



# Overview of BOEM-funded Historic Preservation Research on the Pacific OCS

BOEM Pacific Region  
July 8, 2020

Dave Ball | West Coast Renewable Energy Science Exchange Webinar



# Historic Preservation on the Pacific OCS

## Overview:

- BOEM Historic Preservation Program
- BOEM Environmental Studies Program
- Regional Baseline Studies
- Inventory and Analysis of Coastal and Submerged Archaeological Site Occurrence on the Pacific OCS
- Archaeological and Biological Assessment of Submerged Landforms
- Characterizing Tribal Cultural Landscapes
- Underwater Cultural Heritage Law Study

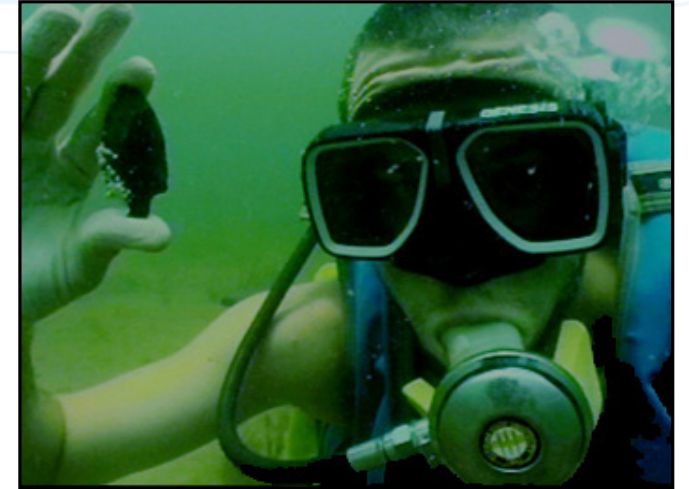




# Historic Preservation on the Pacific OCS

## BOEM's Historic Preservation Program:

- Ensures compliance with the Outer Continental Shelf Lands Act (OCSLA), National Historic Preservation Act (NHPA), and the National Environmental Policy Act (NEPA)
- Consults with Indian Tribes and Native Hawaiian Organizations, State Historic Preservation Offices (SHPO), Advisory Council on Historic Preservation (ACHP), applicants, representatives from local governments, and the public
- Conducts environmental research studies



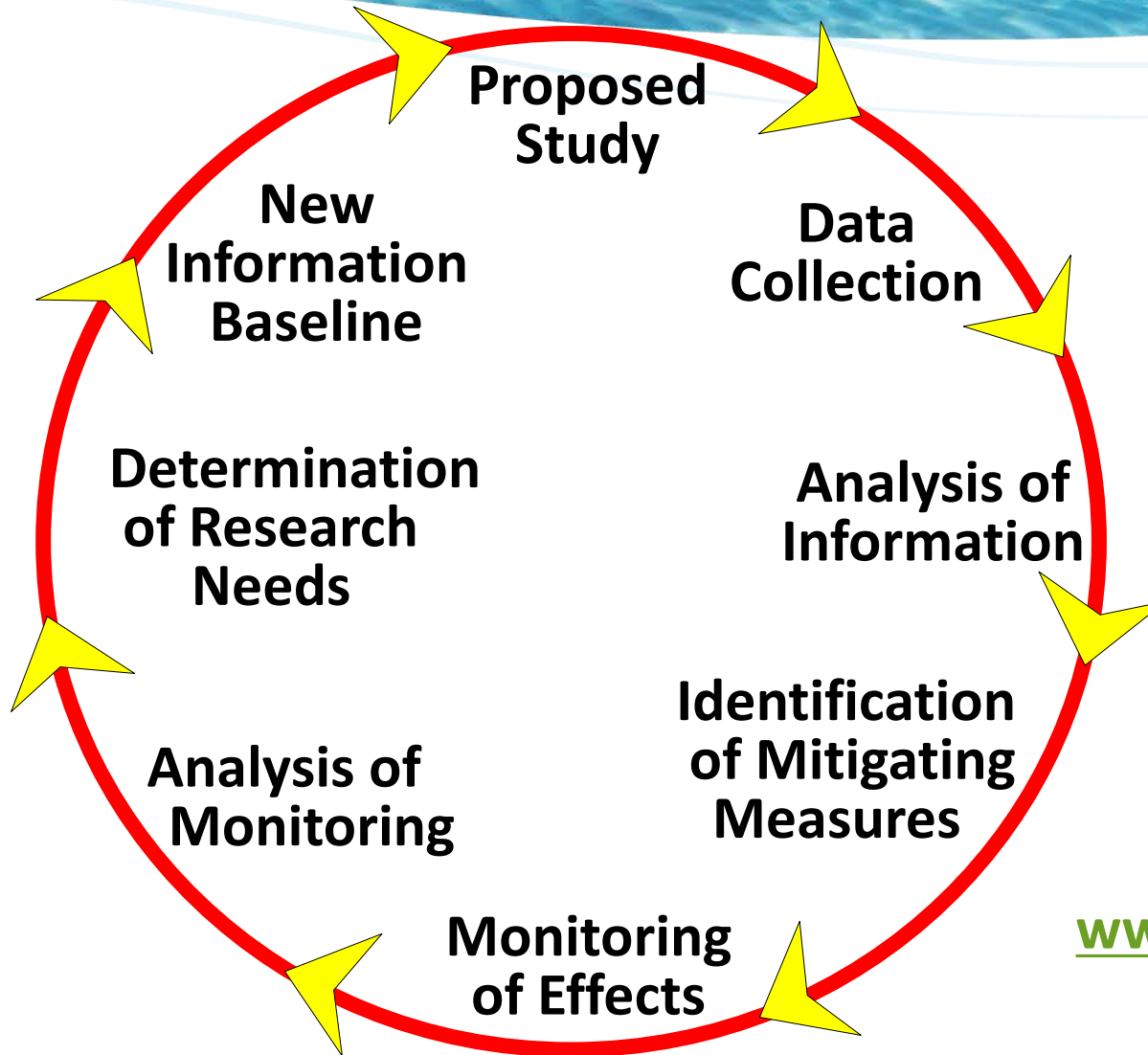
J & J Hunt Site, Paleo-Aucilla Project, Florida.



