

Southern Oregon University

Campus-Community Resilience Assessment Report

Version 1.0



Prepared by The Office of Sustainability
Southern Oregon University
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Introduction

Southern Oregon University (SOU) joined colleges and universities around the country to acknowledge the reality of climate change and the urgency of action, signing Second Nature's [President's Climate Commitment](#). As part of this commitment, SOU conducted a Campus-Community Resilience Assessment (CCRA) during the winter and spring of 2018. The resilience assessment provides a baseline of current resilience activities on campus and in the community, develops initial indicators of resilience through a multi-stakeholder process, and identifies current vulnerabilities related to climate change.

To complete the assessment, SOU's Sustainability Office hosted two public forums open to the campus and surrounding community. The forums provided participants with an overview of regional climate projections and introduced the resilience assessment process. Key stakeholders and interested volunteers were then organized into small working groups in the five focus areas identified by Second Nature:

1. Social Equity & Governance
2. Health & Wellness
3. Ecosystem Services
4. Infrastructure
5. Economic

The five working groups met several times during spring to identify climate resilience related strengths/assets, vulnerabilities, initial indicators, and potential actions. The feedback from the five groups was compiled and summarized by the Sustainability Office into this report. This is an initial assessment of the campus and community resilience to climate change and what data points may serve as useful indicators. This assessment will remain a living document, to be updated as new assets, vulnerabilities, and indicators are identified.

Strengths/Assets

Strengths and assets include features, capacity, characteristics, and resources that will help the campus and its community cope with climate change. The campus and community will need to leverage and draw upon our strengths and assets in order to adapt and thrive in the face of climate impacts. The focus groups and other individuals who submitted responses to SOU's resilience assessment survey identified many strengths and assets. The items identified below represent a summary of the strengths and assets identified, highlighting the most significant and relevant items.

- Abundant green spaces on campus and throughout community with extensive trail system, large tracts of protected lands, and many opportunities for outdoor recreation.
- Many facilities improvements throughout the last 10 years, including 5 new LEED buildings
- Campus and community have emergency response teams and training, All residents received Emergency Preparedness Guidebook from Ashland Fire Rescue. Strong CERT training and participation.
- Community programs for access to food and services (SOU Food Pantry, ACCESS, Food Angels, Faith Organizations).

- High concentration of experienced and educated human capital in the community and SOU staff and faculty.
- The University and the City of Ashland have progressive programs to invest in climate action initiatives, including City incentive programs for energy efficiency, water conservation, and renewable energy and SOU's Green Fund and Climate Action Fund.
- SOU is certified Tree Campus USA and Bee Campus USA.

Vulnerabilities

When assessing vulnerabilities, focus groups and other participants considered vulnerabilities in three categories: direct hazards from the changing climate; impacts from climate change and climate change-related events; and factors that are exacerbated by the effects of climate change. The hazards, impacts, and exacerbating factors used in this report reflect the challenges identified by the [100 Resilient Cities](#). Items in **bold** represent vulnerabilities that were identified across several focus groups. Vulnerabilities marked with an asterisk (*) are items that were highlighted across all focus groups as high priorities and high impact for our community.

Climate Change Hazards

- Drought
- Extreme Heat
- Rainfall Flooding
- Severe Storms

Climate Change Impacts

- Disease Outbreak
- **Fire**
- Infrastructure Failure
- Invasive Species
- Landslide
- Loss of Biodiversity
- **Poor Air Quality**
- Power Outage
- Storm Surge
- **Water Insecurity**

Climate Change Additional Exacerbating Factors

- **Displaced Populations/Migrants**
- Drug/Alcohol Abuse
- Earthquake
- **Economic Inequality***
- Energy Insecurity
- **Environmental Degradation**
- **Ethnic Inequality**
- **Food Insecurity***
- **Homelessness***

