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PE-7: STORM-READY.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	90
PE-8: EMERGENCY ALERT SYSTEM.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	90
PE-9: COMMUNITY RATING SYSTEM. (NFIP program)	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	100
PE-10: EMERGENCY OPERATIONS PLAN.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	80
PE-11: EDUCATE. **(promote local awareness of hazards and mitigation)**	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	80
PE-12A: FLOODING. Assist home owners that have previously flooded to protect their structures from future damage.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	Very High High Medium Low Very Low	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	60

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PE-12B: FLOODING. Maintain compliance with current NFIP regulations to make flood insurance available to property owners in the UIR.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-13: EARTHQUAKE. Participate in the "Great Shake Out" to educate and remind residents how to prepare for and respond to an earthquake event	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-14: FOG. Expand the radio frequency traveler's information program to inform the public of road conditions on I-84	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-15A: WILDFIRES. Coordinate with and support prevention and education efforts identified in the BIA WFPP.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-15B: WILDFIRES. Identify and inform property owners about bridges that cannot support weight of emergency vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-15C: WILDFIRES. Promote retrofitting of homes in WUI areas with noncombustible materials.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**
PE-16: Natural Gas Pipeline Break. Coordinate with the pipeline company operators to provide pipeline safety education forums.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**

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(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

P-1: COMP. PLAN Ensure all CTUIR functional plans adopted consider mitigation measures to address relevant hazards.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	(5) 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	80
P-2: LAND DEV. CODE Help protect <u>future</u> development from hazardous events	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	80
P-3: LDC (Landslides & Wildfires) Help protect <u>existing</u> and future development from hazardous events	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	70
P-4: Int'l Building Codes. Help make new or renovated structures more disaster resistant.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	(5) 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	90
P-5A: FLOODING Purchase and remove existing structures in flood hazard areas as funding and willing sellers allow.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	(5) 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 (1)	**Yes** **No**	60
P-5B: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 (1)	**Yes** **No**	40
P-5C: FLOODING. Include properties located within the Flood Hazard Overlay Zone as a priority in the CTUIR Land Acquisition Strategy Plan as funding and willing sellers allow.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	(5) 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 (1)	**Yes** **No**	60

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P-5D: FLOODING. Work with local, state and federal jurisdictions to install, maintain and operate stream gauging stations on the UIR.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **(2)** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	60
P-6A: EARTHQUAKE. Conduct a study to determine which buildings and infrastructure on the UIR face a risk from earthquakes.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **(2)** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	50
P-6B: EARTHQUAKE. Monitor earthquake activity; establish and implement an infrastructure inspection process for the Community water and sewer system; retrofit as needed.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **(1)**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 (2) 1	**Yes** **No**	30
P-6C: EARTHQUAKE. Update the 2006 CTUIR Water and Wastewater Master Plan. P-6D?	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**(5)** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	90
P-7A: FOG. Provide additional cameras on I-84.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**(5)** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	80
P-7B: FOG. Work with ODOT and State Police to provide a lead car to guide vehicles on Cabbage Hill during times of dense and freezing fog.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**5** **(4)** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	70
P-8: SEVERE WINTER STORMS. Expand the NOAA emergency management signal covering the UIR.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	**Very High** **High** **Medium** **Low** **Very Low**	**(5)** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	80

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P-9A: WILDFIRE. Evaluate all new development within the designated high and medium wildland-urban interface (WUI) areas for fire hazard.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	70
P-9B: WILDFIRE. Within designated WUI and at risk WFPP areas ensure adequate access/egress for fire-fighting vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	90
P-10A: DROUGHT. Develop/Update Water Conservation Plan.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	90
P-10B: DROUGHT. Provide technical assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	60
P-11A: DUST STORMS. Provide technical assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	40
P-11B: DUST STORMS. Develop an Agricultural Management Plan for the UIR to include soil retention best management practices.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	80
P-11C: DUST STORMS. Explore methods of improving communication of hazardous blowing dust conditions with local public safety and law enforcement agencies.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** 5 **High** 4 **Medium** 3 **Low** 2 **Very Low** 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low 5 Low 4 Medium 3 High 2 Very High 1		**Yes** **No**	80

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P-12: DAM FAILURE. Implement and update as necessary, the Indian Lake Dam EOP.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	70
S-1A: FLOODING. Identify and implement measures to mitigate erosion of the county road serving Upper McKay Creek.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	60
S-1B: FLOODING. Flood-proof existing homes in the "July Grounds" area to mitigate for mold and rot associated with the high water table hazard.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	60
S-2A: SEVERE WINTER STORMS. Replace existing power lines with heavier T-2 line, shorter spans, and heavier poles and crossbars.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	40
S-2B: SEVERE WINTER STORMS. Bury utility lines to remove the risk of power outages due to ice.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	40
S-2C: SEVERE WINTER STORMS. Install a second substation to provide a secondary service route to the power grid system.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	60
S-2D: SEVERE WINTER STORMS. Develop additional semi-truck parking near Arrowhead to address safety issues with I-84 winter closures.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	60

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S-3A: DROUGHT. Increase storage of water, especially off stream storage for beneficial use by Farming Enterprise and First Foods.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
S-3B: DROUGHT. Increase storage capacity and supply of potable water to the CTUIR Community Water System which is at capacity.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
PP-1A: WILDFIRES. Develop a Reservation slash pickup, chipping and reuse program in WUI designated areas for homeowners.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
PP-1B: WILDFIRES. Inventory existing water supplies within the UIR suitable for use in fighting wildland fires.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	80
PP-2A: HAZARDOUS MATERIALS SPILLS. Provide an enclosed and "haz mat ready" safety facility for trucks with leaking loads near the most accident-prone area of I-84 within the Reservation boundaries.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	50
PP-2B: HAZARDOUS MATERIALS SPILLS. Increase patrol of Casino and Arrowhead parking areas for leaking materials or when I-84 is closed.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
PP-3: FLOODING. Move the affected people out of danger by relocating or elevating threatened homes.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	50

(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only) E

ES-1: EMERGENCY OPERATIONS PLAN. **A.** Annually review the Plan with individuals and agencies responsible for implementation.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	100
ES-1: EMERGENCY OPERATIONS PLAN. **B.** Amend all as necessary to keep current.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	100
ES-2: SEVERE WINTER STORMS. Work with existing utility companies providing services within the UIR to coordinate emergency response to address power outages.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	80
ES-3A: WILDFIRES. Within designated WUI and at risk WFPP areas provide emergency access/egress road signs and maps for homeowners.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	90
ES-3B: WILDFIRES. Develop a process to encourage private property owners to upgrade their bridges to support the weight of fire trucks and emergency vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
ES-4: DUST STORMS. Expand and use the EAS to provide timely information to the traveling public about hazardous blowing dust conditions.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	80
ES-5A: HAZARDOUS MATERIALS SPILLS. Coordinate with the Union Pacific Railroad for local response to derailments and spills.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	90

(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

ES-5B: HAZARDOUS MATERIALS SPILLS. Develop a response training program with UPRR and Umatilla County for use of specialized equipment.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	90
ES-6: CRITICAL FACILITIES PROTECT Ensure all critical facilities are equipped with emergency backup generators and fuel supply.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	80
NR-1: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	**5** **4** **3** **2** **1**		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	**5** **4** **3** **2** **1**	**Yes** **No**	50

FORM 2: MITIGATION ACTION ITEM PRIORITIZATION

F

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
PE-1: INFORMATION. 550	✓8	4	8	9	3	4	5	4	5	5	630
PE-2: BUSINESS CONTINUITY PLAN. 460	✓7	5	6	6	3	4	4	3	4	4	530
PE-3: GOVERNMENT CONTINUITY PLAN. 420	✓7	5	6	6	4	3	4	4	4	4	530
PE-4: HAZARDOUS EVENTS ON WEBSITE 410	4	3	5	8	5	4	2	3	4	3	480
PE-5: PARTNER TO SHARE RESOURCES. 450	✓4	6	8	5	2	3	4	5	5	3	510
PE-6: REGIONAL E.M. and INFO HUB. 370	3	4	5	5	2	2	4	4	5	3	430
PE-7: STORM-READY. 480	8	4	5	6	4	4	2	2	2	4	470
PE-8: EMERGENCY ALERT SYSTEM. 440	✓6	5	6	7	4	4	2	3	3	4	510
PE-9: COMMUNITY RATING SYSTEM. (NFIP program) 410	7	5	4	7	4	3	2	3	3	3	480
PE-10: EMERGENCY OPERATIONS PLAN. 510	✓5	8	8	7	3	3	4	5	5	3	580
PE-11: EDUCATE. (promote local awareness of hazards and mitigation) 500	7	5	6	8	5	4	4	4	3	4	560
PE-12A: FLOODING. Assist home owners that have previously flooded to protect their structures from future damage. 390	✓9	4	4	5	3	3	2	3	2	4	460
PE-12B: FLOODING. Maintain compliance with current NFIP regulations to make flood insurance available to property owners in the UIR. 420	8	4	4	7	3	3	3	3	3	4	480

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
510 **PE-13: EARTHQUAKE.** Participate in the "Great Shake Out" to educate and remind residents how to prepare for and respond to an earthquake event	~~0~~ 10	5	6	7	~~4~~	3	5	4	3	~~4~~	570
490 **PE-14: FOG.** Expand the radio frequency traveler's information program to inform the public of road conditions on I-84	10	5	6	8	3	3	3	4	3	4	560
510 **PE-15A: WILDFIRES.** Coordinate with and support prevention and education efforts identified in the BIA WFPP.	10	6	6	6	4	4	4	5	3	3	580
470 **PE-15B: WILDFIRES.** Identify and inform property owners about bridges that cannot support weight of emergency vehicles.	6	5	6	8	4 ~~6~~	4	4	4	3	3	530
460 **PE-15C: WILDFIRES.** Promote retrofitting of homes in WUI areas with noncombustible materials.	8	5	6	6	4 ~~7~~	4	~~3~~	3	3	4	520
470 **PE-16: Natural Gas Pipeline Break.** Coordinate with the pipeline company operators to provide pipeline safety education forums.	10	4	5	8	3	3	3	4	3	4	530
480 **P-1: COMP. PLAN** Ensure all CTUIR functional plans adopted consider mitigation measures to address relevant hazards.	10	6	6	6	3	3	3	4	3	4	550
490 **P-2: LAND DEV. CODE** Help protect <u>future</u> development from hazardous events	10	6	7	6	4	3	3	4	3	3	550

F

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
P-3: LDC (Landslides & Wildfires) Help protect existing and future development from hazardous events 530	7	6	7	7	7	3	4	3	4	3	590
P-4: Int'l Building Codes. Help make new or renovated structures more disaster resistant. 390	5	5	5	6	4	3	3	2	3	3 3	450
P-5A: FLOODING Purchase and remove existing structures in flood hazard areas as funding and willing sellers allow. 410	5	6	6	5	3	3	3	3	2	3	470
P-5B: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed 460	7	7	7	7	3	3	2	3	4	3	530
P-5C: FLOODING. Include properties located within the Flood Hazard Overlay Zone as a priority in the CTUIR Land Acquisition Strategy Plan as funding and willing sellers allow. 400	6	6	7	5	2	3	2	3	3	3	470
P-5D: FLOODING Work with local, state and federal jurisdictions to install, maintain and operate stream gauging stations on the UIR. 460	6	7	7	6	3	3	4	4	3	3	530
P-5E: FLOODING. Work with local, state and federal jurisdictions to install, maintain and operate stream gauging stations on the UIR. 450	6	6	7	6	3	3	4	4	3	3	520
P-6A: EARTHQUAKE. Conduct a study to determine which buildings and infrastructure on the UIR face a risk from earthquakes. 440	7	5	5	7	3	3	4	4	3	3	500

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
P-6B: EARTHQUAKE. Monitor earthquake activity; establish and implement an infrastructure inspection process for the Community water and sewer system; retrofit as needed. 390	5	6	5	5	3	3	3	4	3	2	39 450
P-6C: EARTHQUAKE. 420 Update the 2006 CTUIR Water and Wastewater Master Plan.	7	6	6	6	2	3	3	3	3	3	42 490
P-7A: FOG. 430 Provide additional cameras on I-84.	7	5	6	6	3	4	3	3	3	3	43 490
P-7B: FOG. 450 Work with ODOT and State Police to provide a lead car to guide vehicles on Cabbage Hill during times of dense and freezing fog.	7	6	6	6	3	4	3	4	3	3	45 510
P-8: SEVERE WINTER STORMS. 400 Expand the NOAA emergency management signal covering the UIR.	7	5	5	6	3	3	2	3	3	3	40 470
P-9A: WILDFIRE. 420 Evaluate all new development within the designated high and medium wildland-urban interface (WUI) areas for fire hazard.	7	5	6	6	3	3	3	2	3	4	42 490
P-9B: WILDFIRE. 440 Within designated WUI and at risk WFPP areas ensure adequate access/egress for fire-fighting vehicles.	7	6	6	6	3	3	3	4	3	3	44 510
P-10A: DROUGHT. 430 Develop/Update Water Conservation Plan.	7	5	6	7	3	3	3	3	3	3	43 500
P-10B: DROUGHT. 410 Provide technical assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	6	6	5	5	3	3	3	4	3	3	41 470

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	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
P-11A: DUST STORMS. 380 Provide assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	6	5	6	5	2	3	2	3	3	3	440
P-11B: DUST STORMS. 380 Develop an Agricultural Management Plan for the UIR to include soil retention best mgt. practices.	6	5	5	6	3	3	2	2	3	3	450
P-11C: DUST STORMS. 400 Explore methods of improving communication of hazardous blowing dust conditions with local public safety and law enforcement agencies.	7	5	6	6	3	2	2	3	3	3	480
P-12: DAM FAILURE. 400 Implement and update as necessary, the Indian Lake Dam EOP.	7	5	5	6	3	3	2	3	3	3	460
S-1A: FLOODING. 410 Identify and implement measures to mitigate erosion of the county road serving Upper McKay Creek.	7	6	6	6	2	3	3	1	2	4	41 470
S-1B: FLOODING. 400 Flood-proof existing homes in the "July Grounds" area to mitigate for mold and rot associated with the high water table hazard.	7	5	5	5	3	3	2	1	3	3	40 470
S-2A: SEVERE WINTER STORMS. 410 Replace existing power lines with heavier T-2 line, shorter spans, and heavier poles and crossbars.	7	6	7	4	2	3	3	3	3	3	41 470
S-2B: SEVERE WINTER STORMS. 380 Bury utility lines to remove the risk of power outages due to ice.	7	5	5	4	3	3	3	3	2	3	38 450

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
S-2C: SEVERE WINTER STORMS. Install a second substation to provide a secondary service route to the power grid system. 410	6	6	6	6	3	2	3	3	3	3	41 470
S-2D: SEVERE WINTER STORMS. Develop additional semi-truck parking near Arrowhead to address safety issues with I-84 winter closures. 350	5	5	5	5	2	3	2	3	2	3	35 400
S-3A: DROUGHT. Increase storage of water, especially off stream storage for beneficial use by Farming Enterprise and First Foods. 340	5	5	5	4	3	3	3	2	3	2	34 390
S-3B: DROUGHT. Increase storage capacity and supply of potable water to the CTUIR Community Water System which is at capacity. 350	6	6	5	5	3	2	2	2	3	3	35 410
PP-1A: WILDFIRES. Develop a Reservation slash pickup, chipping and reuse program in WUI designated areas for homeowners. 400	7	6	5	6	3	2	2	3	3	3	40 470
PP-1B: WILDFIRES. Inventory existing water supplies within the UIR suitable for use in fighting wildland fires. 400	7	5	6	5	3	3	3	3	2	3	46 460
PP-2A: HAZARDOUS MATERIALS SPILLS. Provide an enclosed and "haz mat ready" safety facility for trucks with leaking loads near the most accident-prone area of I-84 within the Reservation boundaries. 410	7	6	6	5	3	2	3	3	3	3	41 460
PP-2B: HAZARDOUS MATERIALS SPILLS. Increase patrol of Casino and Arrowhead parking areas for leaking materials or when I-84 is closed. 370	6	5	5	6	3	2	2	2	3	3	37 440

