



Climate & Archeological Sites in Glacier National Park

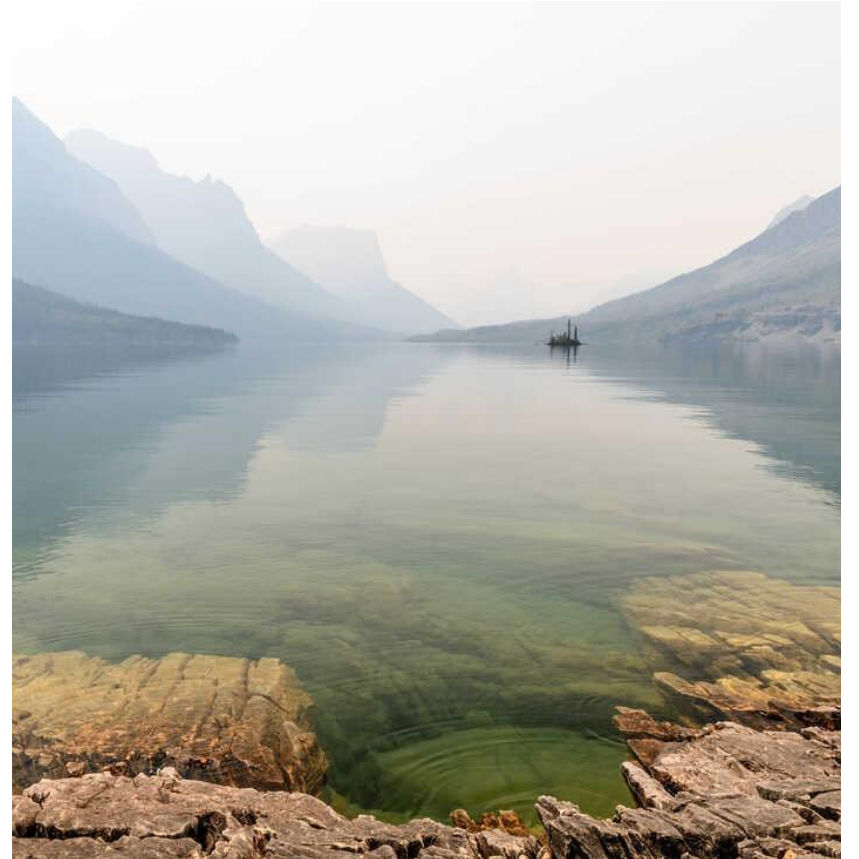
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Project Overview

- **Project Rationale:** PM 14-02 directs managers to prioritize actions to cultural resources most “at risk” and “significant”
- **Project Purpose:** develop guidance for NPS managers during climate adaptation planning of archeological resources, including American Indian sites on park lands, threatened by climate change.
- **Project Goal:** to enhance stewardship of resources vulnerable to climate change impacts (for example, storm-related flooding and erosion, sea level rise, fire).