# Applied Science: BOEM Environmental Studies Program



Research produces improved mitigation measures and outreach opportunities



**Mission:** To **provide** the **information** needed to **predict, assess, and manage impacts** from offshore energy and marine mineral exploration, development, and production activities on human, marine, and coastal environments

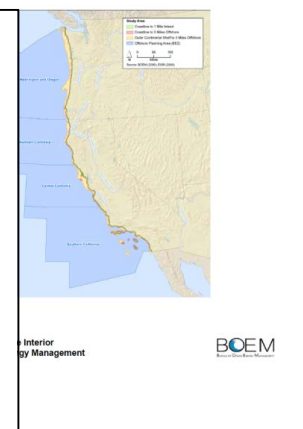
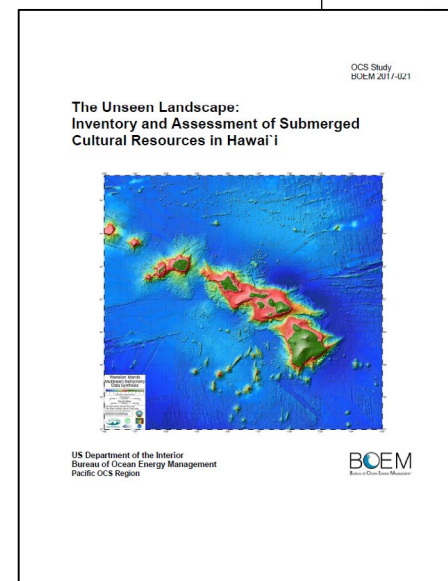
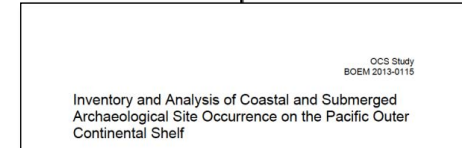
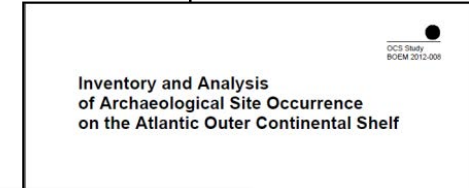
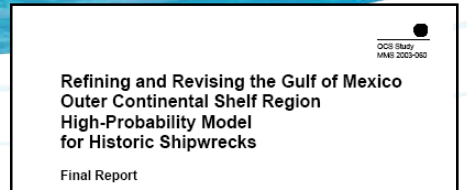
[www.boem.gov/Studies/](http://www.boem.gov/Studies/)



# Historic Preservation on the Pacific OCS

## Regional Baseline Archaeological Studies:

- Provide baseline information on known and potential historic properties within a region
- Update and standardize historic shipwreck information
- Assign locational reliability ratings to targets with reported loss locations
- Identify high-probability areas for intact submerged landform areas





# Historic Preservation on the Pacific OCS

## Inventory and Analysis of Coastal and Submerged Archaeological Site Occurrence on the Pacific OCS

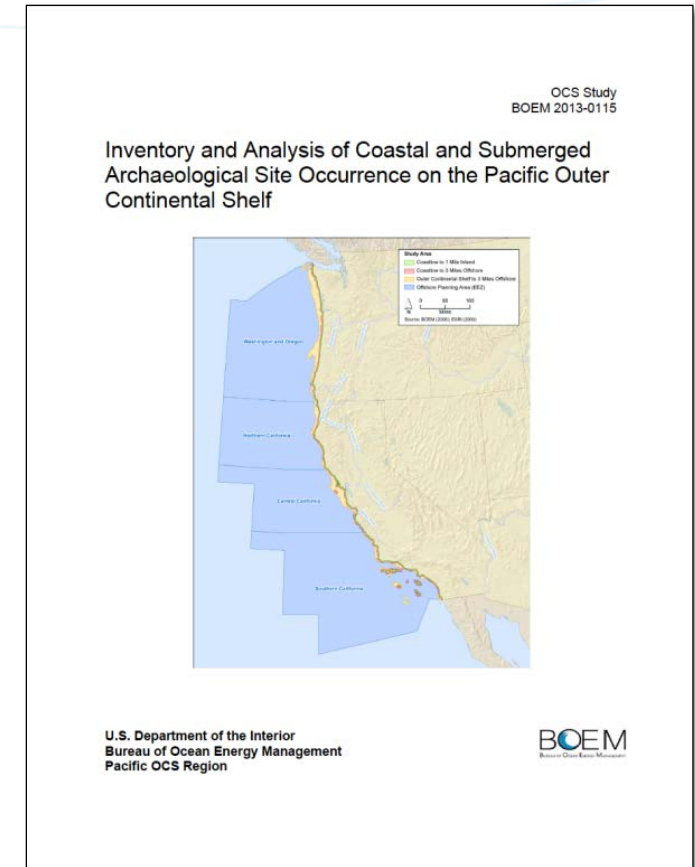
**Purpose:** To provide baseline information related to archaeological, cultural, and historic resources along the Pacific Outer Continental Shelf (OCS)