F

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
PP-3: FLOODING. Move the affected people out of danger by relocating or elevating threatened homes. 330	5	5	4	4	3	3	2	2	2	3	33 390
ES-1: EMERGENCY OPERATIONS PLAN. A. Annually review the Plan with individuals and agencies responsible for implementation. 420	7	6	6	6	3	3	2	3	3	3	42 490
ES-1: EMERGENCY OPERATIONS PLAN. B. Amend all as necessary to keep current. 400	7	6	5	6	3	3	2	~~3~~ 2	2	3	40 480
ES-2: SEVERE WINTER STORMS. Work with existing utility companies providing services within the UIR to coordinate emergency response to address power outages. 390	7	6	~~5~~	6	3	3	2	2	2	3	39 450
ES-3A: WILDFIRES. Within designated WUI and at risk WFPP areas provide emergency access/egress road signs and maps for homeowners. 390	7	5	6	6	3	2	2	2	3	3	39 460
ES-3B: WILDFIRES. Develop a process to encourage private property owners to upgrade their bridges to support the weight of fire trucks and emergency vehicles. 390	7	6	6	4	2	3	2	3	3	3	39 440
ES4 **ES-5A: HAZARDOUS MATERIALS SPILLS.** Coordinate with the Union Pacific Railroad for local response to derailments and spills. 410	7	6	5	4	3	3	2	3	3	3	41 470
ES-5B: HAZARDOUS MATERIALS SPILLS. Develop a response training program with UPRR and Umatilla County for use of specialized equipment. 400	6	6	6	4	3	3	3	3	3	3	40 460

	Eliminates Repetitive Loss (1-10pts)	Greatest Economic Impact (0-10)	Greatest Good for Most People (0-10)	Least Expensive Option (0-10)	Funding Is Secure or Easy to Obtain (0-5)	Can Fund Sooner (0-5)	Has Greater Public and Political Support (0-5)	Benefits More Than One Jurisdiction (0-5)	Addresses Two or More Goals (0-5)	Local Ability to Perform Project (0-5)	TOTAL POINTS From both forms
ES-6: CRITICAL FACILITIES PROTECT Ensure all critical facilities are equipped with emergency backup generators and fuel supply. 410	7	6	6	6	3	3	2	2	3	3	411 480
NR-1: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed. 410	7	6	6	6	3	2	2	3	3	3	41 460

(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

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FORM 1: Benefit – Cost Assessment

Measure/Action	Estimated Benefits				Estimated Cost			B > C	
PE-1: INFORMATION.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	80
PE-2: BUSINESS CONTINUITY PLAN.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	70
PE-3: GOVERNMENT CONTINUITY PLAN.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	60
PE-4: HAZARDOUS EVENTS ON WEBSITE	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	70
PE-5: PARTNER TO SHARE RESOURCES.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	60
PE-6: REGIONAL E.M. and INFO HUB.	**Prevents or Reduces:** - Injury or Loss of Life - Displacement Costs - Disruption Costs - Loss of Service - Business Closure - Bridge/Road Closure - Recovery Costs - Replacement Costs	Very High High Medium Low Very Low	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	Yes No	60

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PE-7: STORM-READY.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	60
PE-8: EMERGENCY ALERT SYSTEM.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(**Yes**) **No**	70
PE-9: COMMUNITY RATING SYSTEM. (NFIP program)	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	70
PE-10: EMERGENCY OPERATIONS PLAN.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(**Yes**) **No**	70
PE-11: EDUCATE. **(promote local awareness of hazards and mitigation)**	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** (**No**)	60
PE-12A: FLOODING. Assist home owners that have previously flooded to protect their structures from future damage.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	Very High High Medium Low Very Low	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	70

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PE-12B: FLOODING. Maintain compliance with current NFIP regulations to make flood insurance available to property owners in the UIR.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(Yes) **No**	60
PE-13: EARTHQUAKE. Participate in the "Great Shake Out" to educate and remind residents how to prepare for and respond to an earthquake event	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	60
PE-14: FOG. Expand the radio frequency traveler's information program to inform the public of road conditions on I-84	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(Yes) **No**	70
PE-15A: WILDFIRES. Coordinate with and support prevention and education efforts identified in the BIA WFPP.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	70
PE-15B: WILDFIRES. Identify and inform property owners about bridges that cannot support weight of emergency vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(Yes) **No**	60
PE-15C: WILDFIRES. Promote retrofitting of homes in WUI areas with noncombustible materials.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	(Yes) **No**	60
PE-16: Natural Gas Pipeline Break. Coordinate with the pipeline company operators to provide pipeline safety education forums.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** (**No**)	60

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P-1: COMP. PLAN Ensure all CTUIR functional plans adopted consider mitigation measures to address relevant hazards.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-2: LAND DEV. CODE Help protect future development from hazardous events	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-3: LDC (Landslides & Wildfires) Help protect existing and future development from hazardous events	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-4: Int'l Building Codes. Help make new or renovated structures more disaster resistant.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-5A: FLOODING Purchase and remove existing structures in flood hazard areas as funding and willing sellers allow.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-5B: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-5C: FLOODING. **Include properties located within the Flood Hazard Overlay Zone as a priority in the CTUIR Land Acquisition Strategy Plan as funding and willing sellers allow.**	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70

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P-5D: FLOODING. Work with local, state and federal jurisdictions to install, maintain and operate stream gauging stations on the UIR.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	(Yes) No	70
P-5E: FLOODING. Work with local, state and federal jurisdictions to install, maintain and operate stream gauging stations on the UIR.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	Yes (No)	70
P-6A: EARTHQUAKE. Conduct a study to determine which buildings and infrastructure on the UIR face a risk from earthquakes.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	Yes (No)	60
P-6B: EARTHQUAKE. Monitor earthquake activity; establish and implement an infrastructure inspection process for the Community water and sewer system; retrofit as needed.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	Yes (No)	60
P-6C: EARTHQUAKE. Update the 2006 CTUIR Water and Wastewater Master Plan.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	(Yes) No	70
P-7A: FOG. Provide additional cameras on I-84.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	Yes (No)	60
P-7B: FOG. Work with ODOT and State Police to provide a lead car to guide vehicles on Cabbage Hill during times of dense and freezing fog.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	(Yes) No	60

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P-8: SEVERE WINTER STORMS. Expand the NOAA emergency management signal covering the UIR.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-9A: WILDFIRE. Evaluate all new development within the designated high and medium wildland-urban interface (WUI) areas for fire hazard.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-9B: WILDFIRE. Within designated WUI and at risk WFPP areas ensure adequate access/egress for fire-fighting vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-10A: DROUGHT. Develop/Update Water Conservation Plan.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
P-10B: DROUGHT. Provide technical assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-11A: DUST STORMS. Provide technical assistance and low-interest loans to farmers and ranchers to develop livestock watering systems.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
P-11B: DUST STORMS. Develop an Agricultural Management Plan for the UIR to include soil retention best management practices.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70

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P-11C: DUST STORMS. Explore methods of improving communication of hazardous blowing dust conditions with local public safety and law enforcement agencies.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**
P-12: DAM FAILURE. Implement and update as necessary, the Indian Lake Dam EOP.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**
S-1A: FLOODING. Identify and implement measures to mitigate erosion of the county road serving Upper McKay Creek.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**
S-1B: FLOODING. Flood-proof existing homes in the "July Grounds" area to mitigate for mold and rot associated with the high water table hazard.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**
S-2A: SEVERE WINTER STORMS. Replace existing power lines with heavier T-2 line, shorter spans, and heavier poles and crossbars.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**
S-2B: SEVERE WINTER STORMS. Bury utility lines to remove the risk of power outages due to ice.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**
S-2C: SEVERE WINTER STORMS. Install a second substation to provide a secondary service route to the power grid system.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**

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(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

S-2D: SEVERE WINTER STORMS. Develop additional semi-truck parking near Arrowhead to address safety issues with I-84 winter closures.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	50
S-3A: DROUGHT. Increase storage of water, especially off stream storage for beneficial use by Farming Enterprise and First Foods.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	50
S-3B: DROUGHT. Increase storage capacity and supply of potable water to the CTUIR Community Water System which is at capacity.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	60
PP-1A: WILDFIRES. Develop a Reservation slash pickup, chipping and reuse program in WUI designated areas for homeowners.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	(5) 4 3 2 1	**Yes** **No**	70
PP-1B: WILDFIRES. Inventory existing water supplies within the UIR suitable for use in fighting wildland fires.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	60
PP-2A: HAZARDOUS MATERIALS SPILLS. Provide an enclosed and "haz mat ready" safety facility for trucks with leaking loads near the most accident-prone area of I-84 within the Reservation boundaries.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	50
PP-2B: HAZARDOUS MATERIALS SPILLS. Increase patrol of Casino and Arrowhead parking areas for leaking materials or when I-84 is closed.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1	< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	(5) 4 3 2 1	**Yes** **No**	70

(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

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PP-3: FLOODING. Move the affected people out of danger by relocating or elevating threatened homes.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 (3) 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	60
ES-1: EMERGENCY OPERATIONS PLAN. **A.** Annually review the Plan with individuals and agencies responsible for implementation.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	70
ES-1: EMERGENCY OPERATIONS PLAN. **B.** Amend all as necessary to keep current.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 (4) 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	80
ES-2: SEVERE WINTER STORMS. Work with existing utility companies providing services within the UIR to coordinate emergency response to address power outages.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 (4) 3 2 1	**Yes** **No**	60
ES-3A: WILDFIRES. Within designated WUI and at risk WFPP areas provide emergency access/egress road signs and maps for homeowners.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	(5) 4 3 2 1	**Yes** **No**	70
ES-3B: WILDFIRES. Develop a process to encourage private property owners to upgrade their bridges to support the weight of fire trucks and emergency vehicles.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 (3) 2 1	**Yes** **No**	50
ES-4: DUST STORMS. Expand and use the EAS to provide timely information to the traveling public about hazardous blowing dust conditions.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 (2) 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	(5) 4 3 2 1	**Yes** **No**	70

(For confidentiality, each completed form will be given a number and will be used for tallying and documentation purposes only)

ES-5A: HAZARDOUS MATERIALS SPILLS. Coordinate with the Union Pacific Railroad for local response to derailments and spills.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
ES-5B: HAZARDOUS MATERIALS SPILLS. Develop a response training program with UPRR and Umatilla County for use of specialized equipment.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	60
ES-6: CRITICAL FACILITIES PROTECT Ensure all critical facilities are equipped with emergency backup generators and fuel supply.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	70
NR-1: FLOODING. Pursue vegetation and restoration practices that assist in enhancing and restoring the natural and beneficial functions of the flood plain and watershed.	**Prevents or Reduces:** - **Injury or Loss of Life** - **Displacement Costs** - **Disruption Costs** - **Loss of Service** - **Business Closure** - **Bridge/Road Closure** - **Recovery Costs** - **Replacement Costs**	**Very High** **High** **Medium** **Low** **Very Low**	5 4 3 2 1		< $10,000 $10,000 to $25,000 $25,001 to $100,000 $100,001 to $ 250,000 > $250,000	Very Low Low Medium High Very High	5 4 3 2 1	**Yes** **No**	50

APPENDIX E

RISK ASSESSMENT

APPENDIX I – Risk Assessment

An Explanation of the Criteria Used in the Hazard Mitigation Steering Committee Qualitative Impact-Risk Assessment Criteria used for the Umatilla Indian Reservation Hazard Mitigation Plan. (Tables 3-2 and 3-3)

Analyzing the number of injuries and damage from possible hazards is useful in deciding which hazards to mitigate.

Deaths	0-1	2-3	4-5	6-7	8-10	10+
Injuries	0-3	4-7	8-11	12-15	16-19	20+
Critical Facilities	Closed or interrupted for less than 12 hours	Closed for 1-2 days	Closed for 3-6 days	Long-term disruption	Loss of 50% capacity	Destroyed
Lifelines	Interrupted for less than 12 hours	1-2 day loss of services	3-6 day Interruption	7-10 day Interruption	Long-term Interruption	Destroyed
Property Damage	Minimal	Localized repairable	Widespread repairable	Substantial damage – 25%	Substantial damage -50%	Widespread non-repairable
Environmental Impact	Minimal	Localized minor	Widespread minor	Localized severe	Widespread severe	Long-term degradation
Economic and Social Impact	Minimal	Temporary localized	Temporary widespread	1-2 Months	3-5 Months	Long-term disruption
Cultural Impact	Minimal	Localized	Temporary	Substantial	Irreversible Damage	Destroyed
Score	**1**	**2**	**3**	**4**	**5**	**6**

Some of the criteria used in Table 3-2 need little or no explanation while other criteria need explanations. The discussion that follows will shed some light on how these criteria were used in the planning process.

Deaths

The first criterion is the number of deaths that may occur as a result of a hazardous event. Thankfully, most hazards that have occurred that affect the Reservation have not been known to cause deaths. However, there have been some disasters where deaths have occurred (E.g, traffic accidents on I-84 due to fog), and if a major disaster occurs, such as flooding, some deaths are possible.

Injuries

Unfortunately, injuries are more likely to occur from certain hazards. Assessing the possibility of injuries is an important criterion. Points range from 1 point for no or one injury to 6 points for 20 or more injuries.

Critical Facilities and Services

Critical facilities and services include emergency service providers such as fire, police and ambulance, the Yellowhawk Tribal Health Clinic and facilities that shelter people during a disaster.

Anticipating what may happen to critical facilities and services during each hazardous event is important in determining possible protection measures designed to mitigate the hazard's effects. Loss of one or more critical facilities for any length of time can be very disruptive for residents and to the Reservation's economy.

Another hazardous event may present greater problems to the Reservation by damaging critical facilities to the point that major repairs are needed before they become operational. This scenario would fall under the category of "long-term disruption." For example, a strong earthquake has this potential and thus, would score a 5 under this specific criterion.

Lifelines

Lifelines include electricity, water, sewer, communications, and access to transportation.

Property Damage

Property damage from hazards includes damage to structure, personal property such as automobiles and large trucks, and contents located in structures.

Substantial damage means that 25% or one quarter of the structures suffer major damage or greater than 50% of the structures suffer major damage. Based on the hazards that threaten the UIR, only earthquakes and a devastating wildfire could potentially cause this type of damage. Based on the history of these two hazards, neither hazard is expected to cause this much damage.

Environmental Impact

Environmental impacts include damage to habitat both short and long-term, groundwater, and vegetation and wildfire that are culturally significant to the CTUIR. For example, damage from natural events, such as from wildfires, floods, severe winter storms can damage habitat. In most cases, natural events cause damage that is less permanent as opposed to damage from man-made hazards such as from a hazardous material spill.

Economic and Social Impact

Economic and social impacts from disasters include disruptions to the work day, increased workforce absenteeism, loss of revenue from reduction in travelers using Tribal enterprises and reduction of governmental services available to Tribal members.

Cultural Impact
Natural and man-made hazards can have varying impacts to historical, archeological and First Foods that have significant cultural and spiritual relevance to the Umatilla, Cayuse and Walla Walla First Nations of the Umatilla Indian Reservation.

Table 3-3 - Criteria for Scoring the Frequency of Hazardous Events

The history of previous occurrences is the basis for predicting which hazardous events are more likely to occur in the future. Based on past frequency, the following criteria were developed to help compare risks among the various hazardous events. The **score** from Table 3-3 is combined with the scores from Table 3-2 to develop a comparable risk assessment score for each hazard.

Likelihood of Occurrence	200+ years	100-199 years	30-99 years	10-29 years	3-9 years	1-2 years
Score	**1**	**2**	**3**	**4**	**5**	**6**

Total Score

The total score is obtained by combining the scores from Tables 3-2 and 3-3. The purpose of the evaluation is to determine which hazards present the greatest threat to the UIR. After completing the assessment using these criteria, the Mitigation Plan Steering Committee identified the hazards which present the greatest threat to the Reservation.

