents
- Pesticides, herbicides, and rodenticides
- Fertilizers
- Aerosols
What is Mitigation?

“Sustained action taken to reduce or eliminate long-term risk to life and property” (Prevention)
Hazard Mitigation Action Plan Draft Goals

- Goal 1: Minimize risk and vulnerability of Hiouchi and surrounding areas to the impacts of natural hazards and protect lives and reduce damages and losses to property, economy, public health and safety, and the environment.

- Goal 2: Provide protection for critical facilities, infrastructure, utilities and services from hazard impacts.

- Goal 3: Improve public awareness, education, and preparedness for all hazards.

- Goal 4: Increase communities' capabilities to mitigate losses and to be prepared for respond to, and recover from a disaster event.

- Goal 5: Maintain FEMA Eligibility/Position the communities for grant funding.
Currently Proposed Hazard Mitigation Actions

<table>
<thead>
<tr>
<th>Mitigation Actions</th>
<th>Hazards Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace the 100,000-gallon Redwood water storage tank with a bolted steel tank mounted on a granite shelf, and increase the working capacity to 200,000 gallons to accommodate water service to the community. Acquire ownership of 6.83 acres to secure facilities</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Install a complete emergency communications system with 70-ft antenna tower and a 30 kW generator with propane field for emergency HF/VHF/UHF, and Simplex communications. The tower will include a microwave antenna to perform SCADA operations</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Replace the 50,000-gallon Redwood water tank with a bolted steel tank mounted on ultramafic granite and increase total capacity to 100,000 gallons. Secure against threats of vandalism/terrorism</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Improve road access to the District’s assets and emplace flood and erosion barriers</td>
<td>All Hazards</td>
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</tbody>
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## Currently Proposed Hazard Mitigation Actions

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<tr>
<td>Upgrade the existing SCADA system</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Purchase a ¾-ton 4WD replacement vehicle for staff that is equipped with VHF/UHF radio</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Purchase two satellite telephones with a 5-year service contract</td>
<td>Earthquake, Severe Weather</td>
</tr>
<tr>
<td>Replace all aged water mains, including resilient features, to reduce damage during hazard events</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Support countywide initiatives identified in Del Norte County’s MJHMP</td>
<td>All Hazards</td>
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<tr>
<td>Develop a Big Rock CSD Catastrophic Disaster Plan addressing prevention, protection, response, recovery, and mitigation</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Enhance Public Education and Awareness of Natural Hazards and Public Understanding of Disaster Preparedness</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Support Smith River Fire Protection District, Fire Station No. 2 with structural seismic upgrades and installation of emergency preparedness equipment</td>
<td>All Hazards</td>
</tr>
</tbody>
</table>
## Personal Emergency Preparedness – Survey Results

<table>
<thead>
<tr>
<th>Have Stored or Stocked up On</th>
<th>Responses</th>
<th>Other Preparations</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>3</td>
<td>Prepared a disaster supply kit</td>
<td>2</td>
</tr>
<tr>
<td>Water</td>
<td>2</td>
<td>Received First Aid/CPR training</td>
<td>4</td>
</tr>
<tr>
<td>Flashlight(s)</td>
<td>3</td>
<td>Made a fire escape plan</td>
<td>2</td>
</tr>
<tr>
<td>Batteries</td>
<td>3</td>
<td>Discussed utility shutoffs</td>
<td>2</td>
</tr>
<tr>
<td>Battery-powered radio</td>
<td>2</td>
<td>Smoke detector on each level of house</td>
<td>4</td>
</tr>
<tr>
<td>Medical supplies (First aid kit)</td>
<td>3</td>
<td>Developed a reconnection plan</td>
<td>1</td>
</tr>
<tr>
<td>Fire extinguisher</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Personal Emergency Preparedness Resources

How can I prepare myself and my family in case of an emergency?

1. Develop an Emergency Communication Plan
2. Create an Emergency Supply Kit
3. Become familiar with the Hazards in your community
4. Know your neighbors
5. Prepare!
Emergency Communication Plan

Create an emergency communications plan and build an emergency kit to ensure you and your family are prepared for hazards.

Your family may not be together if a disaster strikes, so it is important to think about the following situations and plan just in case. Consider the following questions when making a plan:

• How will my family/household get emergency alerts and warnings?
• How will my family/household get to safe locations for relevant emergencies?
• How will my family/household get in touch if cell phone, internet, or landline doesn't work?
• How will I let loved ones know I am safe?
• How will family/household get to a meeting place after the emergency?
Emergency Supply Kit

Recommended Items to Include in a Basic Emergency Supply Kit:

- Water, one gallon of water per person per day for at least three days, for drinking and sanitation
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both
- Flashlight and extra batteries
- First aid kit
- Whistle to signal for help
- Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to turn off utilities
- Can opener for food (if kit contains canned food) Local maps
Become Familiar with the Hazards in Your Community

• Research and understand mitigation measures you can implement at home to address earthquakes, floods and wildfire.
• Link to emergency notification system to be aware of potential hazards.
Preparing for Flood Hazards

There are small flood proofing measures that you can take to help prevent, or minimize the impact of flooding to your home and its contents. A few examples include:

- Elevate your furnace, water heater and electric panel in your home, if you live in a high flood risk area.
- Install "check valves" to prevent flood water from backing up into the drains of your home.
- When practical, homeowners can construct barriers (such as sandbagging) to stop floodwater from entering your home.
- Seal walls in your basement with waterproofing compounds.
Preparing for Wildfire Hazards

There are several simple steps that can be taken to prepare for wildfire hazards which include:

- Regularly clean the roof and gutters.
- Maintain an area approximately 30’ away from your home that is free of anything that will burn, such as wood piles, dried leaves, newspapers and other brush.
- Connect garden hoses long enough to reach any area of the home and fill garbage cans, tubs, or other large containers with water.
- Review your homeowner's insurance policy and also prepare/update a list of your home's contents.
- Know evacuation routes
- Stay in communication
Preparing for Earthquakes

At a minimum, you should be prepared to be isolated and on your own for at least seven days and nights. There will likely be the loss of utilities after a disaster. It is possible the power will be out, water may be scarce, gas lines may break, phones and cell towers could become inoperable, roads might be impassible, etc. Your only source of news may well be the car radio, assuming your local radio station has a working generator. There might not be medical assistance for days. To begin preparing your home and family:

- Identify potential hazards in your home and begin to fix them.
- Create a disaster-preparedness plan.
- Identify your building’s potential weaknesses and begin to fix them.
- Protect yourself during earthquake shaking.
- After the quake, check for injuries and damage.
- When safe, continue to follow your disaster-preparedness plan.
For More Information

Please visit the BRCSD Website at:
http://www.bigrockcsd.org

Community Resources Page Includes:
• Initial Outreach Meeting Presentation
• BRCSD Neighbors Helping Neighbors Policy
• Emergency Preparedness Resources
• Draft Local Hazard Mitigation Plan
So What’s Next?

- Draft Plan available July 17 – August 16\textsuperscript{th} for review
  - Comments due to BRCSD by August 16\textsuperscript{th}
- BRCSD considers public comments and adopts LHMP – August 17\textsuperscript{th}
- Submit Final LHMP to FEMA by August 23, 2017
QUESTIONS