**Goals:**

- Update the Pacific Region information of known and reported shipwrecks
- Update the Pacific Region submerged landforms model
- Develop a database of coastal historic property types

**Geography:** California, Oregon, Washington

<https://espis.boem.gov/final%20reports/5357.pdf>



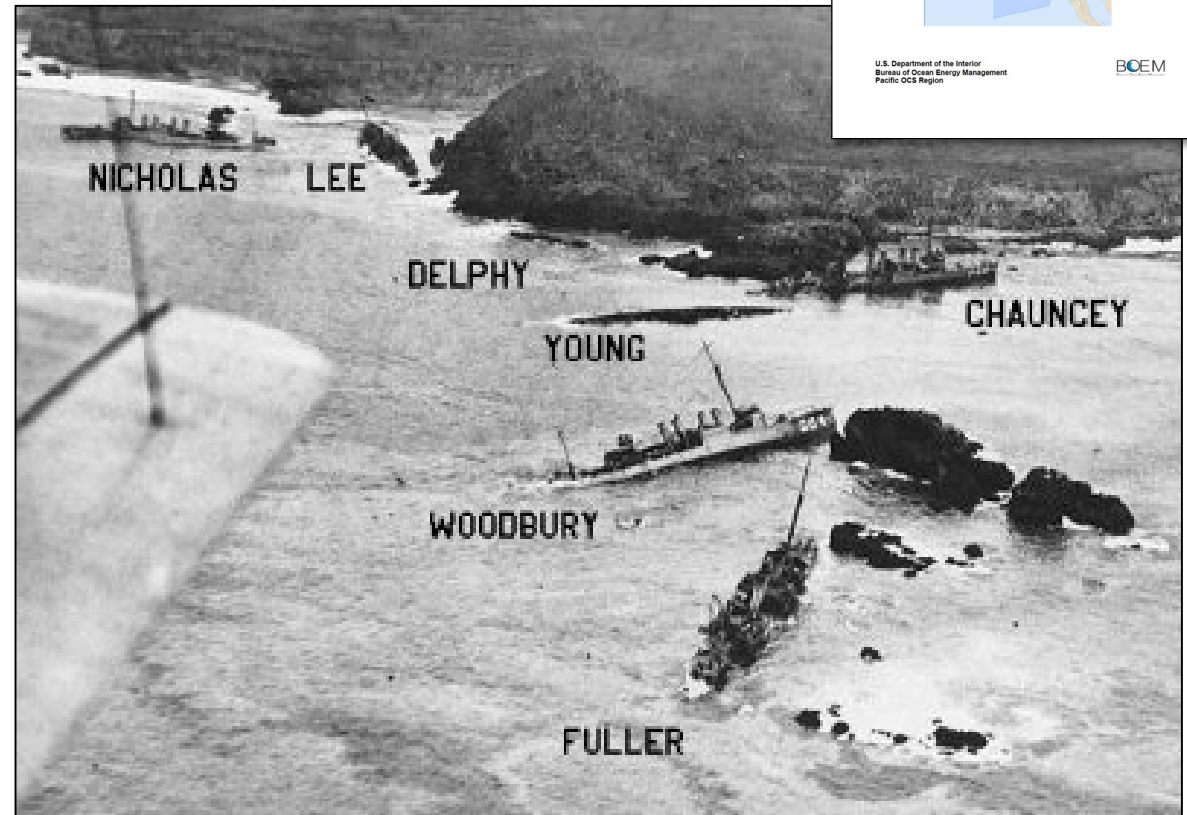
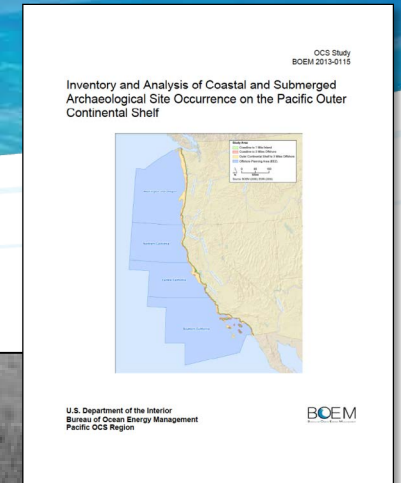
# Historic Preservation on the Pacific OCS

## Inventory and Analysis of Coastal and Submerged Archaeological Site Occurrence on the Pacific OCS

### Known and reported shipwrecks:

- Conducted primary and secondary research of known and reported vessel losses
- Geospatial information with location reliability rating of 1-4 for each target
- 5,813 total records, about 10% of records included spatial data

<https://epis.boem.gov/final%20reports/5357.pdf>



Navy vessels lost off Point Arguello, California, 1923.

