



1st Quarter: February 1, 2021 - April 30, 2021

Greetings!

The Gulf Watch Alaska (GWA) program and Principal Investigators (PIs) continued with their research and monitoring during this first quarter of FY21. February 1 marked the beginning of the final year of the Trustee Council's FY17-21 five-year funding cycle. FY21 marks the tenth year of monitoring under the GWA program. All hands were on deck this quarter as the program focused on completing annual reports and submitting a proposal package to the Trustee's Invitation for Long-Term Research and Monitoring focus area. This Invitation potentially paves the way for an additional ten years (FY22-31) of research and monitoring, an unprecedented opportunity to better understand long-term impacts of the *Exxon Valdez* oil spill on injured resources and ecosystem health in a changing environment.

Here is a brief summary of Gulf Watch Alaska's first quarter activities and accomplishments:

### **Science Update:**

- The GWA humpback whale project completed its April survey in PWS. Whale numbers continue to remain low, likely in the single digits for Prince William Sound. Our observations were confirmed by the ADF&G and PWSSC herring surveys, which reported "not many whales". For comparison, our April surveys in 2014 and 2015 encountered 133 and 94 whales, respectively. Herring were actively spawning during the survey and other marine predators were present in what appeared to be typical numbers, although common murrelets were in short supply. We made up for the lack of humpbacks by helping out the killer whale project and Steller sea lion research efforts. See photos below.
- The Continuous Plankton Recorder survey got recognized for its sampling efforts by being awarded a [Guinness World Record for the greatest distance sampled by a marine survey](#). Of course the Tacoma to Anchorage route supported by the EVOSTC plays a big part in adding to those miles.
- The Environmental Drivers GAK1-Seward Line-NGA LTER survey is currently underway! (April 23-May 6).

### **Program Management Team (PMT):**

- The PMT rallied PIs and successfully submitted FY20 annual reports to the EVOSTC March 1, 2021. GWA accomplishments in FY20 included: 27 peer-reviewed publications, 26 reports, 66 oral and poster presentations at conferences and workshops, 16 popular articles and one podcast, and 19 outreach media/events with the public. GWA provided 21 time series indicators to NOAA's annual Alaska Ecosystem Status Report and several Ecosystem and Socioeconomic Profiles to support ecosystem-based fisheries management in the GOA.
- The PMT and PIs successfully orchestrated and submitted a GWA Long-Term Research and Monitoring proposal package to the EVOSTC on March 29, 2021 for FY22-31. The package includes 25 project proposals representing 43 principal investigators from multiple agencies and organizations.

### **Relevant Media:**

- [NOAA Fisheries releases new video looking at environmental conditions in the Gulf of Alaska in 2020](#). NOAA press release, April 30, 2021.

- [Marine and Coastal Resources Continue to Feel the Effects of the Marine Heatwave](#). NPS webstory, April 5, 2021. By Heather Coletti.
- [GOA is slow to return to pre-heat-wave status](#). Cordova Times, March 25, 2021
- [Pacific heatwave had lasting impacts on Gulf of Alaska marine species](#). Alaska Public Media, April 12, 2021.
- [Most Recent Data Shows Gulf of Alaska Marine Ecosystem Slow to Return to Pre-Heatwave State](#). NOAA Fisheries webstory, March 18, 2021.
- [Refuge Notebook: The fall of sea stars](#). Homer News, March 10, 2021. By Heather Coletti.
- [The importance of University of Alaska-based monitoring of our oceans](#). Anchorage Daily News Op-Ed, 12 Dec. 2020. by Seth Danielson.

#### **Recent Publications:**

- McGowan**, David W., T. A. **Branch**, S. **Haught**, and M. D. Scheuerell. Multi-decadal shifts in the distribution and timing of Pacific herring (*Clupea pallasii*) spawning in Prince William Sound, Alaska. Canadian Journal of Fisheries and Aquatic Sciences. <https://doi.org/10.1139/cjfas-2021-0047>.
- Pinchuk, A.I., S.D. **Batten**, and W.W. Strasburger. 2021. Doliolid (Tunicata, Thaliacea) blooms in the southeastern Gulf of Alaska as a result of the recent heat wave of 2014-2016. Frontiers in Marine Science – Marine Ecosystem Ecology. <https://doi.org/10.3389/fmars.2021.625486>.
- Suryan**, R.M., M.L. **Arimitsu**, H.A. **Coletti**, R.R. **Hopcroft**, M.R. **Lindeberg**, S.J. Barbeaux, S.D. **Batten**, W.J. Burt, M.A. **Bishop**, J.L. **Bodkin**, R.E. Brenner, R.W. **Campbell**, D.A. **Cushing**, S.L. **Danielson**, M.W. Dorn, B. Drummond, D. **Esler**, T. Gelatt, D.H. Hanselman, S.A. **Hatch**, S. **Haught**, K. **Holderied**, K. **Iken**, D.B. Iron, A.B. Kettle, D.G. Kimmel, B. **Konar**, K.J. **Kuletz**, B.J. Laurel, J.M. Maniscalco, C. **Matkin**, C.A.E. **McKinstry**, D.H. **Monson**, J.R. **Moran**, D. **Olsen**, W.A. Palsson, W.S. **Pegau**, J.F. **Piatt**, L.A. Rogers, N.A. Rojek, A. **Schaefer**, I.B. Spies, J.M. **Straley**, S.L. Strom, K.L. Sweeney, M. Szymkowiak, B.P. **Weitzman**, E.M. Yasumiishi, and S.G. Zador. 2021. Ecosystem response persists after a prolonged marine heatwave. Scientific Reports 11:6235 <https://doi.org/10.1038/s41598-021-83818-5>.

#### **Important Upcoming Dates:**

- **March 29, 2021** - Invitation for proposals due to the EVOSTC (done!)
- **June 1, 2021** - EVOSTC Revisions/comments sent back to proposers
- **August 13, 2021** - Final proposals are due to the EVOSTC; FY22 Work Plans

*see next page for GWA Quarterly Photo*

## ***Gulf Watch Alaska Quarterly Photos:***



*Mother and calf killer whale. The GWA killer whale team had been recording a lot of killer whale calls on their hydrophone in Hinchinbrook Entrance during April. We confirmed that there were a lot of killer whales in the area; both resident and transient pods were photographed.*

*Photo by John Moran, MMPA permit #18529-01. April 2021.*



*Steller sea lions hauled out on Porpoise Rocks. ADF&G and the NMFS Marine Mammal Lab use photos to locate branded individuals, entanglements, and injuries (note the pop-eyed sea lion in the upper left).*

*Photo by John Moran MMPA Permit # 18537-04. April 2021.*