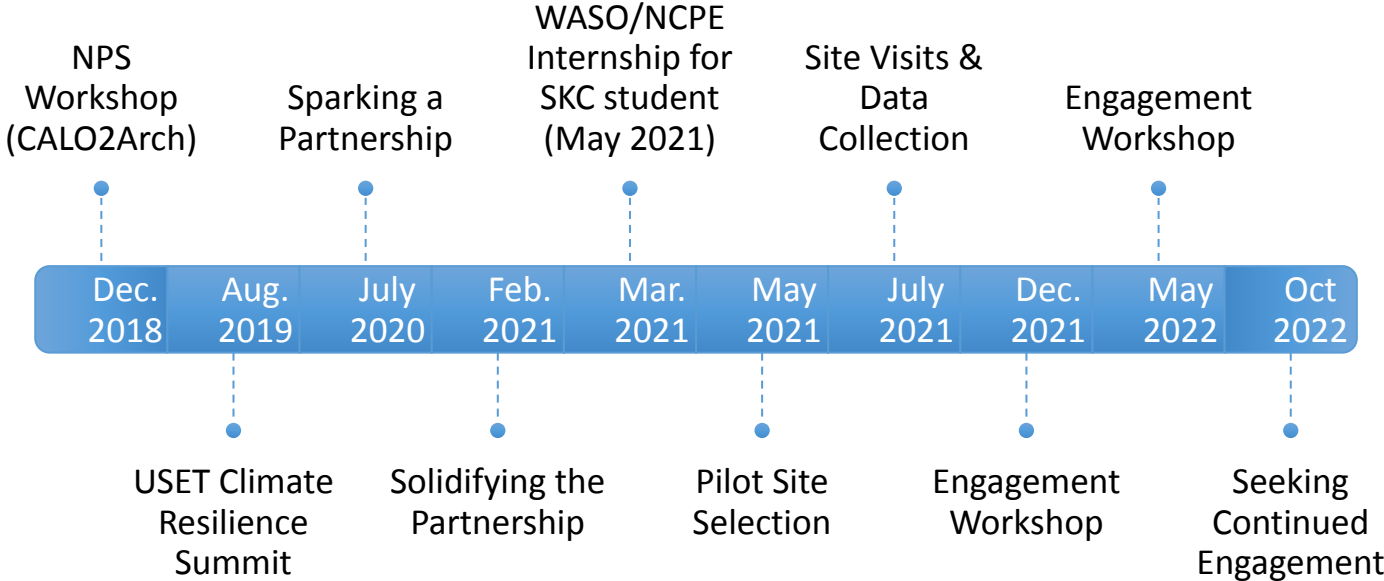


Project Position

- **Project Statement:** We recognize that the NPS approaches archeological resource management from a Western science point of view & that Traditional Knowledge needs to be woven into planning & decision-making of all areas & resources that are culturally important & traditionally used (past, present & future).
 - We acknowledge that significance should be determined by those individuals & communities who hold ancestral connections to heritage sites
 - We affirm that holders of Traditional Knowledge(s) must help guide the process of climate adaptation planning & response
 - We desire co-management as a future outcome
- Our **project is focused on the process** & not the sites themselves.
 - We hope to provide the NPS with a strategy for integrating Traditional Knowledge, values, preferences & priorities into a climate adaptation planning process



Our Collective Journey



Engagement Process Overview

- Consider 9 sites for conversation
- Describe “exposures”
- Consider material “sensitivity”
- Contemplate “strategies” for responding
- Listen to suggestions for integrating Traditional Knowledge(s)



Example

Sensitivity Scale

- Moderate (0.50 – 0.65)
- High (0.66 – 0.75)
- Very High (0.76 – 0.85)
- Extreme (0.85 – 1.00)

- Materials:
 - Lithics
 - Bone
 - Charcoal
- Stressors:
 - Freeze/Thaw
 - Precipitation (Flooding)
 - Ice Scouring
 - Erosion
 - Fire
- Sensitivity: Extreme
 - Stability
 - Existing Disturbances
 - Assemblage Susceptibility
 - Physiographic Context
 - Existing Protections
- Concerns
 - Re-covering Materials
 - Looting
- Adaptation Preferences
 - Nature-based Solutions

Landscapes

- Archeology has narrow site limits based on material presence
- Traditional knowledge keepers ask us to look at landscapes to help inform responses
- Treatment for site specific issues can be addressed by looking at a much larger field to prescribe nature-based solutions





Collective Journey

- The pilot works within communities familiar with Climate Change Adaptation Planning and shared understanding of terms
- (Re-)Establishing relationships are paramount
- Speaking about sensitive sites or locations can add unforeseen issues that need to be resolved prior to moving project goals forward
- Western planning/funding must overcome limits of 1-to-2-year studies when engaging traditional communities