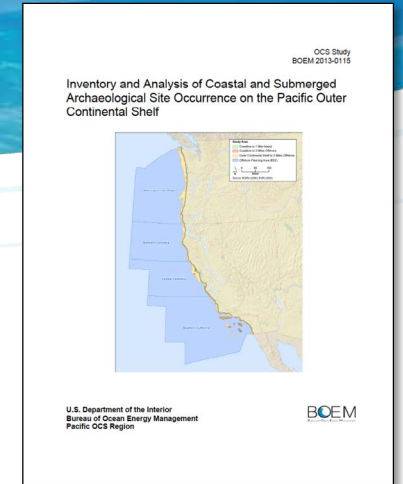
# Historic Preservation on the Pacific OCS

## Inventory and Analysis of Coastal and Submerged Archaeological Site Occurrence on the Pacific OCS

### Coastal Property Types:

- Includes summary of types of historic properties within one mile of the coastline
- Geo-spatial database with descriptive data for coastal properties to aid BOEM planning efforts related to potential visual impacts from offshore development

<https://epis.boem.gov/final%20reports/5357.pdf>



Cape Arago Lighthouse, Coos Bay, Oregon.



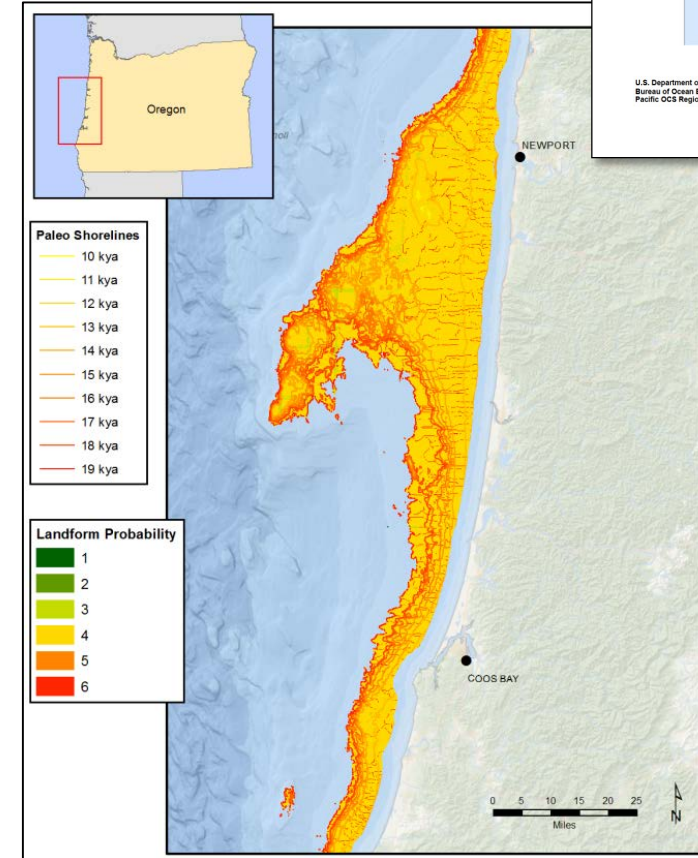
# Historic Preservation on the Pacific OCS

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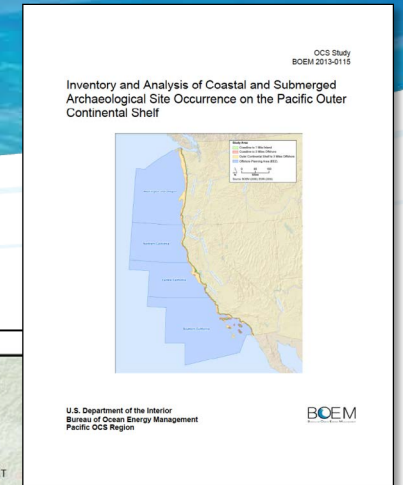
### Submerged Landforms Model:

- Included modeling of modern bathymetry, ancient stream systems, crustal deformation, eustatic sea level history, and relative sea level history
- Geo-spatial coastline model in 1,000-year increments
- Geo-spatial model of areas most likely to have survived sea level transgression

