

A wide-angle photograph of a mountain landscape. In the foreground, there is a rocky, gravelly slope with several patches of snow. A small stream flows through the middle ground. The background shows a range of mountains with some snow on their peaks and ridges. The sky is overcast with light clouds.

Climate Change and Archaeological Resources

Greg Burtchard



Climatic Shifts & the Archaeological Record

Two Issues of Concern:

- Direct Physical Effects to the Record
 - Damage to Archaeological Properties
 - Enhanced Opportunities for Discovery
- Archaeological Record's Capacity to Inform



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The Glacier Basin Archaeological District



Tarpelle Cabin after Crossing St Elmo Pass

Glacier Basin Mining ca. 1895



TarPebble Cabin – Blacksmith Shop ca. 1918



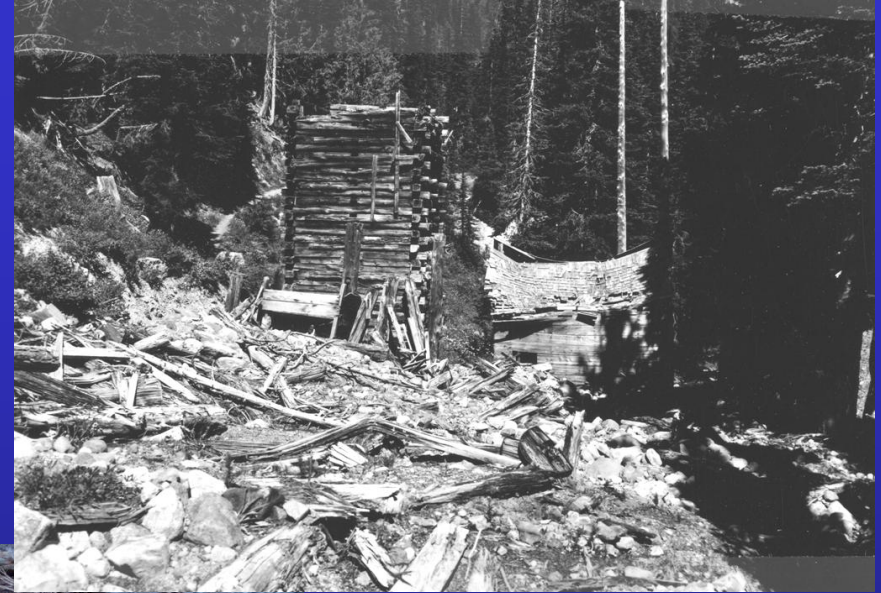
Storbo Hotel ca. 1918



Storbo Hotel – From Structure to Archaeological Site



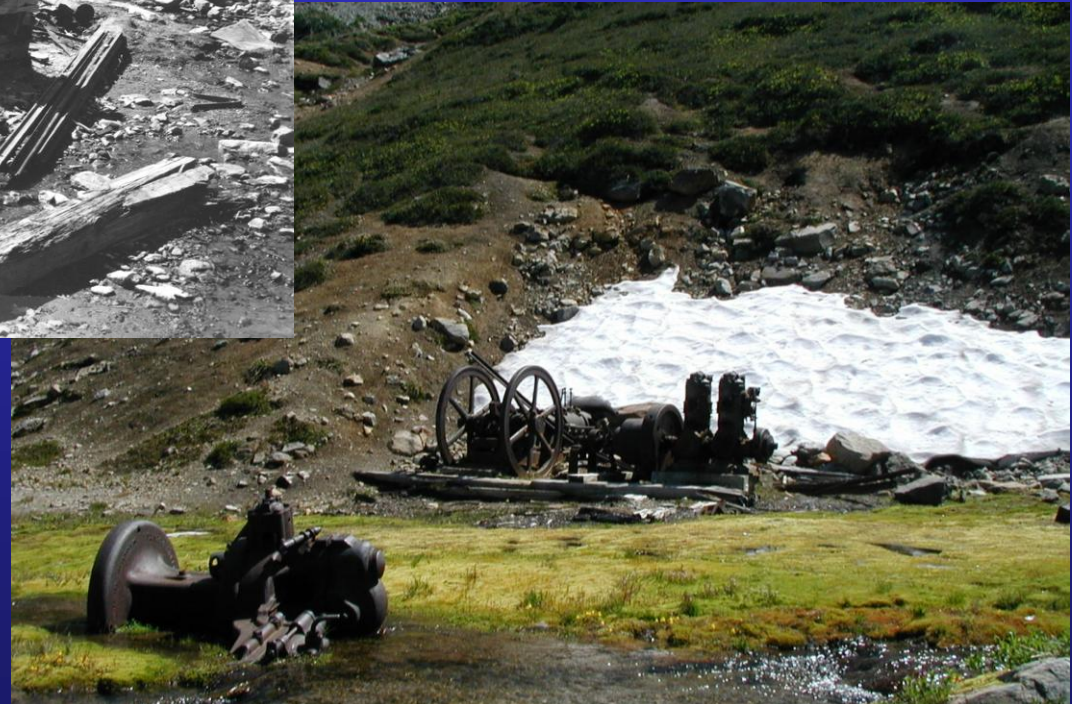
Glacier Basin Sawmill ca. 1918



Sawmill from Structure to (Destroyed) Archaeological Site



St. Elmo Mine Portal & Interior 2007



**Equipment at Reven Mine 1961 and Present
-Indirect Effects-**



Climatic Warming – Increased Erosion – Archaeological Loss



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Discoveries Associated with Glacial Melting



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- **Archaeological Record's Capacity to Inform**
(Archaeology as a science of long-term cultural and environmental process)



Buck Lake Project:

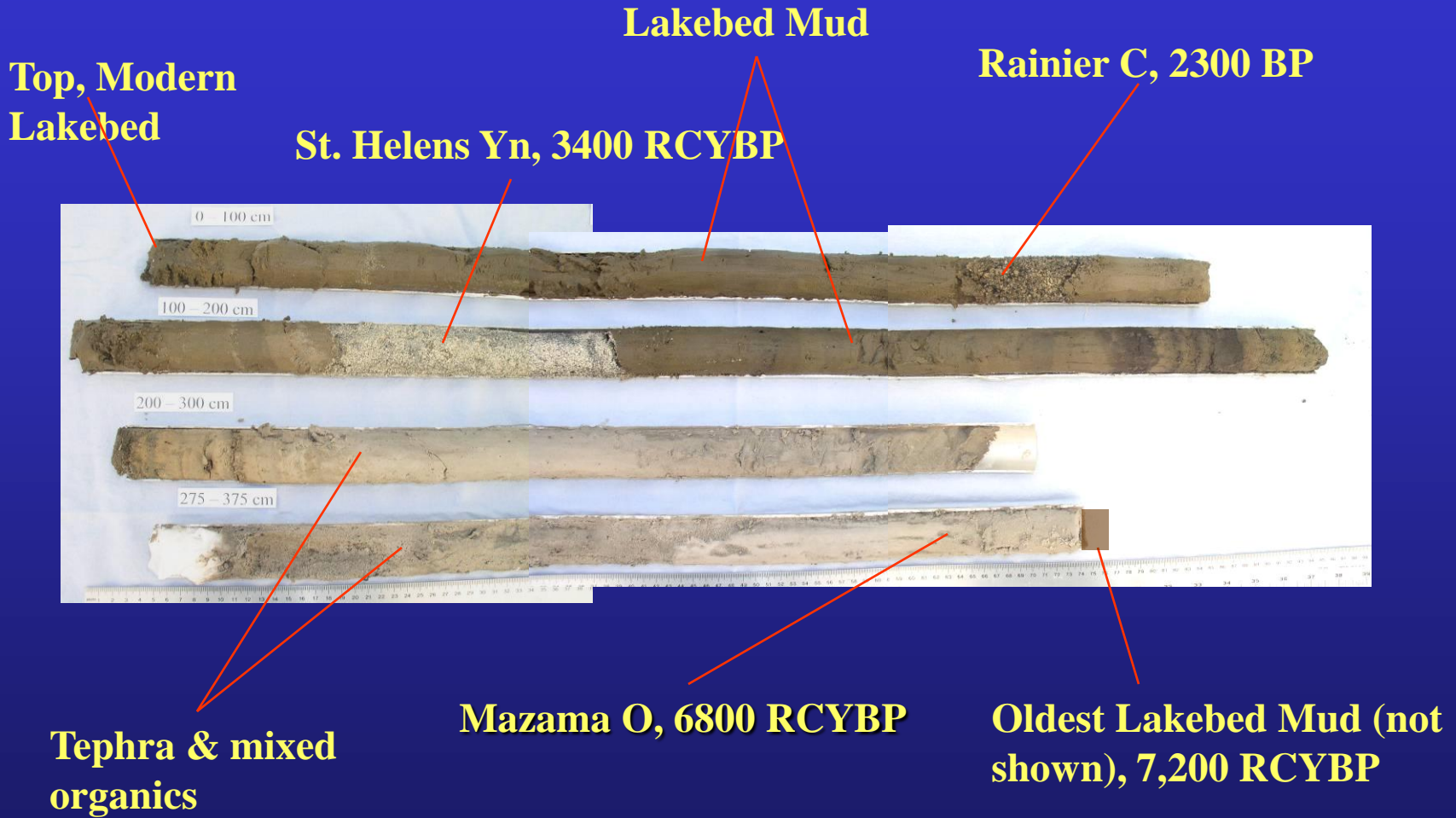
1. Archaeological testing
2. Lakebed sediment core extraction and analysis



