Natural Hazard Action Item Proposal Form

Proposed Action Item:	**Alignment with Plan Goals:**
Identify incentive programs to install water efficient devices.	Protect Human Welfare, Property, and Natural Resources

Rationale for Proposed Action Item:

- 1985-1997 was a dry period capped by statewide droughts in 1992 and 1994 (1992 drought emergency declaration). Negative externalities included forest-fires and insect problems.
- 2001: Northeast Oregon counties received USDA declarations for drought.
- 2003: Northeast Oregon counties declared local drought emergencies.
- Drought has a negative effect on tourism, agriculture, industry, wildfire and fishing.
- The probability that Region 7 will experience future droughts is high; likewise, each county in Region 7 has described its vulnerability to drought has high (i.e., more than 10% of the population or regional assets will be affected by a major drought emergency or disaster)
- A strong water conservation incentive program will help to raise public consciousness and participation in water saving habits and lifestyles.
- Fresh water is a finite resource and requires care. Problems associated with decreased water supply include: Pollution from runoff from over-irrigation of agricultural and urban lands; additional dams and reservoirs and additional water and wastewater treatment facilities; habitat degradation from surface water withdrawals; destruction of wetlands, which filter pollutants; and increased energy needed to treat wastewater and byproducts from power plants.
- Water-efficiency measures can reduce water and sewer costs by up to 30%. Significant savings in energy, chemical and maintenance expenses are also possible. The typical payback period is three to seven years. Some general benefits of water conservation include energy savings (by using less energy for heating, pumping, and treating water), financial savings, less wastewater, and environmental benefits including increased water availability to local streams, wetlands, and the natural inhabitants of both environments.
- Competing water needs and limited resources may hamper future development efforts. Drought has a profound effect on the State's economy, particularly the hydropower and agricultural sectors. Similarly, drought can lead to insect infestations, loss of topsoil through wind erosion, flash floods, fire, and reduced stream flows to support endangered fish species.
- The Disaster Mitigation Act of 2000 requires communities to identify comprehensive actions and projects that reduce the effects of a hazard on the community [201.6(c)(3)(ii)], such as actions protecting natural resources. Installing water efficient devices can significantly reduce the impact of drought by conserving the critical water resources in the community.

Ideas for Implementation:

- Create a water-conservation committee within interested counties and/or cities to develop incentive programs, educational programs, and voluntary and/or mandatory restrictions on water use.
- Create short, intermediate, and long-term steps for a one-year effort to reduce water consumption.
- Work with utility companies to charge higher rates for excessive water use.
- Distribute conservation literature along with the regular mailing of bills. Local service organizations can be asked to disseminate water conservation promotional information.
- Investigate water pricing schemes (i.e., peak pricing and excess use charges) that discourage water use.
- Initiate a water conservation program in high-use facilities such as schools and colleges, hospitals and institutions, involving a retrofit of existing plumbing fixtures with water saving models and the dissemination of water conservation literature.
- Promote a campaign of household leak detection. Provide leak detection tips on billing cards.

Distribute dye tablets to customers to encourage toilet leak checks. Direct meter readers to inform customers with unusually high recorded use to check for household water leaks.

- Speak to local civic organizations (Boy Scouts, volunteer fire companies, etc.) on water conservation and suggest the sale of water-saving devices as a fund-raising activity.
- Encourage the wise use and management of water during peak use summer periods by restricting lawn/garden watering to non-daylight hours.

Coordinating Organization:	County Water Masters and participating cities (including Baker City, and Halfway)

Internal Partners:	**External Partners:**
Relevant utility companies, county public works departments, wastewater treatment facilities	US Environmental Protection Agency's WAVE program (a non-regulatory water-efficiency partnership that encourages commercial businesses and institutions to reduce water consumption while increasing efficiency, profitability, and competitiveness)

Timeline:		**If available, estimated cost:**
Short Term (0-2 years)	Long Term (2-4 or more years)	
1 year		