<https://epis.boem.gov/final%20reports/5357.pdf>



Submerged Landforms Model



# Historic Preservation on the Pacific OCS

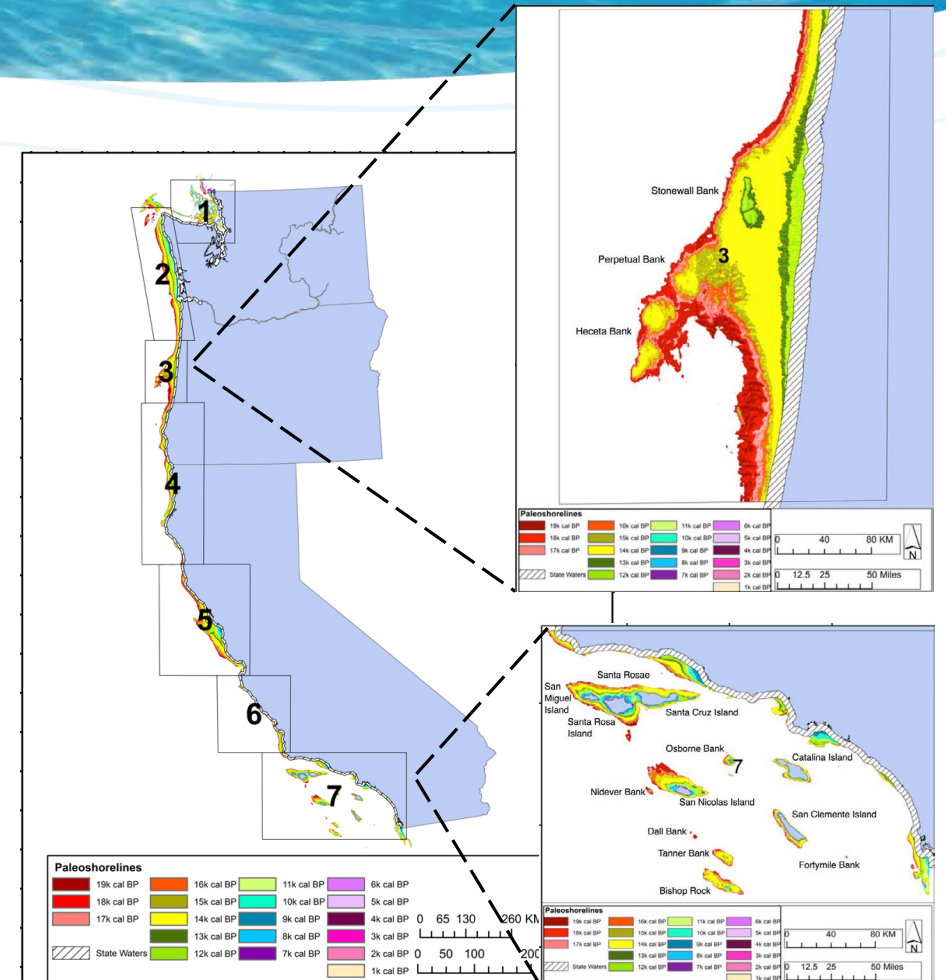
## Archaeological and Biological Assessment of Submerged Landforms

**Purpose:** Develop a process that will enhance the ability for BOEM to detect and avoid affecting potential submerged archaeological features and high productivity areas

### **Goals:**

- Conduct field investigations of areas with a high potential for association with intact submerged cultural landforms
- Field test a geospatial model to aid in identification and classification of potential submerged landforms
- Improve regional landscape models of submerged archaeological resources and assist BOEM in decision-making related to these resources and offshore activities
- Identify paleolandscape features that may indicate sensitive habitat areas

**Geography:** California, Oregon, Washington



<https://www.boem.gov/PC-14-04-Fact-Sheet/>



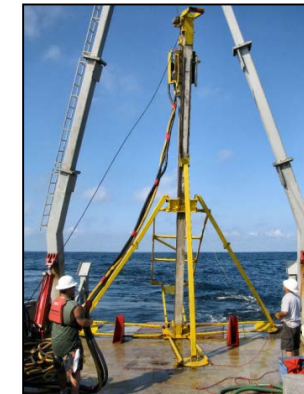
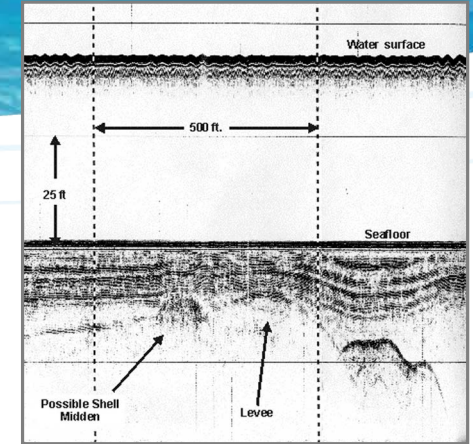
# Historic Preservation on the Pacific OCS

## Archaeological and Biological Assessment of Submerged Landforms

### Methods:

- Evaluate existing remote sensing data and review current theories on sea level rise during the Last Glacial Maximum (LGM) to identify high probability areas for further testing
- Conduct fine-scale survey and ground-truth at least four high probability targets from each survey area
- Analyze new data for possible indicators of pre-contact human activity and biological resources associated with paleolandforms
- Develop and refine a model that can be used to interpret remote sensing data and seafloor maps in other areas along the Pacific Coast

<https://www.boem.gov/PC-14-04-Fact-Sheet/>





# Historic Preservation on the Pacific OCS

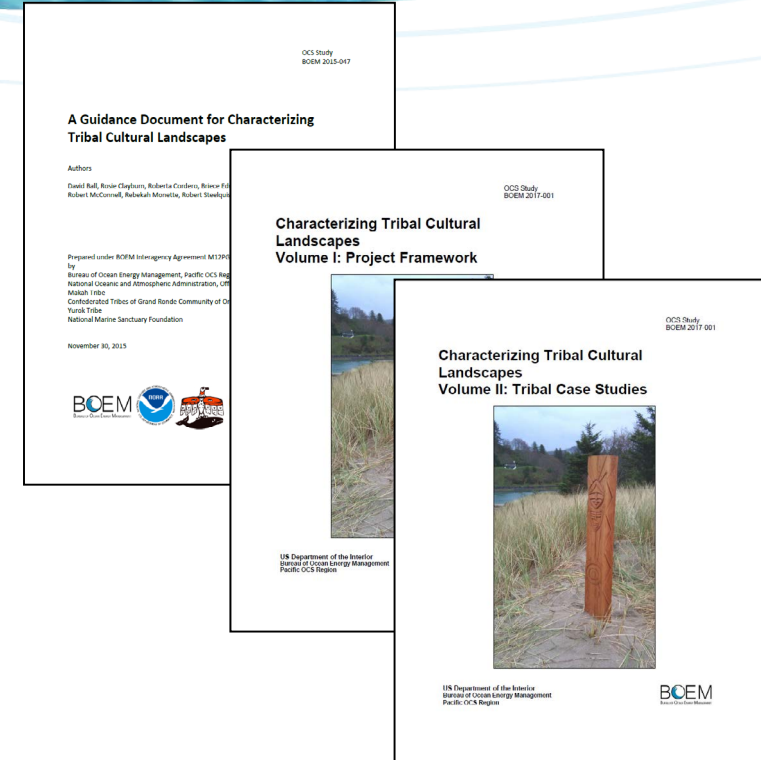
## Characterizing Tribal Cultural Landscapes (TCL)

