



Assessing Kachemak Bay's Blue Carbon Resources and Increasing Community Awareness and Commitment to Preserving Wetland Ecosystem Services

Overview

The Kenai Lowlands cover 9,400 square kilometers, with much of the area comprised of wetlands and over half of the landscape characterized as peatlands. These wetlands sequester large stores of carbon, preventing the carbon from entering the atmosphere. In 2016, at the request of the Kachemak Bay Community Council, a group of municipalities, government agencies, and local non-profits, the Kachemak Bay National Estuarine Research Reserve partnered with the Smithsonian Environmental Research Center to conduct pilot tests of saltmarsh carbon sequestration. The results spurred interest in blue carbon valuation throughout the region.

This project will build on Kachemak Bay Reserve's expertise in wetland ecosystem function and ecosystem services to map carbon stores in Kenai Peninsula wetlands, and explore opportunities for engaging local stakeholders in valuing wetlands. The reserve will benefit from the expertise of Waquoit Bay Reserve's blue carbon stakeholder engagement process and from the Smithsonian Environmental Research Center's expertise in global blue carbon assessment.

Anticipated Benefits

- Community leaders will discover how local people value wetlands and how to connect those values to blue carbon stakeholder engagement strategies.
- Community leaders will receive wetland carbon stock maps to understand the extent of blue carbon within the Kenai Peninsula.
- Community leaders will receive training on how to continually assess carbon stocks throughout the Kenai region.

Project Location

Kachemak Bay, Alaska

Project Duration

October 1, 2017 to March 31, 2019

Project Lead

Coowe Walker
Kachemak Bay National Estuarine
Research Reserve
(907) 235-4792
cmwalker9@alaska.edu

Project Type

Science Transfer – promoting the use of science

Project Partners

- Kachemak Bay National Estuarine Research Reserve, Alaska
- Smithsonian Environmental Research Center
- Waquoit Bay National Estuarine Research Reserve, Massachusetts

Project Approach

The Kachemak Bay Reserve will hold initial meetings with the Waquoit Bay Reserve and the Smithsonian Environmental Research Center to learn from their experience and expertise in blue carbon markets and implementing stakeholder engagement strategies. These sessions will increase Kachemak Bay Reserve's knowledge of blue carbon markets and environmental values in communities, while also introducing partners to community stakeholders and environmental resources in Kachemak Bay. The Kachemak Bay Reserve team will then work with their local partners to understand how landowners value wetlands, and use that information to develop a plan and communications products for local stakeholder engagement. They will also work with the Smithsonian Environmental Research Center to develop an assessment strategy for identifying and monitoring blue carbon resources in wetlands throughout the Lower Kenai Peninsula in the form of wetland maps that quantify wetland carbon stocks.

Targeted End Users and Anticipated Products

- Reserve staff, environmental agency staff, local municipal leaders, and non-profit groups will produce a community engagement plan that identifies appropriate messaging and communication methods for various local stakeholder groups.
- Reserve staff, environmental agency staff, local municipal leaders, and non-profit groups will receive trainings and protocols for how to assess and monitor blue carbon stocks in the Kachemak Bay area.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at coast.noaa.gov/nerrs or graham.umich.edu/water/nerrs.