

EVOSTC Annual Project Report

1. Project Number: See, Reporting Policy at III (C) (1).

20200127

2. Project Title: See, Reporting Policy at III (C) (2).

Gulf Watch Ocean Acidification Sampling

3. Principal Investigator(s) Names: See, Reporting Policy at III (C) (3).

Jeff Hetrick, Director, Alutiiq Pride Shellfish Hatchery

Robert Campbell, Biological Oceanographer Coordinator Prince William Sound Science Center

Steve Baird, Research Coordinator Kachemak Bay National Estuarine Research Reserve

Wiley Evans, Hakai Institute, Regional Expert Ocean Technology Transfer Project IOOS and NOAA

4. Time Period Covered by the Report: See, Reporting Policy at III (C) (4).

February 01, 2020 to January 31, 2021

5. Date of Report: See, Reporting Policy at III (C) (5).

March 01, 2021

6. Project Website: See, Reporting Policy at III (C) (6).

The Alutiiq Pride Marine Institute (APMI) website: <http://www.alutiiqprideak.org>

7. Summary of Work Performed: See, Reporting Policy at III (C) (7).

a) Field Sampling Efforts

The Alutiiq Pride Marine Institute (APMI) received a total of 400 samples for this project during the FY20 funding period, 88 from the Prince William Sound Science Center (PWSSC) and 312 from the Kachemak Bay Estuarine Research Reserve (KBNERR). Most sampling cruises were conducted according to schedule (Table 1). Due to the COVID-19 pandemic, a small number of the sampling trips outlined in this project were been postponed. KBNERR completed its first quarterly sampling cruise from T6_4, T4_4 (same as KBO3), and T9_6 which amounts to 18 samples. This represents a loss of either two or three sampling transects from the six that were scheduled for FY20. PWSSC completed four of the five sampling trips scheduled for FY20, and missed one sampling trip.

b) Sample Processing

APMI experienced laboratory staffing limitations due to social distancing

requirements, which resulted in limited sample processing capability. Sample processing delays due to COVID-19 also included the limited availability of CO₂ standards from UC San Diego, which caused all BQL Laboratories to convert to an “in house” standard developed out of necessity by the Hakai Institute. This change in protocol has led to further delays in sample processing. Processing for FY20 samples is currently underway.

c) Data Analysis and Dissemination

As sample processing is currently underway, no final analyses have been conducted. Once analysis is complete, dissemination of these data will occur on the APMI website: <http://www.alutiiqprideak.org>.

Table 1. Project milestones and task progress by fiscal year and quarter, beginning February 1, 2020. C = completed, X = planned or not completed. Fiscal year quarters: 1 = Feb. 1 – April 30; 2 = May 1 – July 31; 3 = Aug. 1 – Oct. 31; 4 = Nov. 1 – Jan. 31.

	FY20				FY21				FY22				FY23			
Milestones	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone 1: List																
Collect Samples	C	C	C	C	X	X	X	X	X	X	X	X	X			
Milestone 2: List																
Process Samples		X	X	X	X	X	X	X	X	X	X	X	X			
Milestone 3: List																
Annual Reports						X				X				X		
FY 21 Work Plan			C					X								
Final Report														X		

8. Coordination and Collaboration: See, Reporting Policy at III (C) (8).

a) Within EVOSTC Funded Projects

This project is a collaboration with a currently funded EVOSTC Gulf Watch project (20120114) under the Long-Term Monitoring Program (LTM). APMI has a long-standing relationship with PWSSC and KBNERR through collection and processing of seawater carbonate chemistry samples. This project is utilizing existing Gulf Watch scheduled cruises and sampling sites to collect water samples for seawater carbonate chemistry analysis, and only requires collaborating partners to collect and preserve additional water samples for analysis at APMI.

b) Outside of EVOSTC Funded Projects

APMI has been conducting seawater carbonate chemistry monitoring and research since 2013. In addition to the current project partnerships, APMI has been an active partner with Alaska Ocean Observing System (AOOS) and its Alaska Ocean Acidification Network (AOAN), Northwest Association of Networked Ocean Observing

Systems (NANOOS), the University of Alaska, the University of Oregon, the Kasitsna Bay Laboratory, the U.S. National Park Service, and the Hakai Institute. APMI is a Tribally owned non-profit entity, and is concurrently conducting a seawater carbonate chemistry sampling program with its consortium of coastal village Tribes in the Chugach region, including Chenega, Valdez, Eyak, Port Graham, and Nanwalek. Recently, APMI has engaged in partnerships with communities outside our focus region, including King Cove, Nome, Kotzebue, Seldovia, Utqiagvik, and have recently added Diomede. These projects are in addition to the onsite continuous monitoring of seawater carbonate chemistry at APMI in Seward. Data obtained in this project will complement the suite of ocean monitoring efforts led by APMI to provide a comprehensive picture of baseline seawater carbonate chemistry conditions along the coastal margin of the spill-affected region.

9. Information and Data Transfer: See, Reporting Policy at III (C) (9).

a) Publications
None for this project to date

b) Conference presentations
Ramsay, J. 2021. Measuring the carbonate system in the coastal waters of Southcentral Alaska. Alaska Marine Science Symposium

c) Data and informative products developed
None for this project to date

d) Data uploaded/disseminated
None for this project to date

10. Response to EVOSTC Review, Recommendations and Comments: See, Reporting Policy at III (C) (10).

APMI will be taking advantage of the next funding invitation to provide a more complete and clear description of future study plans, including spatial and temporal strategy to maximize monitoring efforts, as well as improved explanation of peer-reviewed analytical methodology used at the APMI ocean chemistry laboratory.

Data dissemination: APMI is an active partner with AOOS and AOAN. Continuous data recorded at APMI are disseminated through both our website and these platforms. Discrete data collected for this project, as well as our Tribal sampling programs, will be disseminated through the new APMI website: <http://www.alutiiqprideak.org>.

11. Budget: See, Reporting Policy at III (C) (11).

No adjustments to the budget have been made.

Table 2. Proposed budget for FY20-22 and cumulative spending for this project to date.

Budget Category:	Proposed	Proposed	Proposed	TOTAL	ACTUAL
	FY 20	FY 21	FY 22	PROPOSED	CUMULATIVE
Personnel	15,075.00	15,075.00	15,075.00	45,225.00	7,612.37
Travel	-	-	-	-	-
Contractual	11,925.00	11,925.00	11,925.00	35,775.00	-
Commodities	250.00	250.00	250.00	750.00	31.60
Equipment	-	-	-	-	-
Indirect Costs (<i>will vary by proposer</i>)	4,239.00	4,239.00	4,239.00	12,717.00	1,190.17
SUBTOTAL	31,489.00	31,489.00	31,489.00	94,467.00	8,834.14
General Administration (9% of subtotal)	2,834.01	2,834.01	2,834.01	8,502.03	795.07
PROJECT TOTAL	34,323.01	34,323.01	34,323.01	102,969.03	9,629.21