**Purpose:** To better understand the types and locations of significant archaeological and cultural resources that require consideration during the planning process for offshore renewable energy development.

**Goal:** Develop a proactive approach to working with Native American tribes that integrates science with historical, archaeological, and traditional knowledge to identify areas of tribal significance that need to be considered in the federal planning process.

**Geography:** Coastal and offshore California, Oregon, and Washington.

**Partnership:** BOEM, NOAA, in partnership with the Confederated Tribes of Grand Ronde, Makah Tribe, Yurok Tribe, and tribal facilitators.



<http://www.boem.gov/2015-047/>

<http://www.boem.gov/BOEM-2017-001-Volume-1/>

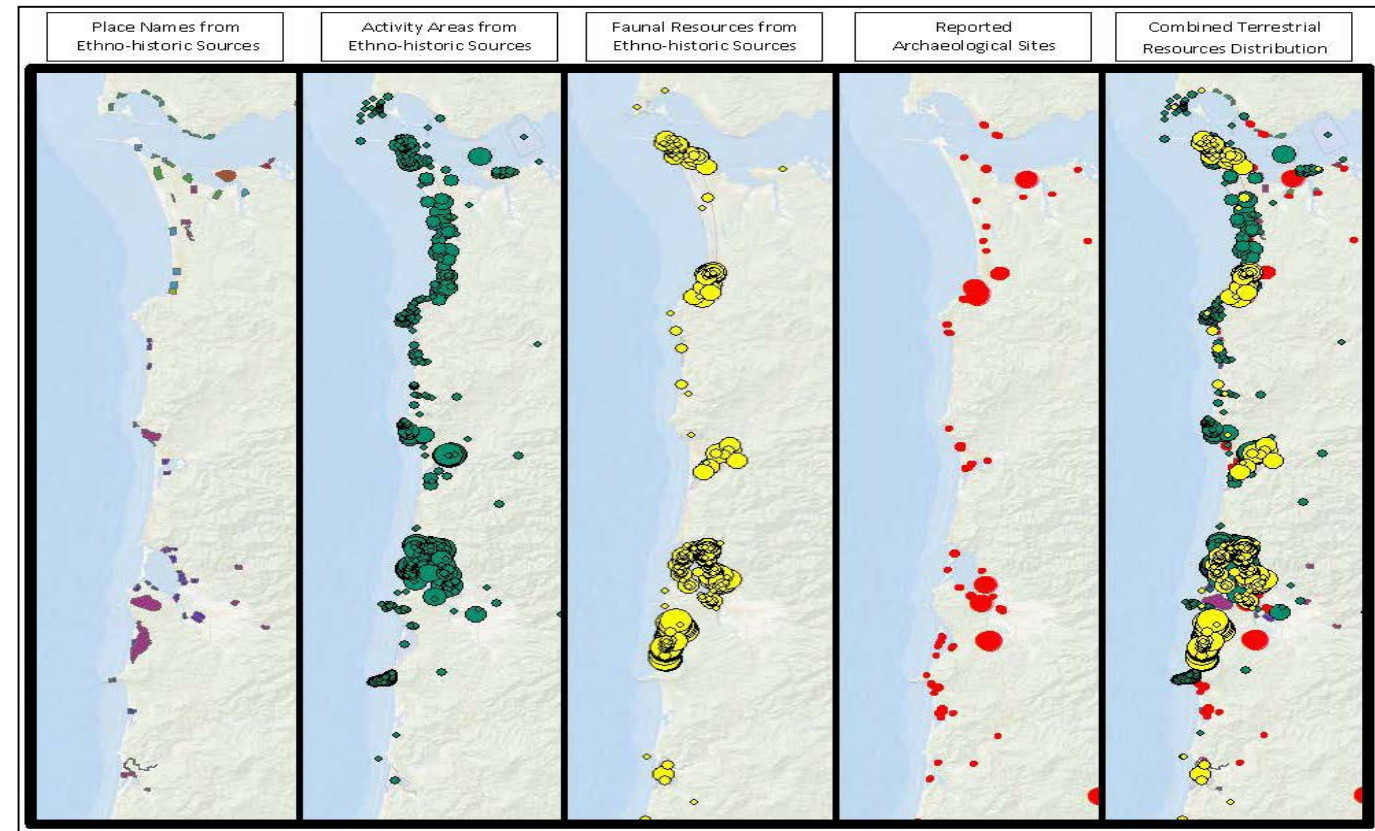
<http://www.boem.gov/BOEM-2017-001-Volume-2/>

# Historic Preservation on the Pacific OCS

## Characterizing Tribal Cultural Landscapes (TCL)

- Holistic approach that integrates science with archaeological, historical, and traditional knowledge.
- Transferable method for any coastal tribe to document significant places and cultural resources.
- Enhanced capability for consultation.