APPENDIX F

PROFILE DOCUMENTATION

DP04

SELECTED HOUSING CHARACTERISTICS

2008-2012 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Umatilla Reservation and Off-Reservation Trust Land, OR			
	Estimate	Margin of Error	Percent	Percent Margin of Error
HOUSING OCCUPANCY				
Total housing units	1,127	+/-68	1,127	(X)
Occupied housing units	1,044	+/-71	92.6%	+/-2.7
Vacant housing units	83	+/-31	7.4%	+/-2.7
Homeowner vacancy rate	0.0	+/-4.6	(X)	(X)
Rental vacancy rate	7.6	+/-6.1	(X)	(X)
UNITS IN STRUCTURE				
Total housing units	1,127	+/-68	1,127	(X)
1-unit, detached	735	+/-69	65.2%	+/-4.3
1-unit, attached	11	+/-9	1.0%	+/-0.8
2 units	73	+/-25	6.5%	+/-2.2
3 or 4 units	4	+/-7	0.4%	+/-0.6
5 to 9 units	0	+/-12	0.0%	+/-3.1
10 to 19 units	3	+/-6	0.3%	+/-0.5
20 or more units	45	+/-24	4.0%	+/-2.0
Mobile home	256	+/-50	22.7%	+/-4.5
Boat, RV, van, etc.	0	+/-12	0.0%	+/-3.1
YEAR STRUCTURE BUILT				
Total housing units	1,127	+/-68	1,127	(X)
Built 2010 or later	0	+/-12	0.0%	+/-3.1
Built 2000 to 2009	82	+/-27	7.3%	+/-2.3
Built 1990 to 1999	243	+/-42	21.6%	+/-3.4
Built 1980 to 1989	99	+/-27	8.8%	+/-2.5
Built 1970 to 1979	345	+/-56	30.6%	+/-4.6
Built 1960 to 1969	86	+/-25	7.6%	+/-2.2
Built 1950 to 1959	150	+/-37	13.3%	+/-3.2
Built 1940 to 1949	35	+/-20	3.1%	+/-1.8
Built 1939 or earlier	87	+/-30	7.7%	+/-2.7
ROOMS				
Total housing units	1,127	+/-68	1,127	(X)
1 room	64	+/-30	5.7%	+/-2.6
2 rooms	26	+/-19	2.3%	+/-1.7

Subject	Umatilla Reservation and Off-Reservation Trust Land, OR			
	Estimate	Margin of Error	Percent	Percent Margin of Error
3 rooms	56	+/-25	5.0%	+/-2.2
4 rooms	124	+/-35	11.0%	+/-3.0
5 rooms	261	+/-51	23.2%	+/-4.7
6 rooms	225	+/-40	20.0%	+/-3.6
7 rooms	188	+/-47	16.7%	+/-3.9
8 rooms	79	+/-27	7.0%	+/-2.3
9 rooms or more	104	+/-33	9.2%	+/-2.9
Median rooms	5.6	+/-0.3	(X)	(X)
BEDROOMS				
Total housing units	1,127	+/-68	1,127	(X)
No bedroom	64	+/-30	5.7%	+/-2.6
1 bedroom	56	+/-23	5.0%	+/-2.0
2 bedrooms	226	+/-43	20.1%	+/-3.9
3 bedrooms	543	+/-64	48.2%	+/-5.3
4 bedrooms	179	+/-46	15.9%	+/-3.9
5 or more bedrooms	59	+/-22	5.2%	+/-2.0
HOUSING TENURE				
Occupied housing units	1,044	+/-71	1,044	(X)
Owner-occupied	739	+/-69	70.8%	+/-5.4
Renter-occupied	305	+/-64	29.2%	+/-5.4
Average household size of owner-occupied unit	2.58	+/-0.21	(X)	(X)
Average household size of renter-occupied unit	3.18	+/-0.55	(X)	(X)
YEAR HOUSEHOLDER MOVED INTO UNIT				
Occupied housing units	1,044	+/-71	1,044	(X)
Moved in 2010 or later	66	+/-26	6.3%	+/-2.4
Moved in 2000 to 2009	392	+/-61	37.5%	+/-5.3
Moved in 1990 to 1999	286	+/-52	27.4%	+/-4.3
Moved in 1980 to 1989	145	+/-45	13.9%	+/-4.2
Moved in 1970 to 1979	128	+/-55	12.3%	+/-5.4
Moved in 1969 or earlier	27	+/-12	2.6%	+/-1.2
VEHICLES AVAILABLE				
Occupied housing units	1,044	+/-71	1,044	(X)
No vehicles available	86	+/-31	8.2%	+/-2.8
1 vehicle available	237	+/-49	22.7%	+/-4.5
2 vehicles available	323	+/-57	30.9%	+/-4.7
3 or more vehicles available	398	+/-71	38.1%	+/-6.7
HOUSE HEATING FUEL				
Occupied housing units	1,044	+/-71	1,044	(X)
Utility gas	147	+/-33	14.1%	+/-3.3
Bottled, tank, or LP gas	127	+/-28	12.2%	+/-2.6
Electricity	486	+/-70	46.6%	+/-5.2
Fuel oil, kerosene, etc.	99	+/-39	9.5%	+/-3.8
Coal or coke	0	+/-12	0.0%	+/-3.3
Wood	166	+/-39	15.9%	+/-3.6
Solar energy	0	+/-12	0.0%	+/-3.3
Other fuel	19	+/-11	1.8%	+/-1.1
No fuel used	0	+/-12	0.0%	+/-3.3
SELECTED CHARACTERISTICS				
Occupied housing units	1,044	+/-71	1,044	(X)
Lacking complete plumbing facilities	25	+/-22	2.4%	+/-2.0
Lacking complete kitchen facilities	41	+/-25	3.9%	+/-2.3
No telephone service available	49	+/-34	4.7%	+/-3.2

Subject	Umatilla Reservation and Off-Reservation Trust Land, OR			
	Estimate	Margin of Error	Percent	Percent Margin of Error
OCCUPANTS PER ROOM				
Occupied housing units	1,044	+/-71	1,044	(X)
1.00 or less	1,007	+/-72	96.5%	+/-1.7
1.01 to 1.50	19	+/-13	1.8%	+/-1.3
1.51 or more	18	+/-15	1.7%	+/-1.5
VALUE				
Owner-occupied units	739	+/-69	739	(X)
Less than $50,000	91	+/-43	12.3%	+/-5.8
$50,000 to $99,999	104	+/-38	14.1%	+/-4.9
$100,000 to $149,999	94	+/-35	12.7%	+/-4.5
$150,000 to $199,999	153	+/-45	20.7%	+/-5.6
$200,000 to $299,999	163	+/-36	22.1%	+/-5.1
$300,000 to $499,999	95	+/-29	12.9%	+/-3.6
$500,000 to $999,999	34	+/-16	4.6%	+/-2.2
$1,000,000 or more	5	+/-5	0.7%	+/-0.7
Median (dollars)	169,200	+/-11,081	(X)	(X)
MORTGAGE STATUS				
Owner-occupied units	739	+/-69	739	(X)
Housing units with a mortgage	330	+/-60	44.7%	+/-6.5
Housing units without a mortgage	409	+/-56	55.3%	+/-6.5
SELECTED MONTHLY OWNER COSTS (SMOC)				
Housing units with a mortgage	330	+/-60	330	(X)
Less than $300	0	+/-12	0.0%	+/-10.1
$300 to $499	4	+/-6	1.2%	+/-2.0
$500 to $699	5	+/-5	1.5%	+/-1.7
$700 to $999	44	+/-20	13.3%	+/-6.1
$1,000 to $1,499	146	+/-39	44.2%	+/-9.7
$1,500 to $1,999	85	+/-29	25.8%	+/-6.9
$2,000 or more	46	+/-23	13.9%	+/-6.3
Median (dollars)	1,400	+/-81	(X)	(X)
Housing units without a mortgage	409	+/-56	409	(X)
Less than $100	13	+/-9	3.2%	+/-2.3
$100 to $199	131	+/-43	32.0%	+/-8.1
$200 to $299	81	+/-30	19.8%	+/-6.7
$300 to $399	88	+/-26	21.5%	+/-5.9
$400 or more	96	+/-27	23.5%	+/-7.0
Median (dollars)	278	+/-34	(X)	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI)				
Housing units with a mortgage (excluding units where SMOCAPI cannot be computed)	330	+/-60	330	(X)
Less than 20.0 percent	146	+/-42	44.2%	+/-9.3
20.0 to 24.9 percent	72	+/-24	21.8%	+/-6.5
25.0 to 29.9 percent	31	+/-13	9.4%	+/-4.3
30.0 to 34.9 percent	18	+/-18	5.5%	+/-5.3
35.0 percent or more	63	+/-23	19.1%	+/-6.7
Not computed	0	+/-12	(X)	(X)
Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed)	405	+/-57	405	(X)
Less than 10.0 percent	242	+/-50	59.8%	+/-8.3
10.0 to 14.9 percent	76	+/-30	18.8%	+/-6.9
15.0 to 19.9 percent	36	+/-20	8.9%	+/-4.7

Subject	Umatilla Reservation and Off-Reservation Trust Land, OR			
	Estimate	Margin of Error	Percent	Percent Margin of Error
20.0 to 24.9 percent	9	+/-10	2.2%	+/-2.4
25.0 to 29.9 percent	3	+/-5	0.7%	+/-1.2
30.0 to 34.9 percent	14	+/-9	3.5%	+/-2.2
35.0 percent or more	25	+/-15	6.2%	+/-3.7
Not computed	4	+/-5	(X)	(X)
GROSS RENT				
Occupied units paying rent	279	+/-61	279	(X)
Less than $200	38	+/-22	13.6%	+/-7.4
$200 to $299	17	+/-16	6.1%	+/-5.6
$300 to $499	60	+/-22	21.5%	+/-7.4
$500 to $749	87	+/-33	31.2%	+/-9.4
$750 to $999	40	+/-18	14.3%	+/-6.2
$1,000 to $1,499	18	+/-15	6.5%	+/-5.4
$1,500 or more	19	+/-17	6.8%	+/-5.6
Median (dollars)	549	+/-70	(X)	(X)
No rent paid	26	+/-17	(X)	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI)				
Occupied units paying rent (excluding units where GRAPI cannot be computed)	277	+/-61	277	(X)
Less than 15.0 percent	104	+/-37	37.5%	+/-10.2
15.0 to 19.9 percent	29	+/-19	10.5%	+/-6.5
20.0 to 24.9 percent	23	+/-12	8.3%	+/-4.3
25.0 to 29.9 percent	25	+/-16	9.0%	+/-5.5
30.0 to 34.9 percent	20	+/-13	7.2%	+/-4.8
35.0 percent or more	76	+/-31	27.4%	+/-9.0
Not computed	28	+/-18	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The median gross rent excludes no cash renters.

In prior years, the universe included all owner-occupied units with a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOC and household income are valid values.

In prior years, the universe included all owner-occupied units without a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOC and household income are valid values.

In prior years, the universe included all renter-occupied units. It is now restricted to include only those units where GRAPI is computed, that is, gross rent and household Income are valid values.

The 2007, 2008, 2009, 2010, 2011, and 2012 plumbing data for Puerto Rico will not be shown. Research indicates that the questions on plumbing facilities that were introduced in 2008 in the stateside American Community Survey and the 2008 Puerto Rico Community Survey may not have been appropriate for Puerto Rico.

Median calculations for base table sourcing VAL, MHC, SMOC, and TAX should exclude zero values.

Telephone service data are not available for certain geographic areas due to problems with data collection. See Errata Note #93 for details.

While the 2008-2012 American Community Survey (ACS) data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2008-2012 American Community Survey

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

2000 and 2010 Census Summary
Umatilla County, Oregon

POPULATION BY AGE GROUP	2000		2010		2000 to 2010 Change	
Total population	70,548	*100.0%*	75,889	*100.0%*	5,341	*7.6%*
Under age 18	19,592	*27.8%*	20,200	*26.6%*	608	*3.1%*
Age 18 and over	50,956	*72.2%*	55,689	*73.4%*	4,733	*9.3%*
AREA AND DENSITY						
Land Area - Sq. Mi. (Source: 2010 Census)	3,216		3,216			
Persons per square mile	21.9		23.6		1.7	*7.6%*
HOUSING OCCUPANCY STATUS						
Total housing units	27,676	*100.0%*	29,693	*100.0%*	2,017	*7.3%*
Occupied	25,195	*91.0%*	26,904	*90.6%*	1,709	*6.8%*
Vacant or Seasonal	2,481	*9.0%*	2,789	*9.4%*	308	*12.4%*
HISPANIC OR LATINO AND RACE[1]						
Total population	70,548	*100.0%*	75,889	*100.0%*	5,341	*7.6%*
Hispanic or Latino (of any race)	11,366	*16.1%*	18,107	*23.9%*	6,741	*59.3%*
Not Hispanic or Latino	59,182	*83.9%*	57,782	*76.1%*	-1,400	*-2.4%*
White Alone	54,670	*77.5%*	52,691	*69.4%*	-1,979	*-3.6%*
Black or African American Alone	535	*0.8%*	557	*0.7%*	22	*4.1%*
American Indian and Alaska Native Alone	2,258	*3.2%*	2,383	*3.1%*	125	*5.5%*
Asian Alone	518	*0.7%*	626	*0.8%*	108	*20.8%*
Native Hawaiian and Other Pacific Islander Alone	51	*0.1%*	95	*0.1%*	44	*86.3%*
Some Other Race Alone	118	*0.2%*	55	*0.1%*	-63	*-53.4%*
Two or More Races	1,032	*1.5%*	1,375	*1.8%*	343	*33.2%*
RACE ALONE OR IN COMBINATION[2]						
Total population	70,548	*100.0%*	75,889	*100.0%*	5,341	*7.6%*
White	59,260	*84.0%*	62,116	*81.9%*	2,856	*4.8%*
Black or African American	782	*1.1%*	910	*1.2%*	128	*16.4%*
American Indian and Alaska Native	2,993	*4.2%*	3,768	*5.0%*	775	*25.9%*
Asian	744	*1.1%*	1,012	*1.3%*	268	*36.0%*
Native Hawaiian and Other Pacific Islander	202	*0.3%*	210	*0.3%*	8	*4.0%*
Some Other Race	8,223	*11.7%*	10,343	*13.6%*	2,120	*25.8%*

1. Data are shown for the Hispanic or Latino population, as well as for people who reported one race and for people who reported two or more races. The population of One Race is the total of the population in the 6 categories of one race. The population of Two or More Races is the total of the population in the 57 specific combinations of two or more races. The redistricting files include data for all 63 groups.

2. Data are shown for the 6 race alone or in combination categories. The concept "race alone or in combination" includes people who reported a single race alone (e.g., Asian) and people who reported that race in combination with one or more of the other major race groups (i.e., White, Black or African American, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and Some Other Race). The concept "race alone or in combination," therefore, represents the maximum number of people who reported as that major race group, either alone, or in combination with another race(s). The sum of the 6 individual race "alone or in combination" categories may add to more than the total population because people who reported more than one race were tallied in each race category.

Sources: U.S. Census Bureau, 2010 Census, Public Law 94-171 Summary File; 2000 Census, SF1.
Tabulated by Population Research Center, Portland State University.

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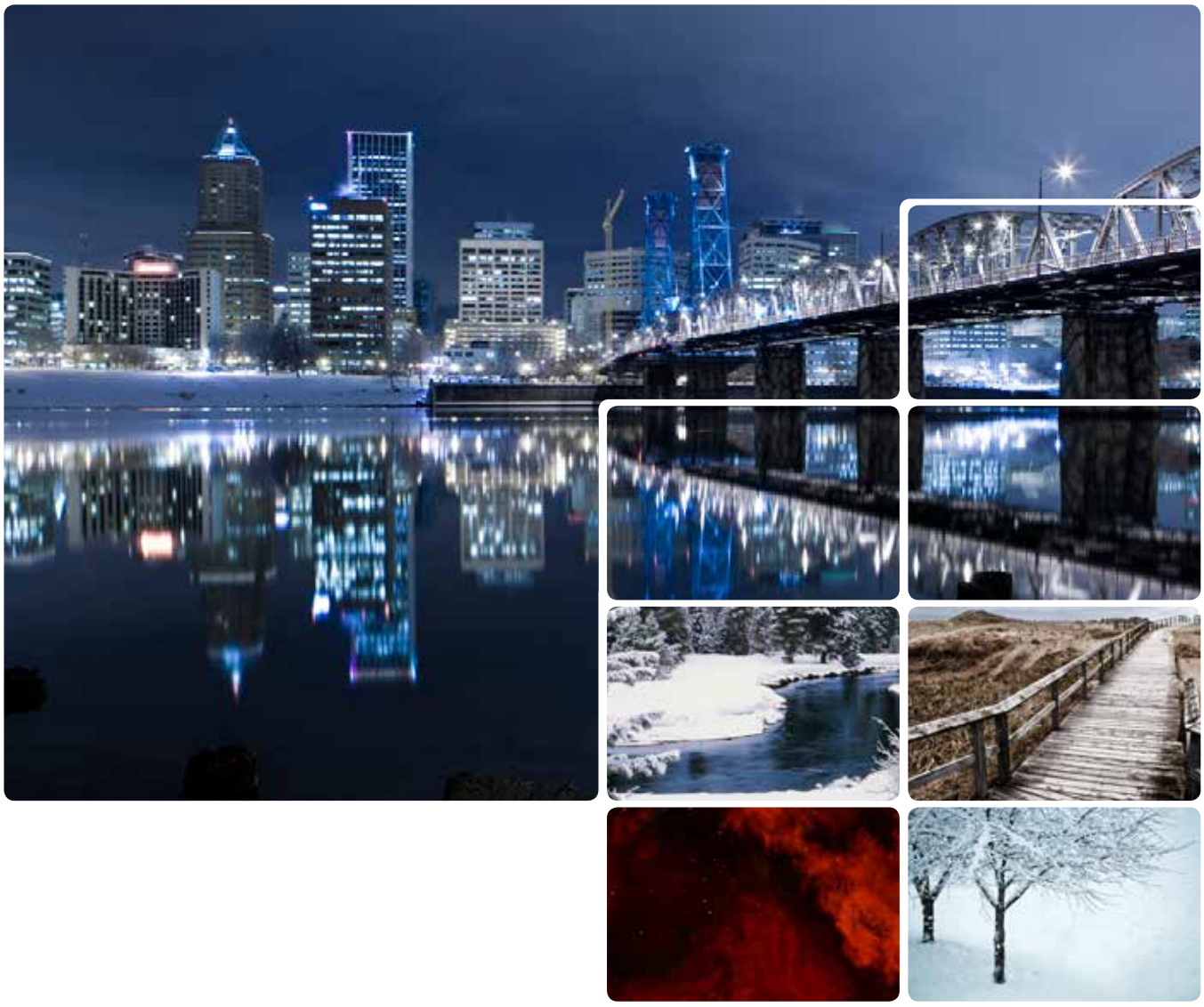

PUBLIC HEALTH

HAZARD VULNERABILITY ASSESSMENT

Oregon Health Authority

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EXECUTIVE SUMMARY

This assessment reviews potential disasters and the consequences for the health of Oregon's population and the public health sector. Local health departments, tribal health agencies, and their emergency management partners reviewed 43 possible natural hazards and human-made threats; and they prioritized three weather-related disasters as most likely to occur: wildfires, winter storms, and flooding. Eleven additional hazards were identified as possible events meriting public health attention. It also should be noted that, in the near future, local climate change models will become available for local planners, and other weather-related priorities may emerge.