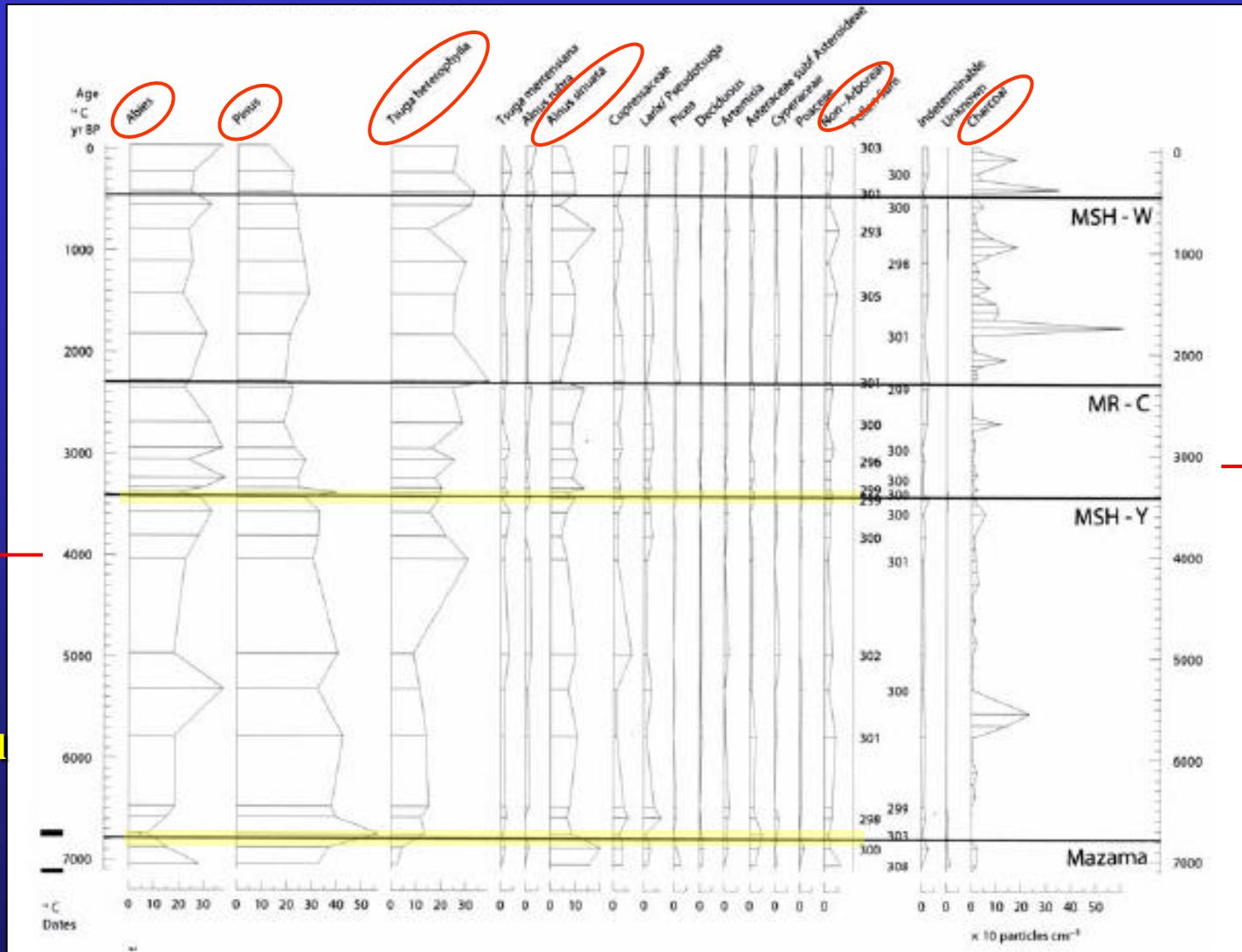
Pre-Mazama Artifact *in situ*



Buck Lake Sediment-Pollen Core Direct Environmental Sampling & Reconstruction



The 4.72 m Buck Lake Core



Fir
Dominated
(later seral
stages)

Pine
Dominated
(earlier seral
stages)

Elevated Fire
Frequency

Pollen Profile by Age



References for this Presentation

- Tweiten, M. A. 2007. The interaction of changing patterns of land use, sub-alpine forest composition and fire regime at Buck Lake, Mount Rainier National Park, USA. Unpublished report for the Columbia Cascades System Support Office of the National Park Service, Seattle, WA. International Archaeological Research Institute, Inc., Honolulu, Hawai'i.
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