

Memorandum

Date: July 11, 2014
To:
From: Matt McRae (541)682-5649
Climate and Energy Analyst
Subject: Eugene/Springfield Climate and Hazards Vulnerability Assessment

The Cities of Eugene and Springfield are in the process of updating the Eugene/Springfield Multijurisdictional Natural Hazards Mitigation Plan (NHMP), a plan that identifies a priority list of actions to be taken now that will help avoid some of the worst impacts associated with natural hazards like flooding, wildfires, winter storms, and earthquakes.

To inform the update of the NHMP, the two cities have conducted a community-wide climate and hazards vulnerability assessment with help from the Oregon Partnership for Disaster Resilience, a program of the Community Service Center at the University of Oregon.

The assessment was conducted in partnership with EWEB and dozens of local businesses, non-profits, and agencies, and identifies both strengths and potential weaknesses within 12 community systems: Drinking water, Electricity, Health Care and Public Health, Transportation, Food, Housing, Communication, Public Safety, Natural Systems, Stormwater, Fossil Fuels, and Wastewater.

During the assessment, experts familiar with each system were asked about the current condition of their system, the ability of the system to adapt to changes, and the likely impacts to their system from a number of specific natural hazards.

The vulnerability assessment was completed in June, 2014 and the findings are being used to inform the development and refinement of several hazard mitigation actions that will be included in the update of the NHMP.

Some of the key findings from the Eugene/Springfield Climate and Hazards Vulnerability Assessment include:

1. There is a unique culture of collaboration and information sharing prevalent within Eugene/Springfield. Overall, this increases our adaptive capacity in a number of areas. Information sharing is particularly notable within the *health, public safety, electricity, and transportation* sectors.
2. Many sectors are heavily dependent on *resources* and *decisions* made *outside* of the Eugene/Springfield area, most notably the food, electricity, and fossil fuel sectors.
3. There are three sectors that are fundamental to the operation, maintenance, and restoration of all other sectors; those are: *Electricity, Transportation, and Fossil Fuels*.

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4. For several sector managers, finding and keeping qualified staff is an important concern over the next decade, with few obvious solutions.

Specific hazards of lower concern:

5. While flood and wildfire events have the potential to cause severe loss and damage in localized areas as well as inconvenience for many and a drain on emergency response resources, these hazards are *not* likely to result in systemic failures across multiple sectors.

Specific hazards of greater concern:

6. Both severe earthquake *and* severe winter storm events have the potential to cause region-wide cascading system failures.
7. Much of our regional capacity to manage hazard situations stems from our ability to draw resources, personnel, and expertise from nearby communities. This capacity is *severely restricted* during region-wide events like a Cascadia earthquake, and severe winter storm events.

Climate Change:

8. The sectors likely to experience the most negative impacts associated with climate change are *natural systems* and *drinking water*, with the greatest potential negative impact on regional forest and water resources, specifically. Climate change also poses significant challenges to the *food*, *electricity*, and *public health* systems.
9. There is an existing conflict among fresh water users that are all critically dependent on summer water availability for:
 - Fisheries,
 - Hydroelectricity,
 - Water for municipal use, and
 - Water for agricultural irrigation.

All of those freshwater demands and existing conflicts are expected to be exacerbated by:

- Reduced snowpack,
- Increased summer temperatures, and
- Extended summer drought

Fossil Fuel dependency:

10. All but one group indicated their sectors rely *heavily* or *entirely* on fossil fuels and fossil fuel-derived products to operate. Health care, food, water, transportation, public safety, electricity, and housing appear most dependent while Natural Systems are least dependent on fossil fuels to function.

For more information regarding the Eugene/Springfield Climate and Hazards Vulnerability Assessment, contact City of Eugene Climate and Energy Analyst, Matt McRae. Matt.a.mcrae@ci.eugene.or.us or (541)682-5649.