<http://www.boem.gov/2015-047/>



Example of spatial analysis incorporating ethno-historic and archaeological information.



# Historic Preservation on the Pacific OCS

## Characterizing Tribal Cultural Landscapes (TCL)

Tribal Cultural Landscape: Any place in which a relationship, past or present, exists between a spatial area, resource, and an associated group of indigenous people whose cultural practices, beliefs, or identity connects them to that place. A tribal cultural landscape is determined by and known to a culturally related group of indigenous people with relationships to that place.

<http://www.boem.gov/2015-047/>





# Historic Preservation on the Pacific OCS

## Characterizing Tribal Cultural Landscapes (TCL)

### Template for Tribal Data Collection and Retention:

Outlines a method for tribes to collect and retain information from which appropriate summary results can be provided to external parties.

<http://www.boem.gov/2015-047/>

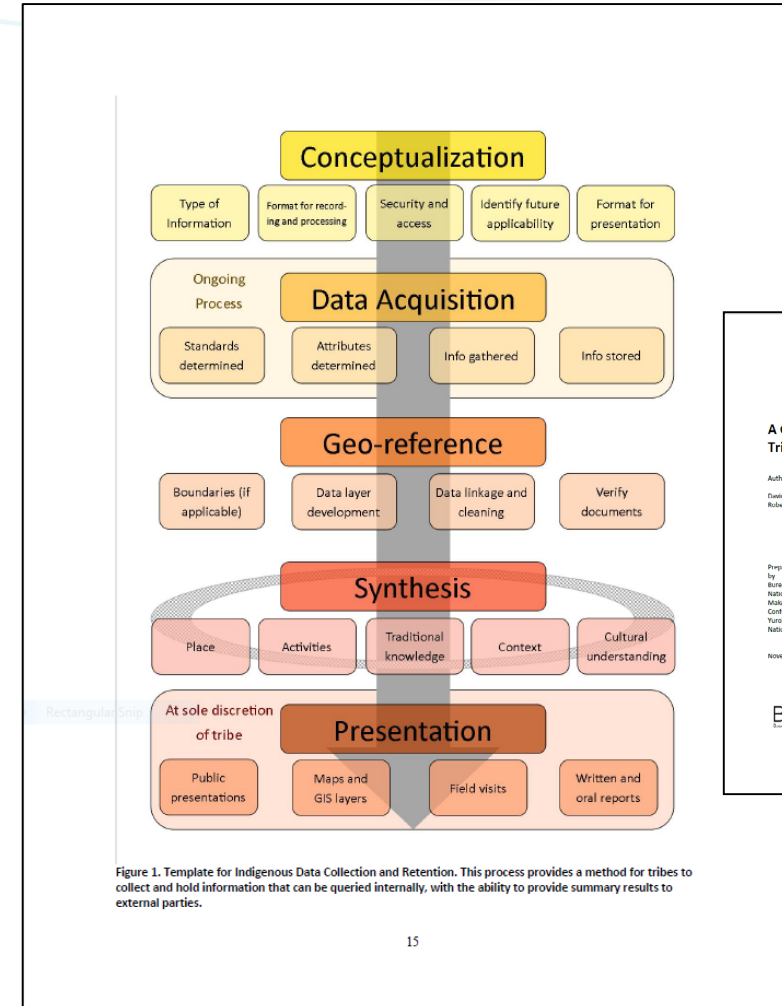
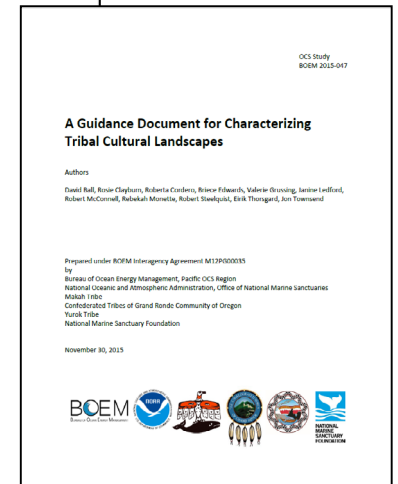


Figure 1. Template for Indigenous Data Collection and Retention. This process provides a method for tribes to collect and hold information that can be queried internally, with the ability to provide summary results to external parties.



# Historic Preservation on the Pacific OCS

## Characterizing Tribal Cultural Landscapes (TCL)

### Coordination with NEPA and NHPA:

This figure shows how the TCL approach can be implemented under existing federal policy.