Public health consequences may be direct or indirect and can affect both a local population's health and its health infrastructure. The direct consequences of a public health disaster are counted in the number of injuries and fatalities occurring as a result of the incident. Among the disaster scenarios deemed as most probable, local health jurisdictions anticipate high fatality rates only in subduction zone earthquakes and pandemics. In all prioritized hazard scenarios, however, incident-related injuries are expected to stretch local hospitals, primary care providers, pharmacies, and emergency medical services operating capacities.

Indirect public health consequences can include exacerbation of mental and chronic health conditions (such as asthma, chronic heart disease, depression, and diabetes) or injuries sustained while cleaning up after an incident. Disasters also can push marginalized households over the edge into food insecurity and increase social isolation, jeopardizing a community's ability to respond and to support all households. Overall, local respondents were confident in their public health system's ability to respond to disease outbreaks after a disaster and to support continued care for those with chronic illnesses; however, respondents consistently expressed concern that multiple households in their jurisdictions would see diminishing food security and that there could be service gaps for vulnerable populations during and after a disaster.

The building of disaster-resilient communities across Oregon requires coordinated planning with all Emergency Support Function partners to mitigate when possible, to adapt when necessary, and to identify where our health system and the health of the population are most at risk.

This assessment is intended:

- To summarize the public health consequences of Oregon's likely hazards and threats; and
- To recommend mitigation and adaptation strategies that public health jurisdictions in Oregon can implement to strengthen community resilience before, during and after emerging public health events.

To explore these issues, this assessment involved:

- The review of survey responses from local emergency managers identifying probable hazards;
- The review of population health indicators by local health jurisdictions; and
- The gathering of local partner perspectives on ways probable disasters would be expected to exacerbate current public health concerns or directly harm the health of the population.

INTRODUCTION

All disasters have public health consequences. Oregon's shorelines and forests bear the evidence of our history of earthquakes, tsunamis, river floods and wildfires, and future occurrences of these natural disasters will affect local populations by causing physical injury, property loss and economic hardship. We also are vulnerable to pandemics and outbreaks of other novel communicable diseases, as well as to the chronic diseases that increasingly affect the health of the population. Our hazards may come in the form of natural disasters, as the unintentional result of human activities, or through intentional acts of destruction. Although the public health consequences of each of these hazards may be significant, they can be moderated through proactive planning, practice and evaluation.

Since the turn of the century, public health agencies have made attempts to assess the hazard vulnerabilities of their populations. Oregon's first effort took place in 2008, with a technical review of local health department data and the introduction of mapping tools for local staff use. Even with the introduction of local mapping tools, this initial effort to quantify risk to the health of the population and the public health system did not clearly point to solutions that would help communities survive and bounce back from public health emergencies.

The current trend toward all hazards, capability-based investment in public health and health care program preparedness offers a structure for engaging the whole health care system. When used in combination with readily available, Web-based tools for identifying at-risk populations and for measuring community health security, state, tribal and local health departments are poised to use data effectively to inform their public health security policies and practice.

During the past year, the Oregon Public Health Division (OPHD) worked with Oregon Emergency Management, the Oregon Partnership for Disaster Resiliency, and local public health emergency preparedness partners to develop a survey instrument for evaluating the public health consequences of hazards that may come our way. Using hazard and threat priorities identified by local emergency management, this instrument walked respondents from local health departments and tribal health agencies through considerations of their jurisdiction's current health indicators, data on injuries and illness related to specific hazards, and their local health care system's ability to absorb the increased demand for resources during and after a disaster. It is expected that tribal and local health jurisdictions will be able to use these findings in combination with their capability gap assessments, after-action reviews, and improvement plans to develop, implement and exercise an all-hazards plan.

METHODS

Scope

This assessment integrates threat and hazard rankings from Oregon emergency managers and the qualitative analysis of the public health consequences of those hazards by all of Oregon's 34 local health departments and eight of Oregon's nine tribal health jurisdictions.

Approach

The assessment tool was developed in collaboration with partners at the Oregon Public Health Division, the Oregon Partnership for Disaster Resilience, and local health departments. These efforts were informed by the work of Kimberley Shoaf, Dr.P.H., at the University of California, Los Angeles Center for Public Health and Disasters, and the Oregon State Preparedness Report, as well as the Building Resilience Against Climate Effects (BRACE) model developed for Centers for Disease Control and Prevention-funded Climate Change Initiative projects.[i] An accompanying Excel worksheet was developed to leverage the standard reporting tool used by Oregon Emergency Management. The survey can be found in Appendix 1. Liaisons from the Health Security, Preparedness and Response Program at the Oregon Public Health Division distributed the survey via email and, when requested, assisted local health jurisdictions in person.

HAZARDS AND HEALTH SECURITY IN OREGON

Oregon has its share of natural disasters. The year 2012 began with President Obama issuing a major disaster declaration for Oregon due to winter storms and flooding.[ii] By the end of the year, wildfires had burned 1.26 million acres of Oregon land.[iii] Since 1990, Oregon has experienced 19 major disasters, one emergency declaration and 31 fire management assistance disasters.[iv] During this time, every Oregon county has been touched by a disaster affecting public health.

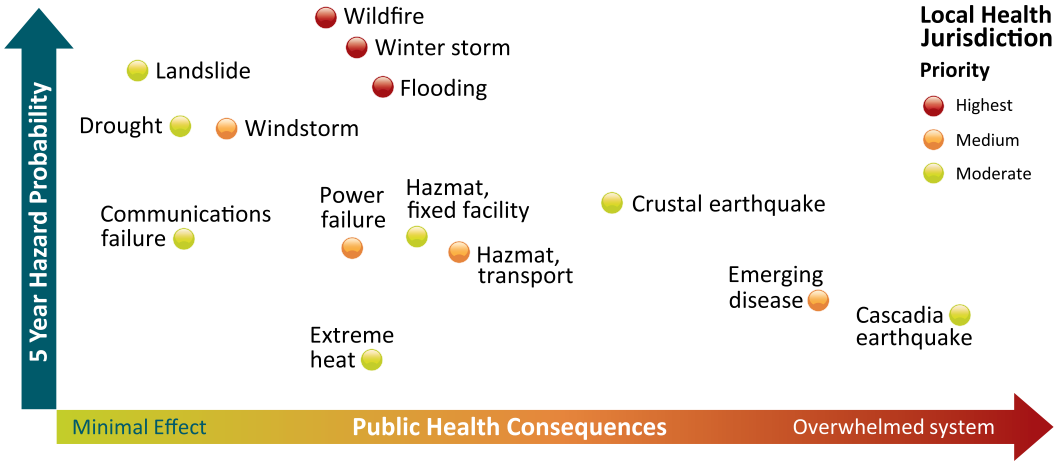
Climate scientists report that in the future, wildfires, floods, and other natural disasters will occur more frequently and will be more devastating to affected populations and the environment.[v] Flooding, resulting from heavy precipitation and snow runoff, may increase the risk of waterborne disease, the spread of vector-borne diseases, water supply contamination, drowning, and degradation of local environments.[vi] Drought plays a major role in the rise of wildfires across the United States. Though drought rarely is a direct cause of death, it is linked to indirect deaths through disruptions of agriculture and water systems, poor air quality, and increased heat-related and respiratory illnesses.[vii]

Leading concerns

Over the next five to 10 years, 74% of local health and emergency jurisdictions expect to experience wildfires, winter storms or river flooding. Moderate consequences for the health of the population and burdens on health care are anticipated, as shown in Figure 1 below. Respondents report that more work is needed to identify and to serve vulnerable populations in preparation for these hazards.

Figure 1 shows hazards that local emergency managers expect to experience in the near future and their association with public health and health system consequences, as assessed by local public health departments. Consequences were estimated on a five-point Likert scale ranging from minimal to catastrophic effects on the population's health and health services.

Figure 1 Oregon's Public Health Hazard Vulnerability Assessment (PH-HVA)



Hazards on the horizon

Fifty percent of the local respondents anticipate that their communities should prepare for:

- Windstorms;
- Power failures;
- Release of hazardous materials on transportation routes; and
- Emerging diseases, including pandemics.

Emerging diseases stand out among these hazards, as local respondents saw that a pandemic would have both direct and indirect costs to the health of the population and to health care infrastructure that could quickly overwhelm their public health system.

Seven hazards were identified by at least 25% of respondents as significant concerns, but as less immediate threats. These include:

- Landslides;
- Droughts;
- Extreme heat events;
- Fixed-facility hazardous waste releases;
- Communication system failures;
- Crustal earthquakes; and
- Subduction zone earthquakes.

Although this assessment focuses on the three hazards prioritized by local jurisdictions, the Oregon Public Health Division uses an all-hazards framework to structure its preparation work. Figure 2, below, displays the anticipated population health consequences of Oregon's prioritized hazards. Overall, the direct effects of disasters, fatalities and injuries, are expected to be minimal to moderate. Communicable disease outbreaks related to these disasters are not likely. However, indirectly, these disasters are projected to stress systemic public health concerns, such as food and water insecurities.

Figure 2 Public Health Consequences of Prioritized Disasters, Local Estimates, 2012–2013

	Flooding	Wildfires	Winter Storms
Fatalities	Minimal	Minimal	Minimal
Injuries	Minimal	Moderate	Moderate
Chronic disease	Moderate	Minimal	Moderate
Respiratory disease	Minimal	Overwhelming	Minimal
Communicable disease	Low	Low	Low
Food insecurity	High	Moderate	High
Water insecurity	High	Low	High
Mental health needs	Moderate	Minimal	Minimal

Source: PH HVA, 2013. Scale is 1=minimal; 2=low; 3=moderate; 4=severe; 5=catastrophic

Most often, Public Health (Emergency Function 8) plays a supporting rather than a leading role in disaster response. Our responsibilities are to ensure that our partners and the public have timely health security guidance, biosurveillance data for situational awareness and intervention planning, recommendations for community mitigation and adaptation, and access to prophylaxis and other state and federal resources necessary to protect the public.

FLOODING

Between 1990 and 2011, 53% of Oregon's major disasters were flood-related.[viii] A disaster was declared in 1996, when a "pineapple express" subtropical jet stream brought warm, wet weather to Oregon. Snowpack melted quickly and 25 rivers reached flood stage. By the time the flooding receded, eight people had died and nearly every county had area under water. Oregon experienced another "pineapple express" storm in 2007, resulting in extensive flooding to the town of Vernonia. Again in 2012, a pineapple express storm swept through the state, leaving 18 counties flooded and in declared disasters; two people drowned in Linn County as their car was swept away.

While flood-related fatalities are rare in Oregon, injuries are common during a flood and flood recovery. Eight percent of local respondents anticipated that injury rates would stretch local health response capacity. Columbia River and Klamath Basin health jurisdictions were more likely than their counterparts

in other areas to believe that their public health infrastructure would be operating at surge capacity during a flooding event. Asthma, chronic obstructive pulmonary disease and other chronic health conditions can be worsened when medication regimens are disrupted, or during the recovery phase as householders encounter mold, mildew, and contaminated products and water in the clean up. The physical and psychological stress of these efforts will take a toll on healthy individuals as well as on those living with chronic conditions; respondents across the state anticipated that the demand for mental health services after a flood would exceed response capacity.

On an average day, 14%[ix] of Oregon households are food-insecure. Local respondents expect hunger rates to worsen following a flood. Affected households and communities that are isolated by language, geography or socioeconomic conditions may be at increased risk of food insecurity, because food supplies may be destroyed or contaminated. Particularly in rural areas, where homes are supplied by private wells, local respondents expected that multiple households would be without potable water.

PUBLIC HEALTH RECOMMENDATIONS

Community preparedness:

1. Engage community partners to identify populations that may be at-risk during flooding events.

Community recovery:

1. Work with partner agencies to inform the community of drinking water standards and the availability of water quality testing services.

Emergency public information and warning:

1. OPHD review and refine flooding communications toolkit;
2. Develop communication plans for reaching vulnerable populations; and
3. Distribute clinical and public guidance on flood recovery health and safety.

Medical materiel management and distribution:

1. Review and support health care resource requests;
2. Consider targeted tetanus vaccination for those with potentially contaminated wounds.

Medical surge:

1. Fully engage clinical partners (pre-hospital and health care system) in surge and evacuation planning;
2. Continue to work with partners to assess and meet prescription medication and treatment needs of evacuees; and
3. Continue to support partners in assessment of need for alternative care facilities and crisis standards of care.

Epidemiology and surveillance:

1. Monitor health security through syndromic surveillance of emergency department visits for respiratory illness, cardiovascular disease, behavioral health, injury, and medication refills;
2. Consider active public health surveillance for water and vector-borne diseases;
3. Consider tracking river levels and predicted duration of flooding through National Oceanographic and Atmospheric Administration to guide planning about health care resource allocation and health care support for displaced persons; and
4. Consider post-event assessment of affected households to evaluate medical and service needs.

WILDFIRES

The 2012 Oregon wildfire season closed with 1,265,357 acres burned in 899 wildfires.[x] Two fires each burned more than 100,000 acres. Since 1990, Oregon has experienced 31 fire management assistance disasters.[xi] During the past decade, both wildfire incidence and acreage area burned have been trending upward. Climate change models predict that in the future Oregon will see fewer, but more destructive, wildfires.[xii] Historically, central, southwestern and northeastern Oregon have been most likely to experience wildfires, and lightning is the predominant cause of the wildfires that affect Oregon communities at the wildland-urban interface.

People in those communities are, therefore, at increased risk of exposure to the poor air quality associated with wildfires. For members of the general public, the greatest health risk from wildfire smoke is due to fine particles suspended in the air. Particles smaller than 2.5 microns are easily inhaled and absorbed into the bloodstream. They can aggravate chronic health conditions, such as asthma, chronic lung disease, and heart disease. In one study, the relative risk of an asthma attack increased 66% with wildfire exposure, and the relative risk of an episode of congestive heart failure jumped 42%.[xiii]

Forty-three percent of local health jurisdictions report the need to plan for a major increase in severe asthma cases, and 21% expect a limited and minor increase in chronic disease conditions. In short, people with existing medical conditions are likely to experience a worsening of their conditions. Populations at greatest risk include persons with existing respiratory conditions, chronic cardiovascular conditions, infants and young children, pregnant women, the elderly, smokers, and outdoor athletes or workers.

PUBLIC HEALTH RECOMMENDATIONS

Emergency public information and warning:

1. Oregon Public Health Division annual review and refine the wildfire communications toolkit;
2. Develop communication plans for reaching vulnerable populations; and
3. Continue to distribute clinical and public guidance on health and safety during and after wildfires.

Medical materiel management and distribution:

1. Review and support health care resource requests.

Medical surge:

1. Continue to engage clinical partners (pre-hospital and health care system) in surge planning and exercise;
2. Work with partners to assess and meet prescription medication and treatment needs of evacuees.

Epidemiology and Surveillance:

1. Monitor the health effects of poor air quality and wildfire-related injuries through syndromic surveillance of emergency department visits for respiratory illness, cardiovascular disease and injury;
2. Monitor air quality data from Department of Environmental Quality and local air quality districts in affected areas, as well as Oregon Department of Forestry forecasts, to guide public messaging, public health interventions, and as necessary, planning about health care resource allocation;
3. Consider monitoring pre-hospital care through emergency medical services reports or pharmaceutical sales information; and
4. Consider post-event assessment of affected households to evaluate medical and service needs.