- Inadequate Health Systems
- Inadequate Infrastructure
- **Inadequate Public Transportation Systems**
- Insecure Municipal Finances
- **Lack of Affordable Housing***
- Lack of Investment
- **Lack of Social Cohesion**
- Political Instability
- **Structural Racism**

Initial Indicators of Resilience

Each focus group was asked to identify up to ten initial indicators of resilience for their focus area. The indicators identified include qualitative and quantitative measurements and represent strengths, vulnerabilities and assets. Some indicators are specific to the university, while others consider the broader community, such as the City of Ashland or Jackson County. These indicators, as with the rest of the assessment, will be reviewed and revised each year to ensure we the indicators used are relevant, useful, and reflective of rapidly changing conditions. Indicators are organized by focus area, with each focus area defined below.

Social Equity & Governance

Social Equity and Governance includes the systems of governance on campus and in the community, levels of engagement among campus and community members, and the ability of different groups to adapt and respond to climate change. The focus group also considered the social fabric of the campus-community, education levels and opportunities, active networks among different groups in the campus-community, and social justice dynamics that are present.

Indicator	Add value, type of measurement	Current Status
Community Integration (DEI)	Qualitative	The university, the city, and the county have each declared to be sanctuary jurisdictions.
Inclusive Access to Education	Quantitative/Qualitative	The campus and community populations are comprised primarily of white residents (88% of county population and 72% of SOU students). The university has a few programs that work to increase opportunities for minority youth in the region to have access to higher education.
Communication & Trust	Qualitative	There is some distrust in power structures in the community and on campus, as well as inadequate

		communication systems to ensure inclusive and timely access to information and equitable representation.
Climate Initiatives & Engagement	Qualitative	The university is a member of several sustainability networks and is a Climate Commitment signatory. The university and the city each have Climate Action Plans.
Voter Turnout	Quantitative	33.92% of the Jackson County population voted in the last Primary election, and 77.41% voted in the last federal election.
Sustainability/Resilience Literacy	Quantitative	88% of the local community believes climate change is human-caused and 76% think that immediate action is needed. ¹
Institutional Integration of Resiliency	Qualitative	The City has a Climate & Energy Action Plan that includes adaptation measures. The university is developing a resilience assessment and is working to incorporate resiliency into campus planning.
Transportation	Quantitative	48% of the population in Jackson County live within 0.5 miles of bus service. 55.6% of the minority population and 32.8% of elderly population live within 0.25 miles of bus service.
Access to Health Care	Qualitative	There are clinics in the community that offer healthcare to low-income populations including Planned Parenthood, La Clinica, Community Health Center, etc.
Accessibility	Qualitative	The university is working to make the entire educational process (digital and physical) accessible to individuals of all abilities, including new software, training for students and employees, and physical improvements.

¹ Ashland Climate Survey Report: <https://www.climatewise.org/images/projects/ashland-survey-final-report.pdf>

Health & Wellness

Health and Wellness includes the ability of different groups to fulfill their basic needs. This includes accessibility of healthcare, food, water, housing, and sanitation. This also considers availability and affordability of healthcare, food and potable water, secure housing and capacity for emergency medical care.

Indicator	Add value, type of measurement	Current Status
Rate of Asthma	Quantitative	An estimated 11.1% of Jackson County residents and 15% of the SOU population suffers from asthma.
Food Insecurity	Quantitative	An estimated 14.2% of the population in Oregon experiences food insecurity. There are several food pantries and local organizations that provide food for residents in need.
Affordable Housing	Qualitative	Housing costs in Ashland and on campus are high. The community does not have enough affordable housing developments.
Health Insurance	Quantitative	An estimated 95% of Oregonians have health insurance.
Dental Insurance	Quantitative	An estimated 66.6% of Jackson County residents have dental insurance. An estimated 30% of the population has not seen a dentist in the last year due to cost. An estimated 75% of SOU population has dental coverage.
Mental Health	Qualitative	SOU has onsite Counseling Services available for all students and has benefits programs that provides access to mental health care for employees.
Homeless Population	Quantitative	An estimated less than 1% of the population in Jackson County is homeless. The 2018 Point In Time (PIT) count located 732 individuals experiencing homelessness in Jackson County. ²

