Resilient Communities

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The Institute for Sustainable Practices at Lane Community College
The Sustainability Doughnut

Higher Education has an ethical responsibility
- To help find a path toward sustainability
- To train our future leaders
- To model sustainability for our communities

As the systems that sustain life loose functionality, the less privileged suffer first and the most.
Number of reported disasters by decade by hazard type (1971–2010)

- **1971–1980**: 743
  - Floods: 330
  - Mass movement wet: 70
  - Storms: 171
  - Droughts: 28
  - Extreme temperature: 2
  - Wildfires: 4

- **1981–1990**: 1,534
  - Floods: 582
  - Mass movement wet: 267
  - Storms: 621
  - Droughts: 59
  - Extreme temperature: 7
  - Wildfires: 24

- **1991–2000**: 2,386
  - Floods: 1,019
  - Mass movement wet: 296
  - Storms: 508
  - Droughts: 489
  - Extreme temperature: 26
  - Wildfires: 119

- **2001–2010**: 3,496
  - Floods: 1,944
  - Mass movement wet: 376
  - Storms: 547
  - Droughts: 341
  - Extreme temperature: 47
  - Wildfires: 222
“An Earthquake will destroy a sizable portion off the coastal Northwest. The question is when.”
Partnerships

- How do they work?
- What do we bring to the table?
- What do we need?
Collaborations with Community Partners

- Red Cross
- Oregon Emergency Management Association (OEMA)
- Community Emergency Response Team (CERT)
- Campus Community Emergency Response Team (C-CERT)
- Community Organizations Active in Disaster (COAD)
- Lane County Emergency Management
Distributed Energy Resources
The built environment

- Solar Thermal Systems
- Naturally Ventilated
- Durable and Recoverable Materials
- Day lighting requires little or no use of overhead lighting in many classrooms and offices
- Rainwater Harvesting
- Floors require no adhesives or heavy chemicals to clean
- Both recovered abandoned or non-functional sites
The built environment

- 40 KW of solar electricity
- 18 covered charging stations
- Permeable pavement
- At the main entrance to the college
- Part of the West Coast electric vehicle highway

Solar Electric Vehicle Charging Station
30th Avenue Campus
Modeling sustainability for our community

- Demonstration of renewable energy applications
  - Solar station provides electricity to campus grid and charges electric cars
  - Solar thermal array provides heated water to PE showers
  - Geothermal system provides heating and cooling for Childcare Buildings and Downtown Campus
Current Portfolio Partnerships

- Solar Station funded by GreenPower grant from Local Utility and local bond levy
- Photovoltaic Panels funded by Energy Trust of Oregon and Lane’s revolving green fund.
- Solar Thermal Water Heating funded by bond levy and state capital construction funds with local utility assistance
Resilience

“The ability of a system to absorb disturbance and still retain its basic structure and viability.”

Seeks to connect higher education, local and regional governments, employers, and resource managers to create resilient communities: educated and employable people, systems to support regional health and well-being, and social cohesion in the face of change or disaster.
Resilience

Build community resilience through economic opportunity: Work with local industry partnerships, high schools, and community programs to align education with demand, establish or expand stackable credentials, and build career pathways to actual jobs.
Resilience

Become a living laboratory of resilience; use the campus as a demonstration and teaching asset for engaging students and the community, modeling, for example, stormwater management or renewable energy systems.
Modeling sustainability for our community

- Innovative green building practices
  - Downtown Campus uses 5 times less energy per square foot than main campus
Resilience

Establish the campus as a safe haven — whether this is because of high ground, microgrids, or self-sustaining buildings — and a stable, reliable operations center for times of crisis.
Resilience

Update existing coursework in emergency response, public service, urban planning, engineering, information technology, landscape, water, construction, environment, health, and transportation programs; and seek interdisciplinary opportunities between them.
Resilience

Social Cohesion

The ability to rely on one’s community in the face of disaster or upheaval.

The ability to build and nurture social capital - the sense of agency, power, and some measure of control over their lives and livelihood.
Thank you

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