A Community-Based Approach to Archaeological Site Preservation in a Changing Climate: A Proposed Risk Assessment Along the Lower Columbia

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Climate Change: A Threat to Cultural Heritage
- Erosion, sea-level rise, increased storm frequency and strength threaten cultural heritage worldwide.
- Archaeologists create risk assessments to assess these threats.
- Two types of risk assessment: Top-Down and Bottom-Up.

Archaeological Value + Community Value = Priority Ranking

Why Does the Lower Columbia Matter?
- Tribes w/ Lower Columbia interests
- Scientists w/ research questions
- Land managers balancing preservation goals, federal guidelines, and stakeholder partnerships
- Ongoing and incoming impacts including:
  - Predicted temperature rise of 0.5-1.0°F per decade.
  - Predicted sea-level rise up to 1.5m by 2100.
  - Salt-water inundation
  - Destruction of sandbars and plant communities leading to coastal erosion of increasing magnitude.

Research Goals
1. Identify the impacts of climate change on Lower Columbia cultural heritage.
2. Use a community-based approach to incorporate tribal knowledge into a risk assessment.
3. Prioritize Lower Columbia cultural locations for preservation in light of multiple values (tribal, scientific, impending climate impacts).

Methods
- Apply indigenous Archaeological principles w/ a Community Based Participatory Research (CBPR) methodology.
- Partner with tribes to identify places the community prioritizes for preservation due to threats and significance.
- Identify interdisciplinary partners to assist in modeling Lower Columbia climate change impacts on landscape.
- Layer existing DMAP, SHPO, ethnohistorical data with locations of tribal and scientific significance.

Next Steps
- Identify tribal and interdisciplinary partners.
- Identify research scope and scale.
- Complete IRB application.
- Hold collaborative meetings.
- Identify places of community significance.
- Overlay cultural heritage data (SHPO, DMAP, ethnohistorical).
- Non-invasive site survey.
- Prioritize resources for preservation.

Acknowledgements: Briece Edwards, for his advice as the cultural resources manager at the Grand Ronde Historic Preservation Office, and Dr. Jeremy Spoon, professor of applied anthropology at Portland State University and committee member.

For references and questions, email pdaily@pdx.edu or see handout