² <https://www.ashlandchamber.com/news.asp?newsid=3118>

Emergency Planning	Qualitative	The community has an active CERT (Citizens Emergency Response Team) program and other emergency preparedness resources.
Access to Exercise and Recreation Opportunities	Qualitative	The community is very active and there is abundant access to exercise facilities and outdoor recreation.
Real Food	Quantitative	An estimated 2% of food served or sold on campus consists of “Real Food” as defined by the Real Food Challenge.

Ecosystem Services

Ecosystem Services includes the environmental systems and services present in the campus-community. This focus area considers natural assets such as tree canopy, undeveloped floodplains, air quality, and biodiversity. Ecosystem Services also includes systems in place to govern or protect these assets, such as conservation easements, recreation parks, and rainwater management systems.

Indicator	Add value, type of measurement	Current Status
Snow Pack	Quantitative	On May 1, 2018 the Snow Water Equivalent (SWE) ³ measured across four sites was on average 29% of the historic median. In 2017, the SWE across the same four sites was on average 151% of the median.
Forest Management	Qualitative	The community has a forest stewardship agreement, known as the Ashland Forest Resiliency Project, that manages surrounding forests to reduce the risk of severe wildfire, help trees survive stressors, restore a healthy forest ecosystem, and protect the watershed. ⁴
Ecosystem Certifications	Qualitative	The university and surrounding communities hold many ecosystem-related designations including Bee Campus USA, Bee Cities USA, Tree Campus, Tree Cities, and Certified Wildlife Habitat.

³ Snow Water Equivalent (SWE) is the amount of water held in the snowpack.

⁴ <https://www.ashland.or.us/Page.asp?NavID=12907>

Open spaces/Outdoor recreation	Qualitative	The City of Ashland is home to 17 parks, 772 acres of parkland and 48 miles of trails.
Rainwater Management	Qualitative	There are two bioswales on campus to capture rainwater runoff and storm sewers have recently been upgraded to handle storm surges.
Water Quality	Qualitative/Quantitative	The City of Ashland regularly monitors water quality. In 2017 no regulated contaminants exceeded maximum contaminant levels. ⁵
Air Quality	Quantitative	In 2017, Jackson County had 31 days of air quality that was unhealthy for individuals with asthma, other lung diseases, older adults and children, and 15 days of air quality that was unhealthy for other individuals. ⁶
Firewise Community	Qualitative	The City of Ashland has a Firewise Program including guidelines for firewise landscaping and construction practices.
Resource Conservation	Qualitative	The City of Ashland and Energy Trust of Oregon offer many programs to promote resource conservation, including tips and incentives for water conservation and energy efficiency.

Infrastructure

Infrastructure includes the physical structures built, owned, managed, and/or used by the campus-community. Many resilience assessments and plans tend to focus on infrastructure. This assessment considers transportation systems, buildings, communication technology, and key features such as bridges and dams.

Indicator	Add value, type of measurement	Current Status
Access to Multi-Modal Transportation	Qualitative	There are many alternative transportation options available to the campus and community, including bike share, carpooling/rideshare, ZipCar, and