WINTER STORMS

During a typical Oregon winter, storms come inland off the Pacific Ocean with wind, rain, and in higher elevations, snow. When temperatures warm, valleys and lowlands may experience flooding and landslides, and avalanches can occur in the mountain ranges. Climate change models predict reduced snowpack and extreme fluctuations in precipitation in the future.

Seventy percent of deaths during winter storms in Oregon result from automobile accidents, while few injuries and deaths result directly from cold weather.[xiv] Although local respondents anticipated little increased risk to the health of the population related to a winter storm, they reported concern about providing care to vulnerable populations in their jurisdictions and anticipated that food and water security would decline as households depleted their on-hand food supplies and would have limited access to potable water. Populations most-at-risk during winter storms are the homeless, the elderly, low-income households that lack adequate space or income for stocked pantries, and households that are geographically isolated.

Health jurisdictions in the Willamette Valley and Columbia Basin were more likely to express concern about winter storm events. Regions expecting to see the most winter weather, Eastern and Central Oregon, anticipated that local surge capacity was adequate for response, though emergency transport and public health staffing might be limited while roads were closed.

PUBLIC HEALTH RECOMMENDATIONS

Emergency public information and warning:

1. Oregon Public Health Division develop winter storm communications toolkit;
2. Develop communication plans for reaching vulnerable populations; and
3. Distribute clinical and public guidance on health and safety during and after winter storms.

Medical materiel management and distribution:

1. Review and support health care resource requests.

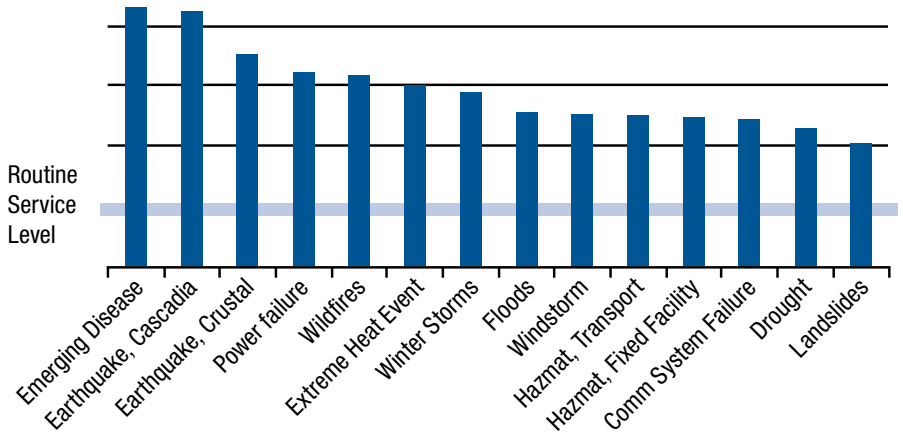
Epidemiology and surveillance:

1. Monitor injuries, motor vehicle accidents, and unintentional carbon monoxide poisoning through syndromic surveillance of emergency department visits;
2. Monitor NOAA/National Weather Service forecasts to guide health care resource allocation decisions;
3. Consider monitoring pre-hospital care through emergency medical services reports; and
4. Work with partners to make shelter recommendations based on exposures and population vulnerabilities.

HEALTH SECURITY FOR VULNERABLE POPULATIONS

Local health jurisdictions were asked to estimate the need for special services to support individuals who are geographically or linguistically isolated, or who have reduced ability to hear, speak, understand, move or walk independently. Respondents across the state estimated that the demand for increased services to vulnerable populations would exceed current service capacity.

Figure 3 Vulnerable Population Service Needs by Hazard, Oregon Public Health Vulnerability Assessment, 2013



It is challenging to meet the complex needs of vulnerable populations following a disaster; a primary reason is that people most at risk rarely participate in the community planning process. People with disabilities can face additional barriers to care during disaster response if shelter access, communication tools, equipment and transportation systems have not been designed to address their needs. However, pre-event collaboration with advocacy organizations, religious institutions, community centers, and residential facility administrators can bring the people who are the most vulnerable to the planning table. An inclusive strategy also can be an opportunity to introduce home preparedness activities to communities with low socioeconomic levels, acknowledging and addressing the finding that higher income, higher levels of education and home ownership are all associated with being better prepared for disasters.[xv]

PUBLIC HEALTH RECOMMENDATIONS

Community preparedness

1. Engage all community sectors in identifying vulnerabilities.
2. Invite community members to be subject matter experts in the development and exercise of all hazard plans.
3. Support local and regional networks of diverse partners, striving to address health equity in public health, health care system and emergency preparedness activities.
4. Support partners in planning for family reunification.
5. Encourage community leaders to act as spokespersons, relaying public health messages for disaster response.
6. Provide timely guidance to educate the public, paying special attention to the needs of at-risk individuals, including considerations of reading levels, options for persons who are visually or hearing impaired, and culturally sensitive messaging.

Emergency public information and warning:

1. Develop communication plans for reaching vulnerable populations; and
2. Distribute culturally appropriate clinical and public guidance on recovery health and safety.

Medical surge:

1. Work with partners to assess and to meet prescription medication and treatment needs of evacuees; and
2. Support partners in assessment of need for culturally appropriate alternative care facilities.

Epidemiology and surveillance:

1. Monitor health security in vulnerable populations through syndromic surveillance of emergency department visits;
2. Consider monitoring pre-hospital care through emergency medical services reports; and
3. Consider post-event assessments of affected households to evaluate medical and service needs.

CONCLUSIONS

This assessment represents a step forward for emergency preparedness in Oregon. County and tribal health jurisdictions identified the hazards most likely to affect their communities and outlined public health consequences associated with these hazards. The assessment also offers a practical list of public health activities that will build state and local public health preparedness capacity before, during and after a disaster. Across the state, local respondents noted the need to better understand and meet the unique vulnerabilities of persons at risk in our communities. This work already is underway as public health collaborates with partners across all sectors to improve community health and resilience. Investments we make now will pay off as we become stronger, more resilient, and better prepared to respond together to face public health disasters.

FOOTNOTES

i. Centers for Disease Control and Prevention. www.cdc.gov/climateandhealth/. Accessed April 1, 2013.

ii. Oregon Emergency Management. Disaster Archive. www.oregon.gov/OMD/OEM/Pages/fin_rec/Disaster-Archive.aspx#January_2012_Winter_Storm:_DR-4055-OR_. Accessed April 1, 2013.

iii. Oregon Department of Forestry. Blog. https://wildfireoregondeptofforestry.blogspot.com. Accessed April 1, 2013.

iv. Federal Emergency Management Agency. www.fema.gov/disasters?field_state_tid=88&field_disaster_type_term_tid=All&field_disaster_declaration_type_value=All&items_per_page=10&=GO. Accessed July 8, 2013.

v. Keim, M.E. Building human resilience: the role of public health preparedness and response as an adaptation to climate change. Am Jr Prev Med. 2008; 35:508-516.

vi. Patz, J.A. Climate Change. In: Frumkin, H, ed. Environmental Health: From global to local. 2nd ed. San Francisco, CA: John Wiley & Sons 2010: chap 10.

vii. Campbell-Lendrum D, Woodruff R. Comparative risk assessment of the burden of disease from climate change. Environ Health Perspect. 2006;114:1935–1941.

viii. Federal Emergency Management Agency. www.fema.gov/disasters?field_state_tid=88&field_disaster_type_term_tid=All&field_disaster_declaration_type_value=All&items_per_page=10&=GO. Accessed July 8, 2013.

ix. United States Department of Agriculture. www.ers.usda.gov/publications/eib-economic-information-bulletin/eib113.aspx. Published May 2013. Accessed June 1, 2013.

x. National Interagency Fire Center. www.nifc.gov/fireInfo/fireInfo_newsRelease.html. Accessed April 1, 2013.

xi. Federal Emergency Management Agency. www.fema.gov/disasters?field_state_tid=88&field_disaster_type_term_tid=All&field_disaster_declaration_type_value=All&items_per_page=10&=GO. Accessed July 8, 2013.

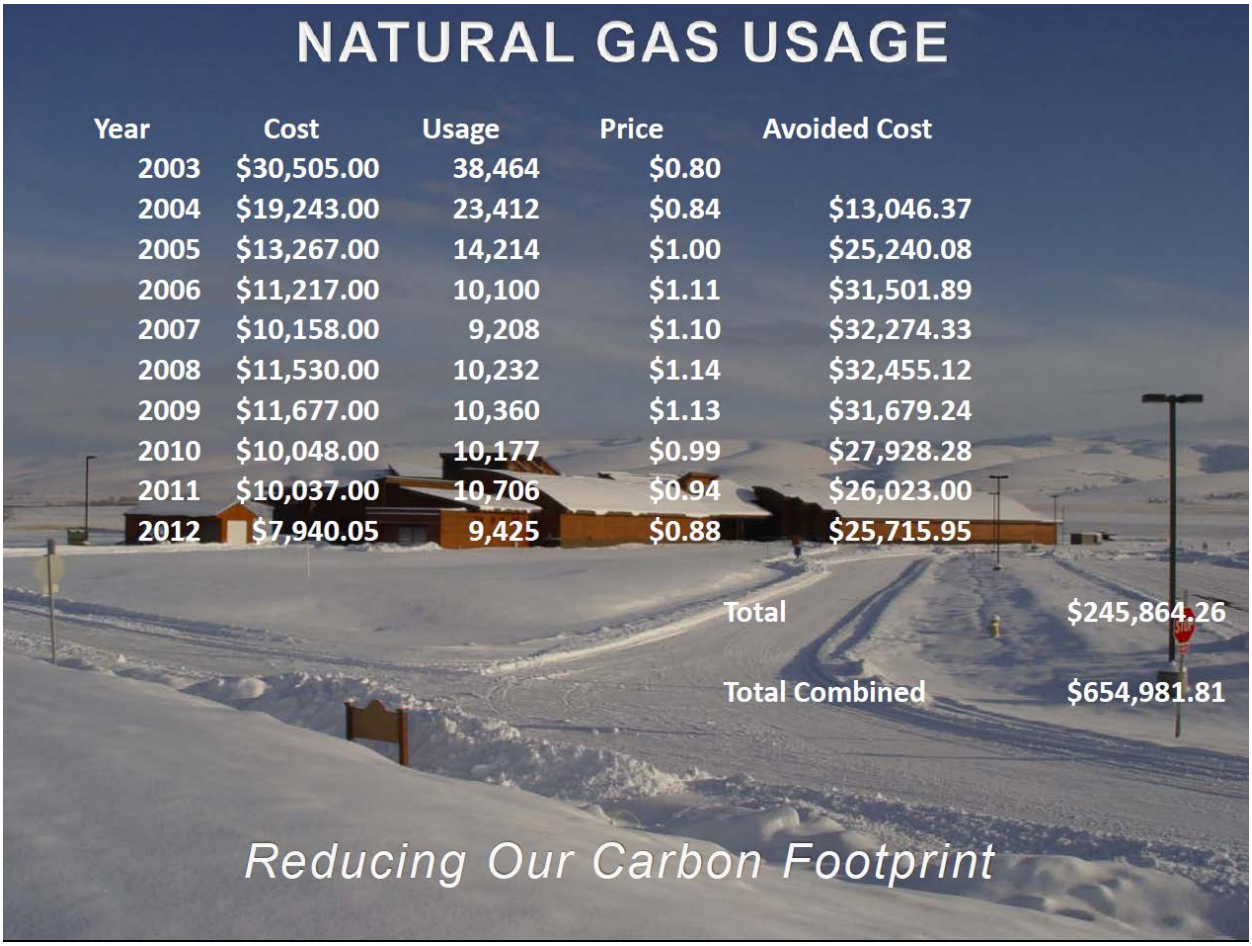
xii. Climate Central. The Age of Western Wildfires. www.climatecentral.org/news/report-the-age-of-western-wildfires-14873. Published September 18, 2012. Accessed April 1, 2013.

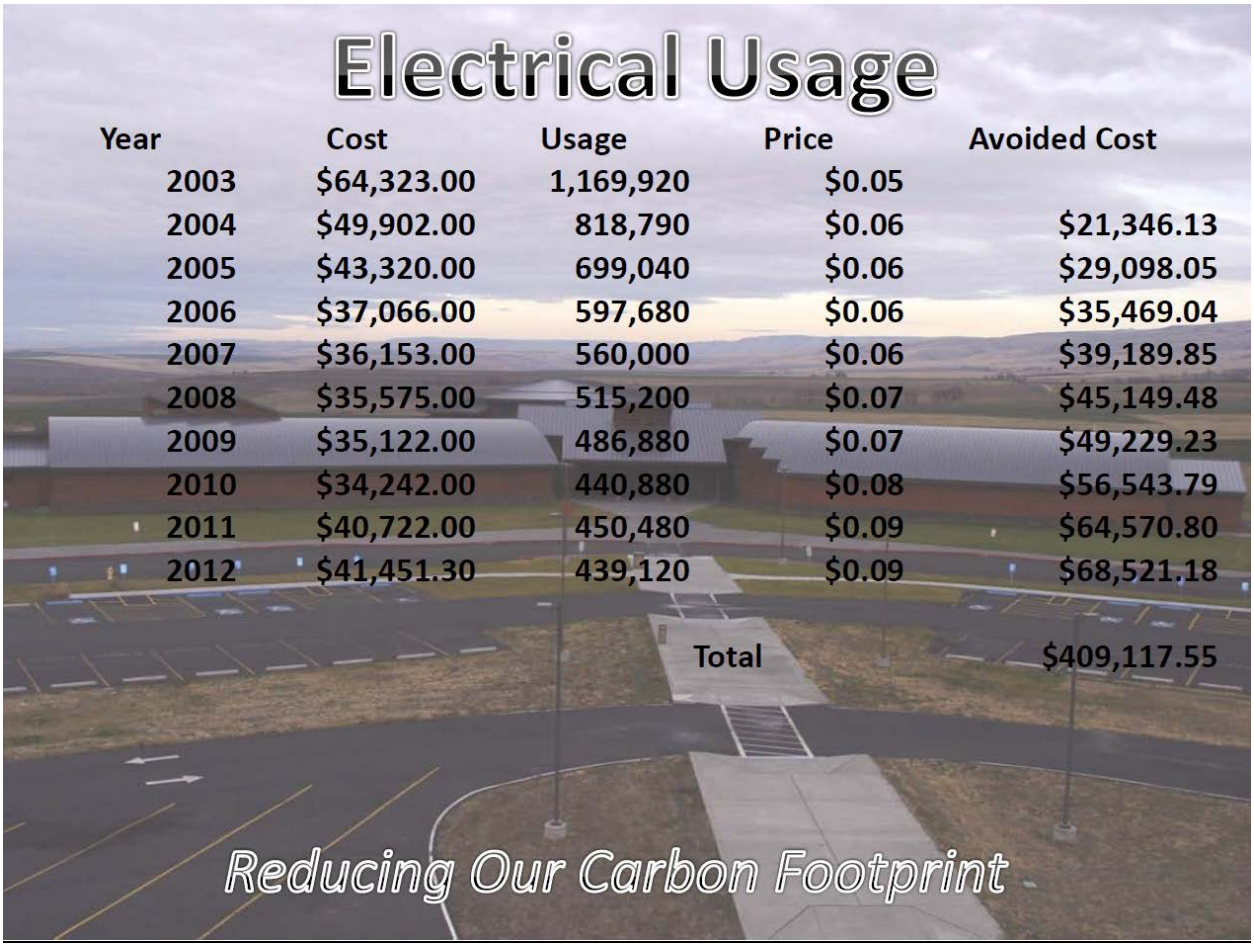
xiii. Rappold, A.G. etal. Cardio-respiratory outcomes associated with exposure to wildfire smoke are modified by measures of community health. Envir Health. 2012;11:71.

xiv. National Oceanic and Atmospheric Association. www.noaawatch.gov/themes/winter.php. Accessed April 1, 2013.

xv. Levac J, Toal-Sullivan D, O'Sullivan TL. Household emergency preparedness: a literature review. Jr Comm Health. 2012 June;37(3):725-733.

