Building college resilience and student success through a scholarship of landscape processes: where nature and culture intersect

### **Destination College of Arts and Sciences**

LCC's unique position within a diverse landscape surroundings offers authentic opportunities for students to achieve desired CLO's while strengthening community partnerships

Outdoor living laboratory

#### **Undergraduate Research**

Settings that offer real world opportunities for students to participate in data collection and analysis that informs planning, management and scientific research.

# Current uses/projects

BIOLOGY & EARTH ENVIRONMENTAL SCIENCE Classes have well established projects:

Phenology (timing of organism responses to weather patterns)

Wildlife use in terrestrial and aquatic habitats

Pollinator diversity

Wild turkey seed dispersal

Zooplankton studies in wetlands

Carbon sequestration

Many others-student selected topics

# Science Undergraduate Research Day 3<sup>rd</sup> Annual SUGR Day:

Jun 1, 2017

10am-2pm with noon Panel

## Best practices in teaching and learning

Research experience/ service learning

Equity in opportunities for underrepresented students

Improves habitat (Sustainability mission of the college)

Local scientific research that enhances biological resilience and local biodiversity

#### **Proposal: Offer Institutional Infrastructure of Research**

Plan strategically for a profitable self-sustaining research facility utilizing our adjacent natural landscapes

Supports resilient community, local job market, and SOTL best practices through collaboration

# **Taphonomic Research Facility**

Taphonomy

Term coined in 1940s by vertebrate paleontologist Ivan Efremov, who described it as the transition of animal remains from the biosphere to the lithosphere.

Has been expanded greatly since this time is often described as the laws of death and burial from its Greek roots – taphos "burial" or "death" and nomos "law"

Multidisciplinary field, including geology, paleontology, anthropology, archaeology, forensic science, biology, chemistry, paleoecology, geomorphology...

#### Facility

- 1 processing animal/faunal remains for building skeletal collections at colleges, universities, and museums
- 2 specific research projects (access limited to researchers -students, faculty, visiting researchers)
- 3 -forensic research and training (more security, limited access active case work or studies)

Facility needs and costs

Phase 1

Land with a variety of microenvironments- can be all together or in separate areas

Phase 2

Fencing

Cameras

Heavy equipment operation

Additional road access

Phase 3

Building with running water and electricity Vehicle

Disciplines

Anthropology

Archaeology

Geology

Zoology

Biology

Botany

Chemistry

Criminal Justice

Forensic Science

Mortuary Science

Entomology

**Interested Partners** 

UO

OSU

OSP Fish and Wildlife

Forensic Laboratory in Ashland

Law Enforcement

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Wildlife Safari
Oregon Zoo
Similar facilities
Currently 7 outdoor decomposition research facilities (human decay)
       University of Tennessee Knoxville (1971)
       University of South Florida (2017)
       Southern Illinois University (2010)
       Sam Houston State University Texas (2010)
       Texas State University (2008)
       Western Carolina University (2006)
       Colorado Mesa University (pigs 2012, Humans 2013)
       Pennsylvania and Wisconsin are in the process
       Also recently opened, Australia and Amsterdam
Novel Funding Opportunities
       Researchers using collection
       Researchers using facility
       More students
      Short courses
      Law enforcement
      Cadaver dog handlers
      Field schools
      Nurses (forensic)
      Grants
             NII
             AFS
             LE$
             NSF
             Other university grants
      BLM
      Donations- wanting to be part of something (buy sections of fence.....) land in
             trust
      SWAG
Which Land?
Considerations?
CORPS- (Center of/for) ORegon Posthumous/ postmortem Studies
MORTIS- Multidisciplinary ORegon Taphonomic Investigative Studies (MORTIS)
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International Association of Forensic Nurses

Portland State University