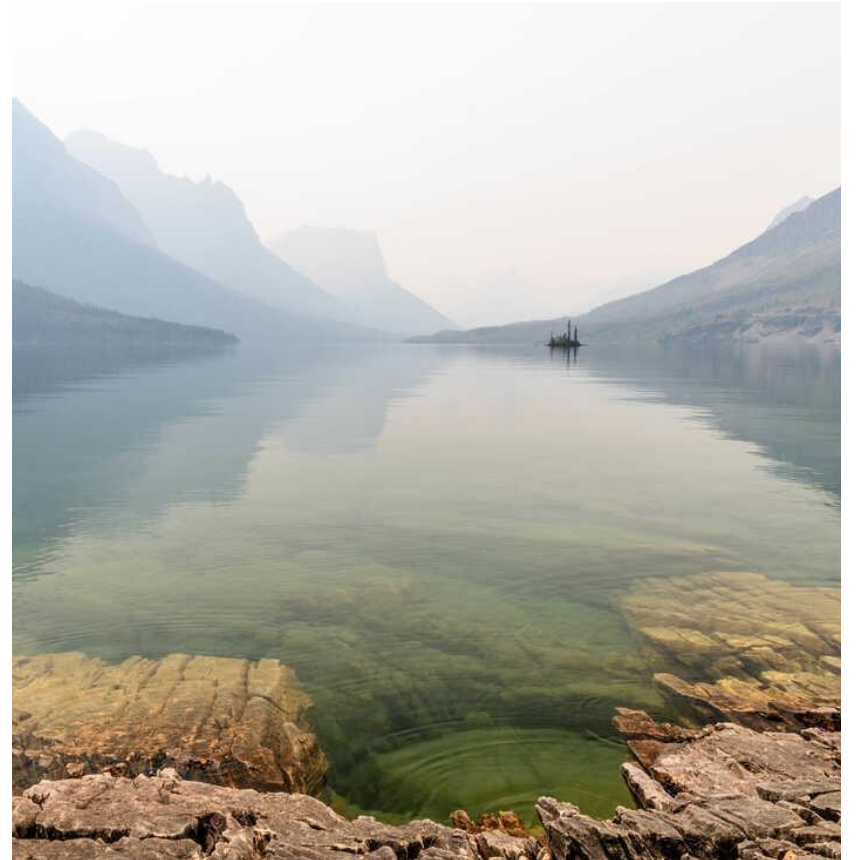
Condition Assessments

- NPS Cultural Resources has unfunded program to visit sites
- Group sites into similar geographic area and engage Traditional Knowledge Keepers with opportunities to visit sites
- Assessment criteria can be modified to include gathering information for climate exposure and sensitivity



Continuing Efforts

- Glacier National Park
 - Seek Funding to Support Continued Engagement
 - Plans for Site Visits
 - Expand Climate & Archeological Sites Conversations
- Confederated Salish and Kootenai Tribes
 - SKC Interns & Upcoming Course
 - CSKT Elder Interviews
 - Supporting Expansion outside of GLAC





Stephen Smallsalmon

- The stories I heard from my elders, my Dad, Pete Beaverhead.
- Too many people going up there now.
- We used to go up to the top and visit and have a picnic, pick huckleberries and medicines.
- It's not like it used to be.