Tamastlikt Cultural Institure Energy Usage : from CU-13-001 application for net metering wind turbine

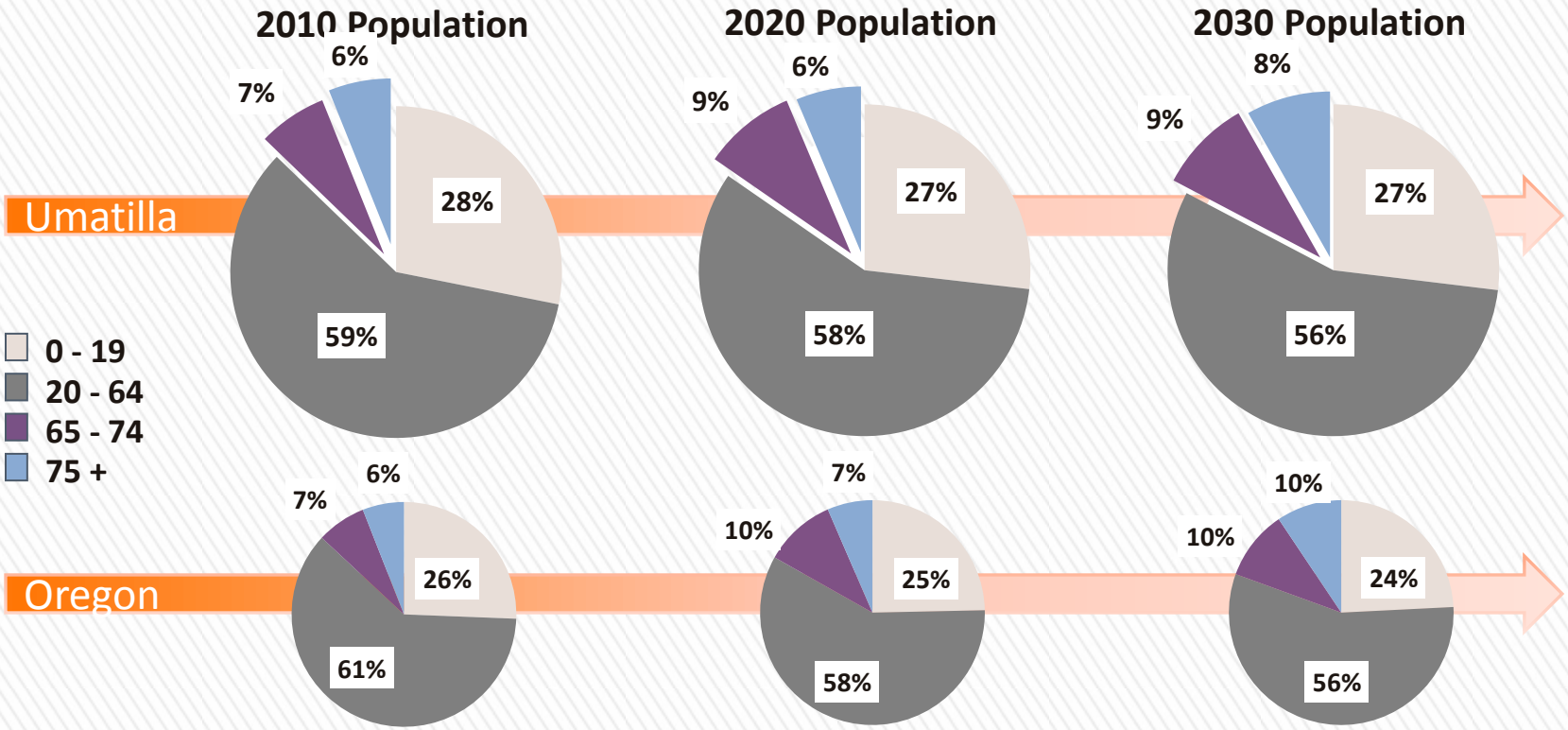



Electrical Usage
Year Cost Usage Price Avoided Cost
2003 $64,323.00 1,169,920 $0.05
2004 $49,902.00 818,790 $0.06 $21,346.13
2005 $43,320.00 699,040 $0.06 $29,098.05
2006 $37,066.00 597,680 $0.06 $35,469.04
2007 $36,153.00 560,000 $0.06 $39,189.85
2008 $35,575.00 515,200 $0.07 $45,149.48
2009 $35,122.00 486,880 $0.07 $49,229.23
2010 $34,242.00 440,880 $0.08 $56,543.79
2011 $40,722.00 450,480 $0.09 $64,570.80
2012 $41,451.30 439,120 $0.09 $68,521.18
Total $409,117.55
Reducing Our Carbon Footprint

Your Community in Focus

Umatilla County

Our Population is Aging ....



Age	Umatilla	Oregon	Umatilla	Oregon	Umatilla	Oregon
19 and Under	21,174	984,694	22,860	1,075,241	25,795	1,184,062
20-64	44,473	2,357,263	49,277	2,550,261	53,466	2,756,241
65-74	5,048	272,592	7,696	450,077	8,716	491,504
75 and Over	4,576	229,352	5,408	283,679	7,867	459,418

Source: Population Projections from Office of Economic Analysis (http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls)

Your Community in Focus

Umatilla County

2010 Census Figures	Oregon	Umatilla County	Athena	Hermiston	Milton-Freewater	Pendleton	Pilot Rock	Stanfield	Umatilla
Population:	3,831,074	75,889	1,126	16,745	7,050	16,612	1,502	2,043	6,906
% Population 65+:	14%	13%	16%	11%	13%	13%	17%	8%	6%
% Hispanic all ages	12%	24%	5%	35%	43%	10%	3%	36%	43%

How is the Financial Health of People in Your Community Now?

2010 Census Figures	Oregon	Umatilla County	Athena	Hermiston	Milton-Freewater	Pendleton	Pilot Rock	Stanfield	Umatilla
Household Mid-Range Income:	$49,260	$45,861	$47,344	$42,571	$37,077	$46,190	$41,719	$42,000	$41,818
Labor Force Participation Rate:	65%	62%	69%	67%	63%	58%	60%	71%	47%
Unemployment:	9%	10%	4%	10%	24%	6%	14%	11%	10%
Poverty Rate:	14%	16%	8%	19%	24%	14%	12%	18%	23%
65+ Poverty Rate:	8%	10%	1%	11%	18%	9%	2%	2%	0%
Public Assistance:	14%	18%	13%	22%	28%	16%	19%	20%	27%

Source: American FactFinder 2010 Census and American Community Survey data (http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t)
Tables: DP-1, S2301, S1701, B19058

Your Community in Focus

Umatilla County

Disability and Health Insurance Coverage of People in Your Community		
2010 Census Figures	**Oregon**	**Umatilla County**
All Ages Percent Uninsured:	17%	20%
18-64 with Disability:	7%	11%
18-64 with Disability with Public Health Insurance*:	45%	43%
18-64 with Disability No Health Insurance:	22%	23%

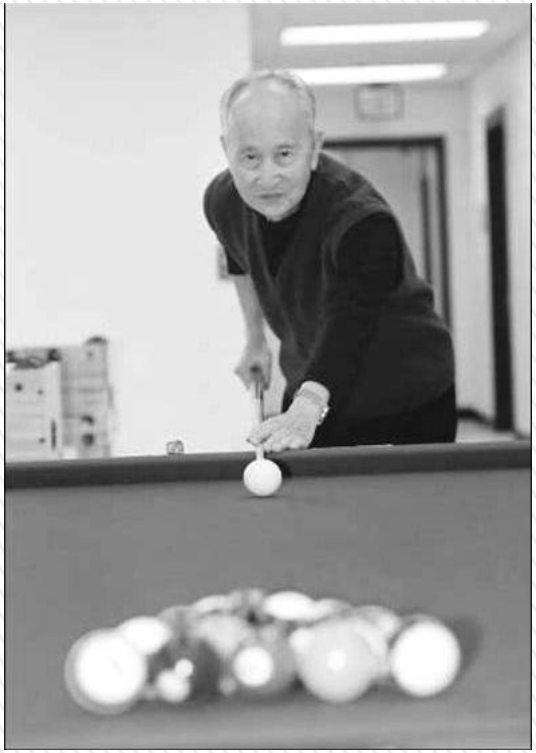
* Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability

Housing, an American's Largest Asset									
Various Sources (All Ages)	**Oregon**	**Umatilla County**	**Athena**	**Hermi-ston**	**Milton-Freewater**	**Pendle ton**	**Pilot Rock**	**Stan-field**	**Umatilla**
% Home Ownership (2010):	62%	63%	72%	55%	56%	56%	74%	69%	58%
Over 50% of Income spent on mortgage (2010):	15%	7%	8%	6%	7%	5%	7%	6%	0%
% SubPrime Mortgages (2005):	20%	17%	N/A	15%	28%	15%	24%	7%	21%
HUD Foreclosure Rates (2008):	2%	3%	3%	3%	3%	2%	4%	4%	3%

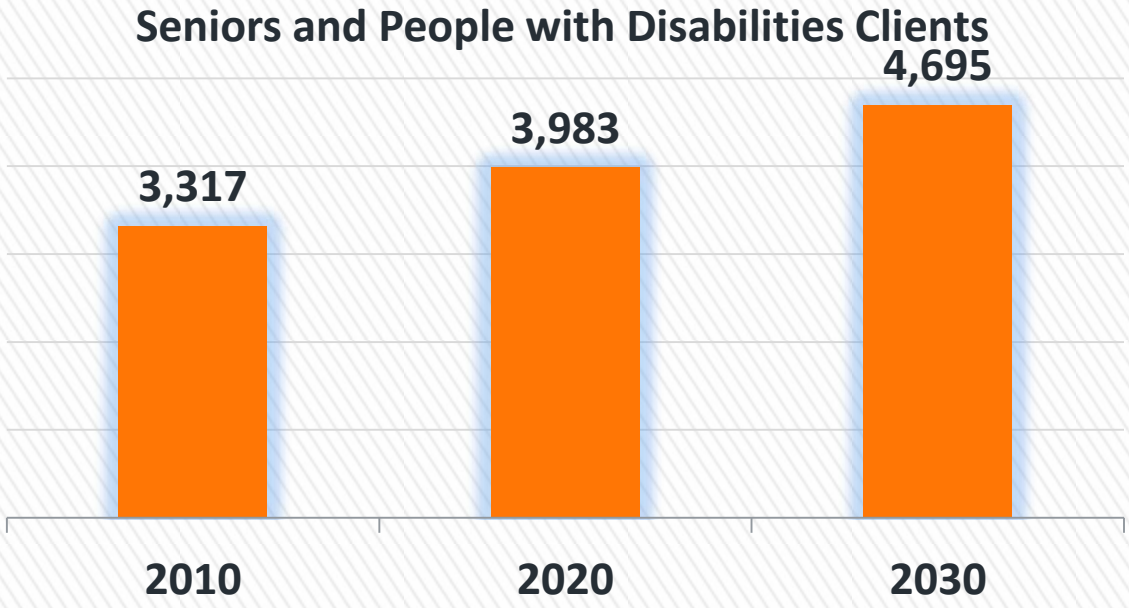
Sources: American FactFinder 2010 Census and American Community Survey data (http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t) Tables: S2701,, B18135, QT-H1, B25091
SubPrime: % of conventional home purchase mortgage loans by subprime lenders (2005),DataPlace.org (http://www.dataplace.org/place?category=4)
Foreclosures: HUD Datasets, OR CountyPlace.xls (http://www.huduser.org/portal/datasets/excel/OR_foreclosure.zip)

Your Community in Focus

Umatilla County



Our Care Needs are Growing



Will our facilities meet the needs of Umatilla County seniors?

Facility Type	Count	Beds
Physicians per 1000 (2011)	1.4	--
Hospitals (2012)	2	--
Community Facilities (June 2012) Adult Foster Homes, Assisted Living Facilities, Residential Care Facilities	61	581
Nursing Homes (March 2012)	3	318

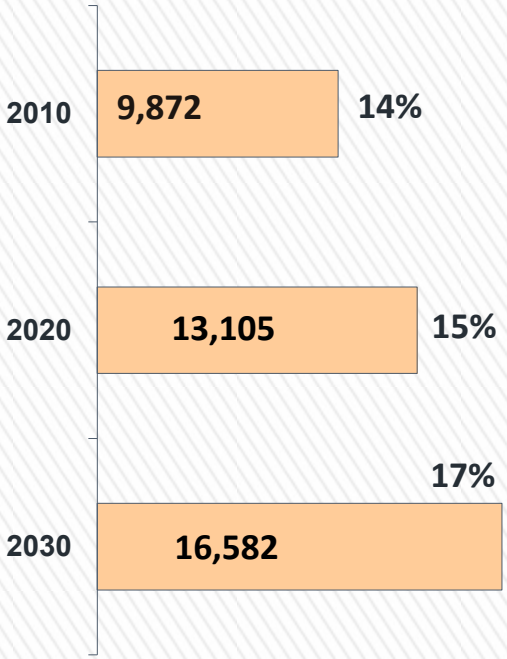
Sources: Disabled Seniors: Office of Forecasting, Research and Analysis, August 2012, Physicians per 1000: Oregon Office of Rural Health—OHSU, Emerson Ong,. Hospitals: Oregon Health Policy & Research, Patrick Bartshe. Community Facilities: SPD Datawarehouse Provider tables June 2012, Julia Brown. Nursing Facilities: ASPEN, Sheryl Luper

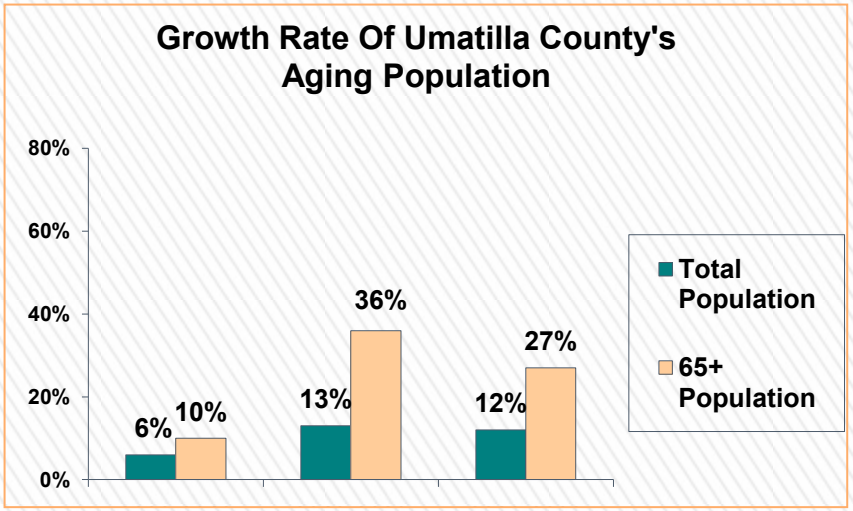
Umatilla County Projected Medicaid Needs	2010	2020	2030
Seniors Living in Poverty	914	1,104	1,575
Seniors receiving Medicaid-funded long-term care and other Medicaid assistance:	1,447	1,970	2,493

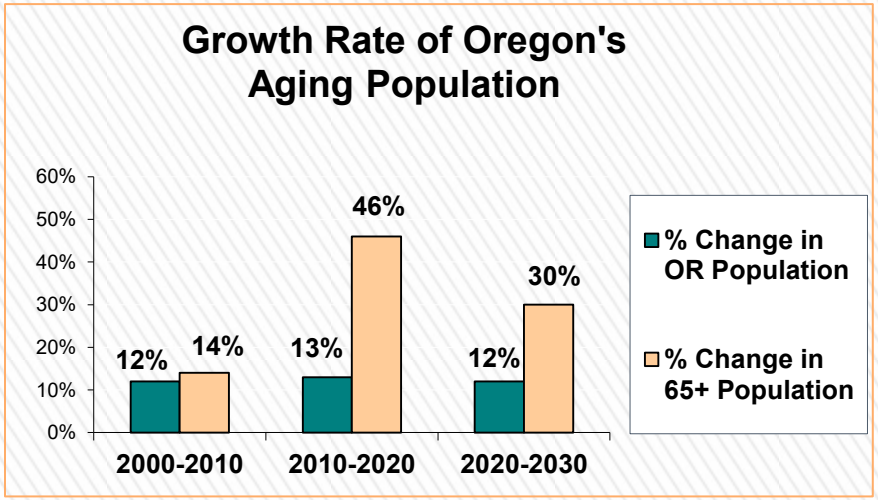
Today: *Employee of the Year*

Tomorrow: *Will he be able to find the help he needs in 2030?*

Umatilla County Projected 65+ Population and % of general population







Source: Senior Poverty and Medicaid Needs, Office of Forecasting, Research and Analysis, August 2012.
Population Projections from Office of Economic Analysis (http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls)

United States

Retirement Security or Insecurity? Experience of Workers Aged 45 and Older – AARP Survey, October 2008

43% of people are NOT saving for retirement outside of work

58% do not believe they are saving enough for retirement

Why are people not saving more for retirement?	
Reason	**Percent**
Don't have enough left over after paying bills	83%
Haven't gotten around to it	25%
Saving for a child's education	23%
Helping to support an elderly relative	15%
Too confusing to get started	14%
Saving for a house	7%

If the economy does not improve, people plan to…	
Delay retirement	65%
Spend less in retirement	69%
Save more for retirement	37%