Form Submitted by:	RARE Participant

Natural Hazard Action Item Proposal Form

Proposed Action Item:	**Alignment with Plan Goals:**
Develop community drought emergency plans and policies.	Strengthen Organizational and Community Capacity

Rationale for Proposed Action Item:

- Competing water needs and limited resources may hamper future development efforts. Drought has a profound effect on the State's economy, particularly the hydropower and agricultural sectors. Similarly, drought can lead to insect infestations, loss of topsoil through wind erosion, flash floods, fire, and reduced stream flows to support endangered fish species.
- 1985-1997 was a dry period capped by statewide droughts in 1992 and 1994 (1992 statewide drought emergency declaration). Negative externalities included forest-fires and insect problems.
- 2001: Northeast Oregon counties received USDA declarations for drought.
- 2003: Northeast Oregon counties declared local drought emergencies.
- Drought has a negative effect on tourism, agriculture, industry, wildfire and fishing.
- The City of Cove maintains a hydroelectric power plant. Although not dependent on the plant for power needs, Cove is required to produce a certain amount of power per year. Should drought or power outages frequently occur, Cove may financially struggle.
- The probability that Region 7 will experience future droughts is high; likewise, each county in Region 7 has described its vulnerability to drought has high (i.e., more than 10% of the population or regional assets will be affected by a major drought emergency or disaster)
- The Disaster Mitigation Act of 2000 requires communities to identify comprehensive actions and projects that reduce the effects of hazards on the community [201.6(c)(3)(ii)], such as actions addressing emergency services. Developing community drought emergency plans and policies will help the community to prepare for future drought events and reduce any impact of a future drought.
- The amount of water within the Grande Ronde Valley's aquifers is unknown; should growth continue, the City of La Grande would like an estimate of aquifer capacities.

Ideas for Implementation:

- Review existing plans and look for improvement opportunities
- Identify new and/or build upon existing emergency water supplies
- Develop emergency water surcharge schedule rules
- Adopt orders, rules and regulations for the purpose of implementing and enforcing the provisions of any Executive Orders issued pertaining to a drought emergency.
- Impose restrictions upon the non-essential use of water including the use of water conservation devices, as may be necessary.
- Conduct a water and land-use needs analysis for Union County.
- Seek funding to clean the City of La Grande's secondary water supply.

Coordinating Organization:	County Emergency Services / Emergency Management; Interested Cities

Internal Partners:	**External Partners:**
Water Resources Departments, County and City Governments, County and City Planning Departments, Public Works Departments, City of La Grande, Baker City, Halfway	Wallowa Lake Service District, Baker County Cattleman's Association, Relevant Irrigation Districts, OSU Extension Office, US Department of Agriculture
Timeline:	**If available, estimated cost:**

Short Term (0-2 years)	Long Term (2-4 or more years)	
1 year		
Form Submitted by:	RARE Participant	

Natural Hazard Action Item Proposal Form

Proposed Action Item:	**Alignment with Plan Goals:**
Conduct an aquifer study for the Pine and Baker Valleys.	Strengthen Organizational and Community Capacity

Rationale for Proposed Action Item:

- Over-exploitation may exceed the practical sustained yield in the near future; Baker County expects that they've reached full capacity, but would like to make sure.
- In the last 10-15 years, the City of Halfway's water supply has dropped by 50ft. The City would like to better understand its ability to sustain growth, and the amount of water in the Valley will be a crucial determinant.
- Baker City's backup water supply is dependent on the valley's aquifers. Currently, aquifers are tapped for agricultural use; if Baker City's primary water supply failed, aquifer supply may not be adequate in accommodating the City's needs.
- Unknown capacities within aquifers may limit future development.
- 1985-1997: dry period capped by statewide droughts in 1992 and 1994 (1992 drought emergency declaration). Negative externalities included forest-fires and insect problems.
- 2001: Northeast Oregon counties received USDA declarations for drought.
- 2003: Northeast Oregon counties declared local drought emergencies.
- Drought has a negative effect on tourism, agriculture, industry, wildfire and fishing.
- A better knowledge of the hydrodynamic conditions and characteristics of the groundwater is essential for the well-being of the population and the economic development of the region
- Competing water needs and limited resources may hamper future development efforts. Drought has a profound effect on the State's economy, particularly the hydropower and agricultural sectors. Similarly, drought can lead to insect infestations, loss of topsoil through wind erosion, flash floods, fire, and reduced stream flows to support endangered fish species.
- Baker County has experienced declared droughts the past four years of this decade. The extended drought has resulted in significant loss for agriculture, increased fire danger and severely impacted tourism with the lack of water in the streams, lakes and reservoirs. A secondary effect of the drought resulted in the Wingville-Pocohontas Community experiencing domestic well issues.
- The Disaster Mitigation Act of 2000 requires communities to identify comprehensive actions and projects that reduce the effects of hazards on a community [201.6(c)(3)(ii)], such as actions protecting natural resources. Conducting an aquifer study will help determine the capacity of the Baker and Union aquifers and help these counties to plan for the effects of a potential drought.