⁵ <https://www.ashland.or.us/SIB/files/Public%20Works/WQR-AshlandOR-Web.pdf>

⁶ <https://www3.epa.gov/aircompare/>

		subsidized bus passes.
Energy Efficiency	Qualitative	The campus has policies for all new construction to achieve LEED Silver minimum certification and all buildings include controls systems.
Renewable Energy Generation	Quantitative	The university generates enough on-site solar energy to supply 2.79% of campus electricity demand.
Emergency Communication	Quantitative	The campus has an emergency communication system that campus and community members can subscribe to. The system has email contact for 100% of campus, voice only contact for 62.5% of subscribers and mobile (text) contact for 46.75% of subscribers.
Access to Heating Fuels	Qualitative	The community has programs and organizations such as the Jackson County Fuel Committee that helps to provide wood for residential heating, emergency firewood, utility advocacy to prevent shut-offs, and weatherization to cut heating costs.
Backup Energy	Quantitative	The campus' backup generators only provide power for egress lighting and to maintain IT server operation. In the case of a grid outage, campus would not be able to operate.
Flood Resistant Buildings	Qualitative	Campus has many buildings with active space below grade (basements) that do not have water-resistant membrane or the membrane has failed, leaving buildings prone to flooding.
Backup Water Supply	Quantitative	The City recently completed the TAP Intertie project to provide a backup water supply in the case of drought, substantial service interruption or emergency. The city can draw up to 2.3 million gallons per day from TAP.

Economics

Economic includes the financial ability of the campus-community to proactively adapt to changing climate conditions and to respond positively to climate change events. This focus area considers the diversity of the campus-community's local economy, availability of tax or other financial incentives to increase resilience, and levels of financial planning for emergencies.

Indicator	Add value, type of measurement	Current Status
Emergency Funds	Quantitative	The university only has a 10% fund balance, enough resources to maintain operations for 3 months in an emergency.
Investment Strategy	Qualitative	The SOU Foundation does not have a sustainable investment policy nor does it actively invest in funds with sustainability metrics.
Green Fund and Climate Action Fund	Quantitative	Campus has two sustainability action funds available for campus sustainability projects that have an average annual income of \$180,000.
Economic Diversity	Qualitative	The local economy is diversified with many small businesses and a variety of industries and employers, though there are segments of the population that rely on seasonal employment (agriculture, tourism, recreation).
Employment	Quantitative	The unemployment rate for Jackson County is 4.2%.
Affordable/Available Housing	Quantitative	1 out of 3 renters are paying more than 50% of their income in rent and the average vacancy rate for rentals is 4.3%. ⁷
Access to Credit or Financial Literacy	Qualitative	The local credit union offers financial education classes in English and Spanish for the community and maintains a blog with articles to improve financial literacy.
Student Debt	Quantitative	In the 2016-2017 academic year,

⁷ <http://www.oregon.gov/ohcs/DO/shp/profiles/Jackson-County-Housing-Profile.pdf>

		69% of students who graduated from SOU borrowed money through a federal loan program and graduated with an average debt of \$22,787.
Income Inequality	Quantitative	The income inequality of Jackson County, OR (measured using the Gini index) is 0.491 which is higher than the national average. ⁸
Poverty Rate	Quantitative	An estimated 14.6% of the population of Jackson County live in poverty. An estimated 18-19.5% of the population of Josephine County live in poverty.

Initial Actions

Throughout the climate resilience assessment process, participants generated ideas of initial actions that may be taken to improve the campus and community resilience to climate change.

- Higher quality air filtration in buildings
- Better outreach about campus Food Pantry
- Develop more affordable, sustainable, high density housing for campus and community
- Find alternative to open burning of forest waste for forest management project
- Adopt a sustainable investment policy for SOU endowment funds
- Pursue practices, policies, and ordinances to reduce the use of plastics throughout the community
- Integrate more “Real Food” in campus dining, including more food from the Farm at SOU
- Explore rainwater catchment system options
- Improve recruitment and retention efforts for marginalized students
- Develop a Donate A Meal Plan program through SOU Dining
- Conduct surveys to measure attitudes, needs, and literacies on campus
 - Sustainability literacy
 - Resilience literacy
 - Power analysis
 - Food insecurity
 - Housing insecurity
 - Health care needs
- Require diversity and sustainability training for every new hire
- Increase balance of campus emergency fund to provide six months of reserves
- Measure percent of students employed within six months of graduating
- Provide financial literacy training on campus

⁸ <https://datausa.io/profile/geo/jackson-county-or/#economy>