

# Washington Sea Grant Progress Report

May 4, 2018

**Project Title:** Growing Sustainable Shellfish: Understanding the Ecological Role of Shellfish Aquaculture Using Emerging Technology

**Reporting Period:** February 1, 2017 - January 31, 2018

**Project Number:** R/SFA/N-6

**Project Start Date:** September 1, 2017

**Project End Date:** March 31, 2019

## PROJECT OVERVIEW

Shellfish aquaculture is a growing global business, and it will be an important contribution to food security as populations grow. Understanding the value of shellfish farms as ecosystems alongside preserving the economic benefits they provide will ensure healthy communities and environments.

With an eye towards streamlining data collection from the marine environment, Washington Sea Grant (WSG), The Nature Conservancy (TNC), National Oceanic and Atmospheric Administration (NOAA), and shellfish growers throughout the region have embarked on collaborative research. Together we aim to understand the ecological function of shellfish-growing areas relative to other habitats. This work builds on GoPro research led by NOAA and others in the region in the last few years. Simple video technology allows us to take ourselves out of the picture, collecting data in a way that snorkeling, netting and other ways of seeing and being underwater do not. So with the footage we ask, what can we see? How do we quantify what we see? And how valuable are the findings?

## PROGRESS

Our core project team, listed below, formally launched the project at the end of October 2017, when funds were distributed. Between the start date and January 31, 2018, we made the following progress towards our three objectives:

**Objective 1:** Characterize differences in nearshore fish and invertebrate communities associated with shellfish aquaculture habitat relative to natural eelgrass or mudflat habitat;

### *Activities:*

- Dr. Ferriss led review and analysis of video collected in summer 2017, in preparation for a spate of talks that will be reported on in the next progress report.
- The team held general discussions of lessons learned from summer 2017, for refinement of 2018 data collection and processing.
- The team began conducting outreach to shellfish growers (listed below) for to plan research in 2018.

**Objective 2:** Empower the shellfish industry to become citizen scientists to improve understanding of the habitat value of shellfish aquaculture; and

### *Activities:*

- The core project team's primary activity in the reporting period was preparation for a collaborative research workshop held at the WSG 24th Shellfish Growers Conference (March 2018; Alderbrook, Union, WA). During the reporting period, we began to plan workshop content

and logistics. We also began to review findings from a plenary session on collaborative research hosted by core team members Drs. Ferriss and Sanderson at the same conference in March 2017.

- TNC team members also worked with TNC colleagues in Massachusetts to help them craft a proposal for similar collaborative research project using GoPro cameras with shellfish growers.

**Objective 3:** Using a team approach, bring to light the data collected by NOAA and shellfish growers to begin to address barriers to sustainable aquaculture growth around public perception and the permitting process.

*Activities:*

- To learn more about the major barriers to sustainable aquaculture growth, core team members:
  - Began a literature review of public perceptions of aquaculture; and
  - Held a call with staff from NOAA, Washington State Department of Ecology and Pacific Shellfish Institute to discuss major data hurdles and promising approaches for improving permitting for shellfish aquaculture in the State.
- We began our efforts to develop a steady stream of outreach products, by creating the project communications team (listed below) and working with them to ;
  - Create a creative brief for development of strategic marketing content (e.g., infographics, blog content, media outreach);
  - Secure verbal commitment from videographer<sup>1</sup> and began to develop a creative brief and workplan for video; and
  - Add project content to TNC's global aquaculture page:  
<https://global.nature.org/content/the-aquaculture-opportunity>

In addition to work towards these objectives, the team spent time on project management. We held 3 team meetings, finalized a detailed workplan, established a contract to hire project research staff (B. Ferriss), and created a shared Google Drive workspace.

## **PARTICIPANTS**

Core Project Team:

1. Bridget Ferriss (Washington Sea Grant-WSG/NOAA– Research Associate)
2. Beth Sanderson (NOAA – Ecosystem Program Manager)
3. Molly Bogeberg (The Nature Conservancy-TNC; Project Coordinator)
4. Jodie Toft (TNC – Senior Scientist)
5. Tiffany Waters (TNC – Global Aquaculture Specialist)
6. Robert Jones (TNC – Global Aquaculture Director)
7. Jackson Blalock (WSG/TNC – Hershman Marine Policy Fellow)
8. Kate Litle (WSG – Interim Director)

Communications Team:

1. MaryAnn Wagner (WSG)
2. Deborah Kidd (TNC)

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<sup>1</sup> Samples of videographer's work: <https://www.youtube.com/watch?v=vn90YJQyUW4>,  
<https://www.youtube.com/watch?v=CUWePUvBGBE>

3. Ruth Howell (NOAA)

Shellfish Growers:

1. Rivera's Shellfish
2. Chelsea Farms
3. Jamestown S'Klallam Tribe
4. Hama Hama Oyster Company
5. Taylor Shellfish
6. Drayton Harbor Oyster Company

**RESULTS**

None at this time as we are working towards milestones and completion dates later in the grant.

**CHALLENGES ENCOUNTERED**

The subaward to The Nature Conservancy was finalized mid-December, which delayed the project start. We have made up for the delay and the project is on track.

**CHANGES TO PROJECT DIRECTION**

None.