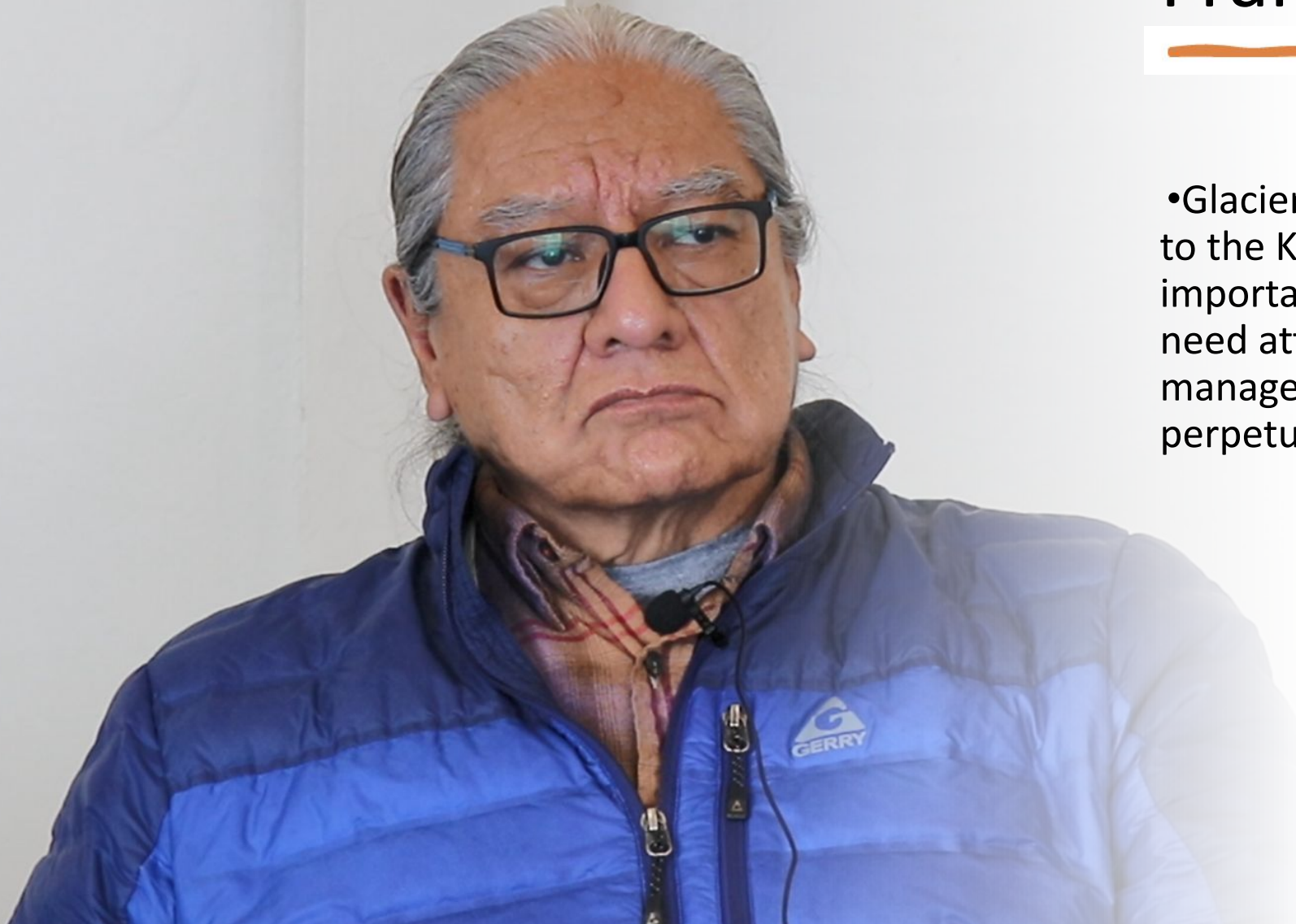


Johnny Arlee

- ...we are in a time right now where climate change is happening and affecting our different aspects of our environment, um, in the park the archeologists have mentioned that the , you know the rivers are changing, eroding and destroying archeological sites associated with the different tribes in the area...

Francis Auld

- Glacier National Park is important to the Kootenai People. It has important sites and places that need attention and careful management for future use and perpetuation of culture.





Hotchkiss, C., Seekamp, E., & McGill, A.
(2022). Strategies for meaningful engagement:
A commentary on collaboration in
archaeological climate adaptation planning.
In *Parks Stewardship Forum* (Vol. 38, No. 3).

Recommendations for Meaningful Engagement

- Hold regular meetings & fairly compensate effort
- Create opportunities for co-management
- Define terms and terminology together
- Share information
- Provide access
- Fund Indigenous site monitors
- Foster data sovereignty
- Develop site-specific planning
- Develop site-specific responses
- Honor non-western timeframes



Acknowledgments

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