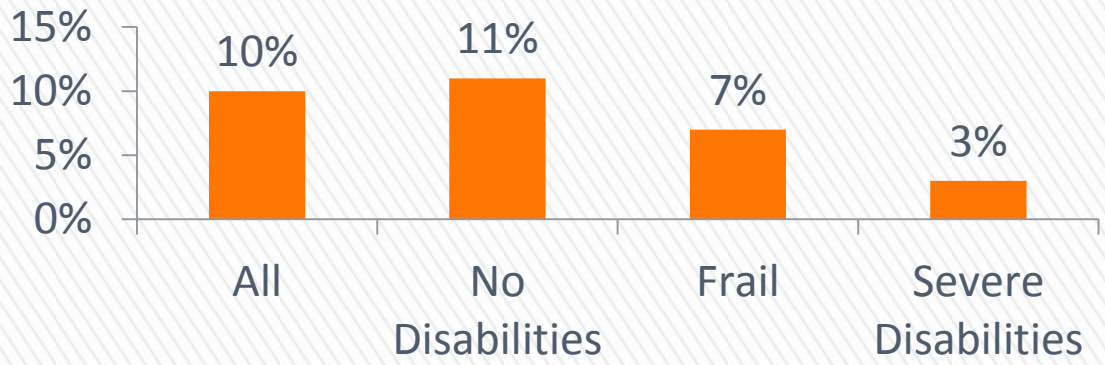
How has the economy affected people?	
Stopped putting money into a retirement account	20%
Prematurely withdrawn funds from retirement account or other investments	13%
Found it more difficult to pay for mortgage or rent	27%
Found it more difficult to pay for basic items such as food, gas, or medicine	56%
Found it more difficult to pay for utilities	45%
Helped a family member pay bills	47%

Source: Retirement Savings: Retirement Security or Insecurity? The Experience of Workers Aged 45 and Older http://assets.aarp.org/rgcenter/econ/retirement_survey_08.pdf

Your Community in Focus

Umatilla County

Share of the U.S. Noninstitutionalized Older Population (65+) with Private Long-Term Care Insurance, 2002



Only 2.3% of Oregonians (all ages) have Long-Term Insurance

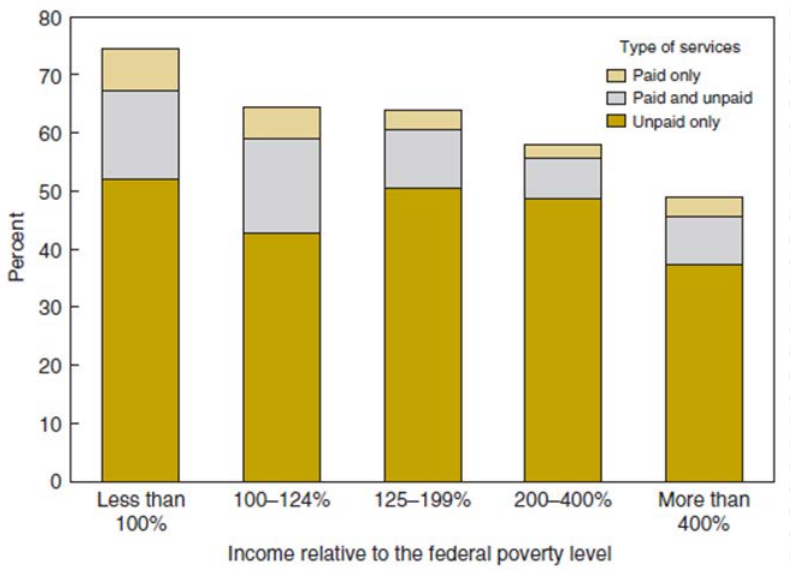
Oregon Cost of Long Term Care 2012				
	Oregon		Rural Area	
Service	Annual Cost	5-Yr Annual Growth	Annual Cost	5-Yr Annual Growth
Adult Day Health Care	$25,155	N/A	$25,155	N/A
Homemaker Services *	$45,760	2%	$42,328	N/A
Home Health Aide *	$48,048	1%	$44,616	N/A
Assisted Living Facility	$46,200	7%	$48,900	8%
Nursing Home – Semi-Private Room	$82,125	5%	$81,030	5%
Nursing Home – Private Room	$91,250	5%	$87,235	6%
* Based on 44 hours per week by 52 weeks				

Sources: Older Population LTC Insurance: A Profile of Frail Older Americans and Their Caregivers http://www.urban.org/uploadedpdf/311284_older_americans.pdf
Oregon LTC Insurance Rate: 2011 National Association of Insurance Commissioners: *Long Term Care Insurance Experience, (88,455/OR 2010 pop 3,831,074*
Oregon Cost of Care - Genworth Financial(http://www.genworth.com/content/non_navigable/corporate/about_genworth/industry_expertise/cost_of_care.html)

Your Community in Focus

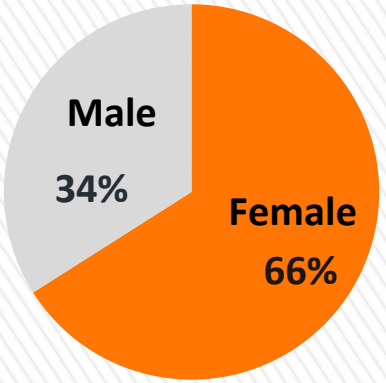
United States

Share of Noninstitutionalized Frail Older Adults Receiving Help From Paid or Unpaid Caregivers, by Income Relative to the Federal Poverty Level, 2002

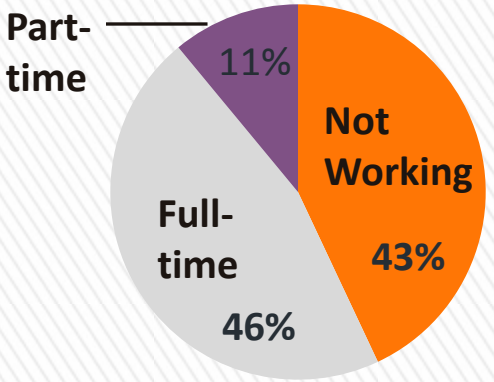


43% *do not feel they had a choice in taking on the responsibility of caregiving.*

Caregiver Gender



Caregiver Employment Status



Caregiving Impact in Oregon, 2010		
Number of Alzheimer/ Dementia Caregivers	Hours of Unpaid Care per Year	Value of Unpaid Care
162,761	185,352,080	$2,211,250,320

Sources: Unpaid Caregivers: *A Profile of Frail Older Americans and Their Caregivers* (http://www.urban.org/uploadedpdf/311284_older_americans.pdf)
Gender & Employment:: AARP *Caregiving in the U.S. 2009* – (http://assets.aarp.org/rgcenter/il/caregiving_09_fr.pdf)
Oregon Caregiving Impact: Alzheimer's Association: 2011 Alzheimer's Disease Facts and Figures (http://www.alz.org/downloads/facts_figures_2011.pdf)

APPENDIX G

FEMA TRIBAL CROSSWALK

Instructions for Using the Plan Review Crosswalk for Review of Tribal Multi-Hazard Mitigation Plans

Attached is a Plan Review Crosswalk based on the ***Tribal Multi-Hazard Mitigation Planning Guidance***, published by FEMA, dated March 2010. This Plan Review Crosswalk is consistent with the Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended by the Disaster Mitigation Act of 2000 (P.L. 106-390); the National Flood Insurance Act of 1968, as amended by the National Flood Insurance Reform Act of 2004 (P.L. 108-264); and 44 Code of Federal Regulations (CFR) Part 201 – *Mitigation Planning*, inclusive of all amendments through November 30, 2009.

SCORING SYSTEM

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Each requirement includes separate elements. All elements of a requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a summary score of "Satisfactory." A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing.

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, reviewers may want to put an N/A in the prerequisite box for single jurisdiction plans. Indian Tribal governments or States that have additional requirements can add them in the appropriate sections of the *Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

Optional matrices for assisting in the review of sections on profiling hazards, assessing vulnerability, and identifying and analyzing mitigation actions are found at the end of the Plan Review Crosswalk.

The example below illustrates how to fill in the Plan Review Crosswalk.

Example

Assessing Vulnerability: Overview

Requirement 201.7(c)(2)(ii): *[The risk assessment **shall** include a] description of the Indian Tribal government's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the tribe.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan include an **overall summary** description of the Indian tribe's **vulnerability** to each hazard?	Section II, pp. 4-10	The plan describes the types of assets that are located within geographically defined hazard areas as well as those that would be affected by winter storms.		✓
B. Does the plan address the **impact** of each hazard on the Indian tribe?	Section II, pp. 10-20	The plan does not address the impact of two of the five hazards addressed in the plan. **Required Revisions:** • Include a description of the impact of floods and earthquakes on the assets. **Recommended Revisions:** • This information can be presented in terms of dollar value or percentages of damage.	✓	
		SUMMARY SCORE	✓	

Tribal Mitigation Plan Review and Approval Status

Tribe: Confederated Tribes of the Umatilla Indian Reservation (CTUIR)	**Title of Plan:** Umatilla Indian Reservation Hazard Mitigation Plan	**Date of Plan:** 2015
Tribal Point of Contact: Patricia T. Perry	**Address:** 46411 Timíne Way Pendleton, OR 97801	
Title: Senior Planner		
Agency: CTUIR		
Phone Number: 541-429-7518	**E-Mail:** pattyperry@ctuir.org	

State Reviewer (if applicable): N/A	**Title:**	**Date:**

FEMA Reviewer:	**Title:**	**Date:**
Date Received in FEMA Region 10		
Plan Not Approved		
Plan Approved		
Date Approved		

Additional Indian Tribal Governments (if appropriate): N/A	**DFIRM**		**NFIP Status***			
	In Plan	**NOT In Plan**	**Y**	**N**	**N/A**	**CRS Class**
1.						
2.						
3.						
4.						
5. [ATTACH PAGE(S) WITH ADDITIONAL INDIAN TRIBAL GOVERNMENTS]						

*** Notes:** **Y = Participating** **N = Not Participating** **N/A = Not Mapped**

TRIBAL MULTI-HAZARD MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted. Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a **"Needs Improvement"** score.

SCORING SYSTEM

Please check one of the following for each requirement.

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.
S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Planning Process	N	S
1. Documentation of the Planning Process: 201.7(b) and 201.7(c)(1)(i) and (ii)		
2. Program Integration: 201.7(c)(1)(iii) and (iv)		

Risk Assessment	N	S
3. Identifying Hazards: 201.7(c)(2)(i)		
4. Profiling Hazards: 201.7(c)(2)(i)		
5. Assessing Vulnerability: Overview: 201.7(c)(2)(ii)		
6. Assessing Vulnerability: Identifying Structures: 201.7(c)(2)(ii)(A)		
7. Assessing Vulnerability: Estimating Potential Losses: 201.7(c)(2)(ii)(B)		
8. Assessing Vulnerability: Analyzing Development Trends: 201.7(c)(2)(ii)(C)		
9. Assessing Vulnerability: Assessing Cultural and Sacred sites: 201.7(c)(2)(ii)(D)		

Mitigation Strategy	N	S
10. Tribal Multi-Hazard Mitigation Goals: 201.7(c)(3)(i)		
11. Identification and Analysis of Tribal Mitigation Actions: 201.7(c)(3)(ii)		
12. Implementation of Tribal Mitigation Actions: 201.7(c)(3)(iii)		
13. Tribal Capability Assessment: 201.7(c)(3)(iv)		
14. Tribal Funding Sources: 201.7(c)(3)(v)		

Plan Maintenance Process	N	S
15. Monitoring, Evaluating, and Updating the Plan: 201.7(c)(4)(i)		
16. Monitoring Progress of Mitigation Activities: 201.7(c)(4)(ii) and 201.7(4)(v)		
17. Incorporation into Existing Planning Mechanisms: 201.7(c)(4)(iii)		
18. Continued Member and Stakeholder Involvement: 201.7(c)(4)(iv)		

Prerequisites	NOT MET	MET
19. Adoption by the Tribal Governing Body : 201.7(c)(5) and (c)(6) ***[single Indian Tribal government only]***		
20. Multi-Jurisdictional Plan Adoption: 201.7(a)(4), (c)(5) and(c)(6) ***[multi-jurisdictional only]***		
21. Multi-Jurisdictional Planning Participation: 201.7(a)(4) ***[multi-jurisdictional only]***		

Severe Repetitive Loss Strategy (Optional)	N	S
22. Repetitive Loss Strategy: 201.7(c)(3)(vi)		

TRIBAL MITIGATION PLAN APPROVAL STATUS

PLAN NOT APPROVED	
See Reviewer's Comments	
PLAN APPROVED	

PLANNING PROCESS: *201.7(b): An effective planning process is essential in developing and maintaining a good plan. The mitigation planning process should include coordination with other tribal agencies, appropriate Federal agencies, adjacent jurisdictions, interested groups, and be integrated to the extent possible with other ongoing tribal planning efforts as well as other FEMA mitigation programs and initiatives.*

1. Documentation of the Planning Process

Requirement 201.7(c)(1): *[The plan **shall** document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was defined and involved. This **shall** include:*

(i) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval, including a description of how the Indian Tribal government defined "public;" and

(ii) As appropriate, an opportunity for neighboring communities, tribal and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan provide a narrative **description of the process** followed to prepare the new or updated plan?	**§1, Pgs. 5-9**			
B. Does the new or updated plan indicate **who was involved** in the current planning process?	**§1, Pg. 6**			
C. Does the new or updated plan indicate **how the "public" was defined and involved**? How was the "public" defined? How was the "public" involved? Were they provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?	**§1, Pg. 3 #4** **§1, Pg. 7** **Appendix B**			
D. Does the new or updated plan discuss the opportunity for other Indian Tribal governments, tribal and regional agencies, businesses, academia, nonprofits, neighboring communities, and other affected stakeholders and interested parties to be involved in the planning process?	**§1, Pgs. 6-7**			
E. Does the updated plan document how the planning team reviewed and analyzed each section of the plan? ***[Updates only.]***	**N/A**			
F. Does the updated plan indicate for each section of the plan whether or not it was revised as part of the update process? ***[Updates only.]***	**N/A**			
		SUMMARY SCORE		

2. Program Integration

Requirement 201.7(c)(1)(iii) and (iv): *[The plan **shall**:]*
[include] (iii) Review and incorporation, if appropriate, of existing plans, studies, and reports; and
(iv) Be integrated to the extent possible with other ongoing tribal planning efforts as well as other FEMA programs and initiatives.