<http://www.boem.gov/2015-047/>

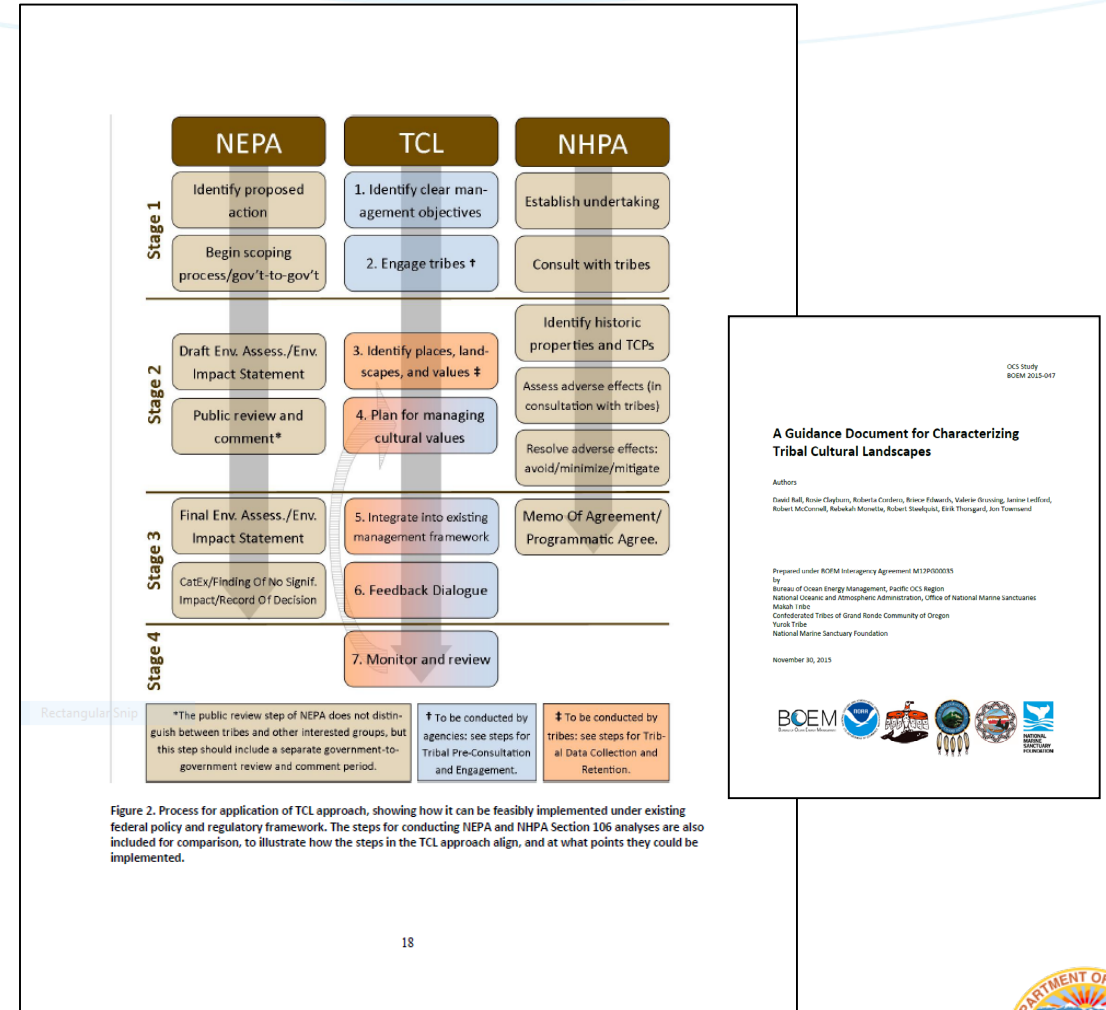


Figure 2. Process for application of TCL approach, showing how it can be feasibly implemented under existing federal policy and regulatory framework. The steps for conducting NEPA and NHPA Section 106 analyses are also included for comparison, to illustrate how the steps in the TCL approach align, and at what points they could be implemented.



# Historic Preservation on the Pacific OCS

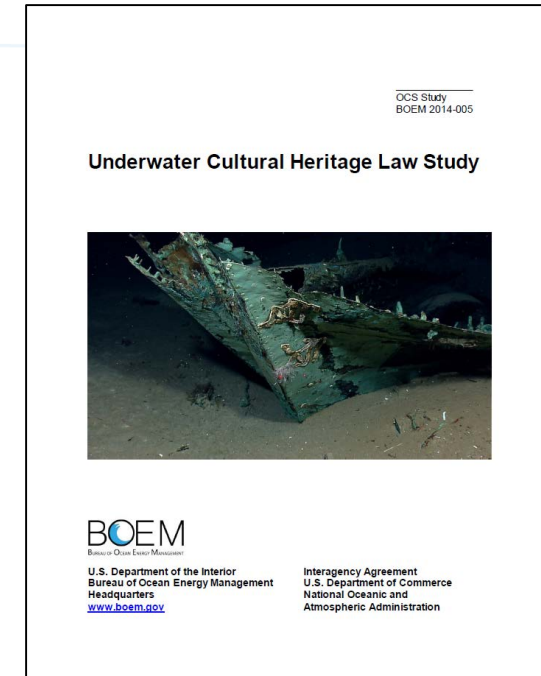
## Underwater Cultural Heritage (UCH) Law Study

**Purpose:** To provide an analysis of existing laws protecting underwater cultural heritage on the U.S. Outer Continental Shelf (OCS), identify gaps in protection, and recommend legislative changes to address any gaps.

**Goals:**

- Summarize the application of U.S. statutes that may directly or indirectly protect UCH
- Analyze gaps in the laws protecting UCH on the OCS
- Recommend ways to fill those gaps, such as proposing new legislation
- Develop a searchable database of environmental and historic preservation statutes, legislative histories, case law, and other document relating to the protection of UCH on the OCS.

**Geography:** U.S. Outer Continental Shelf



***Final Report:***

<https://epis.boem.gov/final%20reports/5341.pdf>

***Searchable Database:***

<https://coast.noaa.gov/oceanlawsearch/#/search>



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