Ideas for Implementation:

- Improve the understanding of hydrodynamic conditions
- Estimate recharge trends over past decades to study potential impacts of climate change.
- Evaluate the vulnerability of water supply
- Characterize the groundwater quality

Coordinating Organization:	Baker County Water Masters

Internal Partners:	**External Partners:**

<table>
<tr><td colspan="2">Baker County Planning Department, Baker County Public Works, Baker City, City of Halfway</td><td>Oregon Department of Water Resources</td></tr>
<tr><td colspan="2">Timeline:</td><td>If available, estimated cost:</td></tr>
<tr><td>Short Term (0-2 years)</td><td>Long Term (2-4 or more years)</td><td rowspan="2"></td></tr>
<tr><td></td><td>2 or more years</td></tr>
<tr><td colspan="2">Form Submitted by:</td><td>RARE Participant</td></tr>
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Natural Hazard Action Item Proposal Form

Proposed Action Item:	**Alignment with Plan Goals:**
Conduct an aquifer study for the Grande Ronde Valley.	Strengthen Organizational and Community Capacity

Rationale for Proposed Action Item:

- Over-exploitation may exceed the practical sustained yield in the near future;
- Unknown capacities within aquifers may limit future development.
- 1985-1997: dry period capped by statewide droughts in 1992 and 1994 (1992 drought emergency declaration). Negative externalities included forest-fires and insect problems.
- 2001: Northeast Oregon counties received USDA declarations for drought.
- 2003: Northeast Oregon counties declared local drought emergencies.
- Drought has a negative effect on tourism, agriculture, industry, wildfire and fishing.
- A better knowledge of the hydrodynamic conditions and characteristics of the groundwater is essential for the well-being of the population and the economic development of the region
- Competing water needs and limited resources may hamper future development efforts. Drought has a profound effect on the State's economy, particularly the hydropower and agricultural sectors. Similarly, drought can lead to insect infestations, loss of topsoil through wind erosion, flash floods, fire, and reduced stream flows to support endangered fish species.
- The Disaster Mitigation Act of 2000 requires communities to identify comprehensive actions and projects that reduce the effects of hazards on the community [201.6(c)(3)(ii)], such as actions protecting natural resources. Conducting an aquifer study will help determine the capacity of the Grande Ronde aquifer and help the county to plan for the effects of a potential drought.
- The City of La Grande is concerned about aquifer capacities, should growth continue. The amount of water within the Grande Ronde Valley is currently unknown.
- The City of La Grande's water is supplied by wells. The Beaver Creek Watershed provides secondary backup, but it currently does not meet water quality standards.

Ideas for Implementation:

- Improve the understanding of hydrodynamic conditions
- Estimate recharge trends over past decades to study potential impacts of climate change.
- Evaluate the vulnerability of water supply
- Characterize the groundwater quality

Coordinating Organization:	Union County Water Master

Internal Partners:	**External Partners:**
The City of La Grande	Oregon Department of Water Resources

Timeline:		**If available, estimated cost:**
Short Term (0-2 years)	Long Term (2-4 or more years)	
	Long Term	

Form Submitted by:	RARE Participant