Element	**Location in the Plan** (section or annex and page #)	**Reviewer's Comments**	SCORE N	SCORE S
A. Does the new or updated plan describe the review and incorporation, if appropriate, of existing plans, studies, and reports in the new or updated plan?	**§6**			
B. Does the new or updated plan describe how the Indian tribal mitigation plan is **integrated with other ongoing Indian tribal planning efforts**?	**§6, §3 Pg. 5**			
C. Does the new or updated plan describe how the Indian tribal mitigation planning process is **integrated with FEMA mitigation programs and initiatives**?	**§1, Pg. 11**			
		SUMMARY SCORE		

RISK ASSESSMENT: *201.7(c)(2): [The plan **shall** include a] risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Tribal risk assessments must provide sufficient information to enable the Indian Tribal government to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

3. Identifying Hazards

Requirement 201.7(c)(2)(i): *[The risk assessment **shall** include a] description of the type … of all natural hazards that can affect the tribal planning area.*

Element	**Location in the Plan** (section or annex and page #)	**Reviewer's Comments**	SCORE N	SCORE S
A. Does the new or updated plan describe the **tribal planning area**?	**§1, Pgs. 3-4**			
B. Does the new or updated plan include a description of the **types of all natural hazards** that affect the tribal planning area?	**§3, Pgs. 1-53**			
		SUMMARY SCORE		

4. Profiling Hazards

Requirement 201.7(c)(2)(i): *[The risk assessment **shall** include a] description of the … location and extent of all natural hazards that can affect the tribal planning area. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the risk assessment identify the **location** (i.e., geographic area affected) of each natural hazard addressed in the new or updated plan?	§4, Pgs. 1-5			
B. Does the risk assessment identify the **extent** (i.e., magnitude or severity) of each hazard addressed in the new or updated plan?	§3, Pgs. 6-53			
C. Does the new or updated plan provide information on **previous occurrences** of each hazard addressed in the plan?	§3, Pgs. 6-53			
D. Does the new or updated plan include the **probability of future events** (i.e., chance of occurrence) for each hazard addressed in the plan?	§3, Pgs. 6-53			
E. Does the updated plan address data deficiencies, if any, noted in the previously approved plan?	N/A			
		SUMMARY SCORE		

5. Assessing Vulnerability: Overview

Requirement 201.7(c)(2)(ii): *[The risk assessment **shall** include a] description of the Indian Tribal government's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the tribe.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan include an **overall summary** description of the Indian tribe's **vulnerability** to each hazard?	§3, Pgs. 6-53			
B. Does the new or updated plan address the **impact** of each hazard on the Indian tribe?	§4, Pgs. 6-26 Table 4-2			
		SUMMARY SCORE		

6. Assessing Vulnerability: Identifying Structures

Requirement 201.7(c)(2)(ii)(A): *[The plan **should** describe vulnerability in terms of the] types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe vulnerability in terms of the **types and numbers** of **existing** buildings, infrastructure, and critical facilities located in the identified hazard areas?	§4 Pgs. 10-26	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the new or updated plan describe vulnerability in terms of the **types and numbers** of **future** buildings, infrastructure, and critical facilities located in the identified hazard areas?	§4 Pgs. 10-26	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

7. Assessing Vulnerability: Estimating Potential Losses

Requirement 201.7(c)(2)(ii)(B): *[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan estimate **potential dollar losses** to vulnerable structures?	§4 Pg. 7	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the new or updated plan describe the **methodology** used to prepare the estimate?	§4 Pg. 8 Table 4-2, Pgs. 10-26	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
C. Does the updated plan reflect the effects of **changes in development** on loss estimates?	N/A	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

8. Assessing Vulnerability: Analyzing Development Trends

Requirement 201.7(c)(2)(ii)(C): *[The plan **should** describe vulnerability in terms of a] general description of land uses and development trends within the tribal planning area so that mitigation options can be considered in future land use decisions.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe land uses and development trends within the tribal planning area?	§2 Pgs. 7-8	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the updated plan reflect changes in development for tribal lands in hazard prone areas within the tribal planning area?	N/A	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

9. Assessing Vulnerability: Assessing Cultural and Sacred Sites

Requirement 201.7(c)(2)(ii)(D): *[The plan **should** describe vulnerability in terms of] cultural and sacred sites that are significant, even if they cannot be valued in monetary terms.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe significant cultural and sacred sites that are located in hazard areas?	§3 Pg. 52 §4 Pg. 8 Table 4-2	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

MITIGATION STRATEGY: *201.7(c)(3): [The plan **shall** include a] mitigation strategy that provides the Indian Tribal government's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

10. Tribal Multi-Hazard Mitigation Goals

Requirement 201.7(c)(3)(i): *[The mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the new or updated plan include a description of mitigation **goals** to reduce or avoid long-term vulnerabilities to the identified hazards?	§5 Pg. 2			
B. Does the updated plan demonstrate that the goals were evaluated and either remain valid or have been revised?	N/A			
		SUMMARY SCORE		

11. Identification and Analysis of Tribal Mitigation Actions

Requirement 201.7(c)(3)(ii): *[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan identify and analyze a **comprehensive range** of specific mitigation actions and projects for each hazard?	§5 Table 5-1			
B Do the identified actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?	§5 Pg. 11 Table 5-1, actions S-1 thru S-3			
C. Do the identified actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?	§5 Pg. 12 Table 5-1, actions PP-1 – PP-3			
		SUMMARY SCORE		

12. Implementation of Tribal Mitigation Actions

Requirement: 201.7(c)(3)(iii): *[The mitigation strategy **shall** include an] action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the Indian Tribal government.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the mitigation strategy in the new or updated plan include how the actions are **prioritized**? (For example, is there a discussion of the process and criteria used?)	**§5 Pg. 13-17**			
B. Does the mitigation strategy in the new or updated plan address how the actions will be **implemented and administered,** including the responsible agency, existing or potential resources, and the timeframe to complete each action?	**§5 Pg. 16, Table 5-1**			
C. Does the **updated** plan identify the completed, deleted, or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?	**N/A**			
		SUMMARY SCORE		

13. Tribal Capability Assessment

Requirement 201.7(c)(3)(iv): *[The mitigation strategy **shall** include a] discussion of the Indian Tribal government's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: An evaluation of tribal laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas; and a discussion of tribal funding capabilities for hazard mitigation projects.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan include an evaluation of the Indian Tribal government's **pre-disaster hazard management** laws, regulations, policies, programs, and capabilities?	**§6 Pgs. 2-4**			
B. Does the new or updated plan include an evaluation of the Indian Tribal government's **post-disaster hazard management** laws, regulations, policies, programs, and capabilities?	**§6 Pgs. 4-5**			
C. Does the new or updated plan include an evaluation of the Indian Tribal government's laws, regulations, policies, programs, and capabilities **related to development** in hazard prone areas?	**§6 Pgs. 2-4**			
D. Does the new or updated plan include a discussion of the Indian Tribal government's **funding capabilities** for hazard mitigation projects?	**§6 Pgs. 7-9, §4 Pg. 10 Table 4-3**			
E. Does the updated plan address any hazard management laws, policies, programs, capabilities, or funding capabilities of the Indian Tribal government's that have changed since approval of the previous plan?	**N/A**			
		SUMMARY SCORE		

14. Tribal Funding Sources

Requirement 201.7(c)(3)(v): *[The mitigation strategy **shall** include an] identification of current and potential sources of Federal, tribal, or private funding to implement mitigation activities.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan identify **current** sources of Federal, tribal, or private funding to implement mitigation activities?	§7 Pgs. 1-5			
B. Does the new or updated plan identify **potential** sources of Federal, tribal, or private funding to implement mitigation activities?	§7 Pgs. 1-5			
C. Does the updated plan identify the sources of mitigation funding used to implement activities in the mitigation strategy since approval of the previous plan?	N/A			
		SUMMARY SCORE		

PLAN MAINTENANCE PROCESS

15. Monitoring, Evaluating, and Updating the Plan

Requirement 201.7(c)(4)(i): *[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan.*

Element	Location in the **Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe the method and schedule for **monitoring** the plan, including how, when, and by whom (e.g., the responsible agency)?	§8 Pgs. 1-6			
B. Does the new or updated plan describe the method and schedule for **evaluating** the plan, including how, when, and by whom (e.g., the responsible agency)?	§8 Pg. 3			
C. Does the new or updated plan describe the method and schedule for **updating** the plan, including how, when, and by whom (e.g., the responsible agency), within the 5-year cycle?	§8 Pg. 5			
D. Does the updated plan include an analysis of whether the previously approved plan's method and schedule worked, and what elements or processes, if any, were changed for the next 5 years?	N/A			
		SUMMARY SCORE		

16. Monitoring Progress of Mitigation Activities

Requirement 201.7(c)(4)(ii): *[The plan maintenance process **shall** include a] system for monitoring implementation of mitigation measures and project closeouts.*

Requirement 201.7(c)(4)(v): *[The plan maintenance process **shall** include a] system for reviewing progress on achieving goals as well as activities and projects identified in the mitigation strategy.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe how mitigation measures and project closeouts will be **monitored**?	§8 Pg. 1			
B. Does the new or updated plan identify a **system for reviewing progress** on achieving goals and implementing activities and projects in the Mitigation Strategy?	§8 Pg. 3			
C. Does the updated plan describe any modifications, if any, to the system identified in the previously approved plan to track the initiation, status, and completion of mitigation activities?	N/A			
D. Does the updated plan discuss whether mitigation actions were implemented as planned?	N/A			
		SUMMARY SCORE		

17. Incorporation into Existing Planning Mechanisms

Requirement 201.7(c)(4)(iii): *[The plan maintenance process **shall** include a] process by which the Indian Tribal government incorporates the requirements of the mitigation plan into other planning mechanisms such as reservation master plans or capital improvement plans, when appropriate.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan identify **other tribal planning mechanisms** available for incorporating the requirements of the mitigation plan?	§8 Pg. 5, §6 Pg. 2			
B. Does the new or updated plan include a **process by which the Indian Tribal government will incorporate the mitigation strategy** and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	§8 Pg. 5			
		SUMMARY SCORE		

18. Continued Member and Stakeholder Involvement

Requirement 201.7(c)(4)(iv): *[The plan maintenance process **shall** include a] discussion on how the Indian Tribal government will continue public participation in the plan maintenance process.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan explain how **continued public participation** will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)				
		SUMMARY SCORE		

PREREQUISITES

19. Adoption by the Tribal Governing Body (*Single Indian Tribal government*)

***Requirement 201.7(c)(5)*:** *The plan **must** be formally adopted by the governing body of the Indian Tribal government prior to submitting to FEMA for final review and approval.*

Requirement 201.7(c)(6): *[The plan **must** include] assurances that the Indian Tribal government will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 13.11(c) of this chapter. The Indian Tribal government will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes as required in 13.11(d) of this chapter.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Has the Indian tribal governing body formally adopted the new or updated plan?	*Pending*			
B. Is supporting documentation, such as a resolution, included with the new or updated plan?	*Pending*			
C. Does the new or updated plan provide assurances that the Indian Tribal government will continue to comply with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 CFR 13.11(c), and will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes as required in 44 CFR 13.11(d)?	§1 Pg. 12 (9)			
		SUMMARY SCORE		

20. Multi-Jurisdictional Plan Adoption (*Multiple Indian Tribal governments*) N/A

***Requirement 201.7(a)(4)*:** *Multi-jurisdictional plans (*e.g., *county-wide or watershed plans) may be accepted, as appropriate, as long as each Indian Tribal government…has officially adopted the plan.*

***Requirement 201.7(c)(5)*:** *The plan **must** be formally adopted by the governing body of the Indian Tribal government prior to submittal to FEMA for final review and approval.*

***Requirement 201.7(c)(6):** [The plan **must** include] assurances that the Indian Tribal government will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 13.11(c) of this chapter. The Indian Tribal government will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes as required in 13.11(d) of this chapter.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the new or updated plan indicate the specific Indian Tribal government(s) represented in the plan?				
B. For each Indian Tribal government(s), has the governing body adopted the new or updated plan?				
C. Is supporting documentation, such as a resolution, included for each participating Indian Tribal government(s)?				
D. Does the new or updated plan provide assurances that the Indian Tribal government will continue to comply with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 CFR 13.11(c), and will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes as required in 44 CFR 13.11(d)?				
		SUMMARY SCORE		

21. Multi-Jurisdictional Planning Participation (*Multiple Indian Tribal governments*) N/A

***Requirement 201.7(a)(4)*:** *Multi-jurisdictional plans (e.g., county-wide or watershed plans) may be accepted, as appropriate, as long as each Indian Tribal government has participated in the process... Indian Tribal governments must address all the elements identified in [44 CFR 201.7] to ensure eligibility as a grantee or as a subgrantee.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the new or updated plan describe **how** each Indian Tribal government participated in the plan's development?				
B. Does the updated plan identify all participating Indian Tribal governments, including new and continuing Indian Tribal government(s) and any Indian Tribal government(s) that no longer participate in the plan?				
C. Does each participating Indian Tribal government participating in the new or updated mitigation plan meet all of the elements identified in the *Tribal Multi-Hazard Mitigation Plan Review Crosswalk* for their tribal planning area? Has a separate crosswalk for participating Indian Tribal government(s) been completed, and are all elements "Met" or "S"?				
		SUMMARY SCORE		

REPETITIVE LOSS STRATEGY (OPTIONAL)

22. Repetitive Loss Strategy

Requirement 201.7(c)(3)(vi): *An Indian Tribal government applying to FEMA as a grantee may request the reduced cost share authorized under 79.4(c)(2) of this chapter of the FMA and SRL programs if they have an approved Tribal Mitigation Plan meeting the requirements of this section that also identifies actions the Indian Tribal government has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties), and specifies how the Indian Tribal government intends to reduce the number of such repetitive loss properties.* ***[Note: While submittal of a Repetitive Loss Strategy is optional, if the Indian Tribal government wants to request the reduced cost share authorized under 44 CFR 79.4(c)(2) for the FMA and SRL programs as a grantee, then all of the following requirements must be met.]***

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan address repetitive loss properties in its risk assessment (see 201.7(c)(2))?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
B. Does the new or updated plan describe the Indian Tribal government's mitigation goals that support the selection of mitigation activities for repetitive loss properties (see 201.7(c)(3)(i))?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
C. Does the new or updated plan identify mitigation actions for repetitive loss properties (see 201.7(c)(3)(iii))?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
D. Does the new or updated plan describe specific actions that have been implemented to mitigate repetitive loss properties, including actions taken to reduce the number of severe repetitive loss properties?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
E. Does the new or updated plan consider repetitive loss properties in its evaluation of the Indian Tribal government's hazard management laws, regulations, policies, programs, and capabilities and its general description of mitigation capabilities (see 201.7(c)(3)(iv))?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
F. Does the new or updated plan identify current and potential sources of Federal, tribal, or private funding to implement mitigation activities for repetitive loss properties (see 201.7(c)(3)(v))?		***[Note: Only required for SRL 90/10 under FMA & SRL]***		
		SUMMARY SCORE		

MATRIX A: PROFILING HAZARDS

This matrix can assist FEMA (and the State, if applicable) as well as the Indian Tribal government in scoring each hazard. Indian Tribal governments may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the tribal planning area. **Completing the matrix is not required**.

Note: First, check which hazards are identified in requirement 201.7(c)(2)(i). Then, place a checkmark in either the N or the S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	Hazards Identified Per Requirement 201.7(c)(2)(i)		A. Location		B. Extent		C. Previous Occurrences		D. Probability of Future Events	
	Not a Hazard	Yes	N	S	N	S	N	S	N	S
Avalanche										
Coastal Erosion										
Coastal Storm										
Dam Failure										
Drought										
Earthquake										
Expansive Soils										
Extreme Heat										
Flood										
Hailstorm										
Hurricane										
Land Subsidence										
Landslide										
Severe Winter Storm										
Tornado										
Tsunami										
Volcano										
Wildfire										
Windstorm										
Other:										
Other:										
Other:										

Legend: 201.7(c)(2)(i) Profiling Hazards
A. Does the risk assessment identify the location (i.e., geographic area affected) of each hazard addressed in the new or updated plan?
B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the new or updated plan?
C. Does the plan provide information on previous occurrences of each natural hazard addressed in the new or updated plan?
D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the new or updated plan?

MATRIX B: ASSESSING VULNERABILITY

This matrix can assist FEMA (and the State, if applicable) as well as the Indian Tribal government in scoring each hazard. Indian Tribal governments may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the tribal planning area. **Completing the matrix is not required**.

*Note: First, check which hazards are identified in requirement 201.7(c)(2)(i). Then, place a checkmark in either the N or the S box for each **applicable** hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk. Note: Receiving an N in the shaded columns will not preclude the plan from passing.*

Hazard Type	Hazards Identified Per Requirement 201.7(c)(2)(i)		201.7(c)(2)(ii) Overview	A. Overall Description of Vulnerability		B. Hazard Impact		201.7(c)(2)(ii)(A) and (D) Identifying Structures and Sacred Sites (types and estimated numbers)	A. Existing Structures		B. Future Structures		201.7(c)(2)(ii)(B) Estimating Potential Losses	A. Loss Estimate		B. Methodology	
	Not a Hazard	Yes		N	S	N	S		N	S	N	S		N	S	N	S
Avalanche																	
Coastal Erosion																	
Coastal Storm																	
Dam Failure																	
Drought																	
Earthquake																	
Expansive Soils																	
Extreme Heat																	
Flood																	
Hailstorm																	
Hurricane																	
Land Subsidence																	
Landslide																	
Severe Winter Storm																	
Tornado																	
Tsunami																	
Volcano																	
Wildfire																	
Windstorm																	
Other:																	
Other:																	
Other:																	

Legend:

201.7(c)(2)(ii) Assessing Vulnerability: Overview

A. Does the new or updated plan include an overall summary description of the vulnerability of the tribal planning area to each hazard?

B. Does the new or updated plan address the impact of each hazard on the tribal planning area?

201.7(c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures

A. Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?

B. Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

201.7(c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses

A. Does the new or updated plan estimate potential dollar losses to vulnerable structures?

B. Does the new or updated plan describe the methodology used to prepare the estimate?

MATRIX C: IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

This matrix can assist FEMA (and the State, if applicable) as well as the Indian Tribal government, in scoring each hazard. Indian Tribal governments may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

*Note: First, check which hazards are identified in requirement 201.7(c)(2)(i). Then, place a checkmark in either the N or the S box for each **applicable** hazard. An "N" for any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.*

Hazard Type	Hazards Identified Per Requirement 201.7(c)(2)(i)		A. Comprehensive Range of Actions and Projects	
	Not a Hazard	Yes	N	S
Avalanche				
Coastal Erosion				
Coastal Storm				
Dam Failure				
Drought				
Earthquake				
Expansive Soils				
Extreme Heat				
Flood				
Hailstorm				
Hurricane				
Land Subsidence				
Landslide				
Severe Winter Storm				
Tornado				
Tsunami				
Volcano				
Wildfire				
Windstorm				
Other:				
Other:				
Other:				

Legend:
201.7(c)(3)(ii) Identification and Analysis of Mitigation Actions
A. Does the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?