

# EMILY MARKOWITZ

I believe there is a need and new opportunity across all science fields to make workflows more efficient, improve data management, and make our results accessible and digestible to general audiences.

## EDUCATION

2015  
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2018

- **Accelerated Master's of Science in Marine Science**

Dr. Janet Nye, Quantitative Fisheries Ecology Laboratory  
 Stony Brook University, NY

- Thesis: "Distribution Shifts Associated with Changing Environmental Parameters in Two Demersal Species: Summer Flounder (*Paralichthys dentatus*) & Black Sea Bass (*Centropristes striata*) on the NE US shelf."
- Developed environmental preference and habitat suitability models from the NOAA NEFSC survey dataset and Regional Oceanographic Modeling System (ROMS) output in MATLAB and R.

2011  
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2015

- **Bachelor of Science in Marine Science, Cum Laude**

Minors in Geospatial Information Sciences, Coastal Environmental Studies, and Theater Arts  
 Stony Brook University, NY

- Crew member aboard the university research vessel, the *R/V Seawolf*
- Dr. Joseph Warren, Acoustic Laboratory for Ecological Studies
- Dr. Bradley Peterson, Marine Community Ecology Laboratory, School of Marine and Atmospheric Sciences, Stony Brook, NY
- Dr. Steve Wing, University of Otago, Portobello Marine Laboratory, New Zealand
- Dr. Nathan Brennan, Mote Marine Laboratory Marine Aquaculture Park, Sarasota, FL
- Dr. Janet Nye, Quantitative Fisheries Ecology Laboratory, School of Marine and Atmospheric Sciences, Stony Brook, NY



## CONTACT

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- 👤 [EmilyMarkowitz-NOAA](https://www.linkedin.com/in/emilyhmarkowitz/)
- 🔗 <https://github.com/emilyhmarkowitz/>
- linkedin [emilyhmarkowitz](https://www.linkedin.com/in/emilyhmarkowitz/)
- instagram [@emilymarkowitz](https://www.instagram.com/emilymarkowitz/)
- 👤 <https://www.fisheries.noaa.gov/contact/emily-markowitz>
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## LANGUAGE SKILLS



Last updated on April 07, 2024.

## WORK EXPERIENCE

2020  
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Present

- **Research Fisheries Biologist**

NOAA Fisheries' Alaska Fisheries Science Center, Resource Assessment and Conservation Engineering Division, Groundfish Assessment Program

 Seattle, WA

- Assist in planning of and participate aboard the Eastern Bering Sea Shelf Bottom Trawl Survey, Eastern Bering Sea Slope, and Arctic Bottom Trawl Surveys.
- Assist in data collection and pre- and post-cruise data management for surveys and field research activities.
- Advance species distribution modeling research using model-based estimates of abundance and biomass using VAST, Generalized Additive Mixed Models (GAMMs), and other techniques.
- Aid in the development of R products that advance GAP surveys, modeling activities, and automation of reports and data products.
- Assist with the production of educational and informational outreach materials for engaging Alaska native communities about the Bering Sea surveys.

Links: [Post](#), [More info](#)

2019  
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2020

- **Environmental Policy Analyst**

NOAA Fisheries' Office of Science and Technology, Division of Economics and Social Analysis, Contractor through ECS Federal

 Silver Spring, MD

- Manage the production and publishing of the annual Fisheries Economics of the US Report (FEUS).
- Redefine a commercial, recreation, and aquaculture national I/O model impact calculator model as an RShiny application to assist fisheries scientists and managers assess the impacts of changing fisheries.
- Develop the national fisheries economic productivity Tornqvist index output and organizing two fisheries economic productivity workshops for NOAA scientists.

Links: [Fisheries Economics of the US Report](#), [GitHub Repository](#)

2018  
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2019

- **2018 Knauss Marine Policy Fellow**

NOAA Fisheries' Office of Science and Technology, Assessment and Monitoring Division, Protected Species Science Branch, Fellow through New York Sea Grant

📍 Silver Spring, MD

- Lead Coordinator, Protected Species Assessment Workshop II (PSAW II/#PSAW2019). 150+ person event, La Jolla, CA February 2019.
- Lead Coordinator, National Protected Species Toolbox Initiative (NPST). Managing 7 individual projects from fisheries science centers around the country.
- Co-Lead Coordinator, 2018 Protected Species Toolbox Mini-Symposium II. Program Manager, Sea Turtle Assessment Internal Funding Allocation.
- Lead Coordinator, Sea Turtle Research Standard Methods. Technical Support, Sea Turtle & Marine Mammal Protected Species Climate Vulnerability Assessment.
- Prepared sensitivity attributes guidelines, webinar presentations, and population literature reviews.
- Editor, Science Connect Newsletter (via Constant Contact and GovDelivery)
- RShiny App Developer, NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing. App provides a calculator function and report for permit applications. Prepared working group/program terms of references, webpages, internal proposals, and final reports.

Links: [PSAW II Planning Website](#), [Science Connect Newsletter](#)

## ❖ RESEARCH

2022

- **{sdmgamindex}: R package for calculating survey indices by age with generalized additive models**

In [development](#): R package for calculating survey indices by age from DATRAS exchange data using Generalized Additive Models.

2021  
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on

- **Model-Based Abundance and Distribution Estimates using VAST**

Help provide mostly-VAST [model-based-estimates](#) of abundance, distribution, or age composition from AFSC Groundfish Assessment Program (GAP) bottom trawl survey data to stock assessment authors.

2021

- **AFSC RACE GAP Survey App**

This [GitHub Repository](#) uses a google spreadsheet listing content to build a consistent, reproducible, and reliable local resource [website](#) for our boats while boats are out to sea.

2021

- **Alaska Fisheries Science Center Survey Data Reports**

Reproductively automate groundfish data reports for all surveys conducted by the AFSC in R Markdown. View the [GitHub Repository](#) for this code.

2021

- **Northern Bering Sea Groundfish and Crab Trawl Survey Community Highlights**

Reproducibly automate outreach reports for the Bering strait communities with results from the northern Bering sea survey conducted by the AFSC in R Markdown. View the [GitHub Repository](#) for this code.

2021

- **Fisheries Economics of the US Report**

Manage the redevelopment and production of the [Fisheries Economics of the US report](#). This is a national-level report that provides ten years of economic information, impacts, and analyses related to U.S. commercial and recreational fishing activities and fishing-related industries. I am working to contemporize this iconic report by writing reproducible code using R and RMarkdown, which produces several report outputs and JavaScript files for the interactive FEUS online tool. All of this work has gone into improving this nationally regarded report for the many who reference it and making the process of producing it more streamlined, reproducible, and efficient.

2021

- **AFSC RACE Groundfish and Shellfish Survey Public Data**

This dataset includes zero-filled (presence and absence) observations and catch-per-unit-effort (CPUE) estimates for all identified species at for index stations by the Resource Assessment and Conservation Engineering Division (RACE) Groundfish Assessment Program (GAP) of the Alaska Fisheries Science Center (AFSC). There are no legal restrictions on access to the data. The data from this dataset are shared on the [Fisheries One Stop Stop \(FOSS\) platform](#). These scripts can be found on [GitHub](#). For more information about codes used in the tables, please refer to the [survey code books](#).

2021

- **GAP Survey Temperature Maps**

These scripts ([GitHub Repository](#)) create the daily temperature and anomaly plots as NOAA Fisheries' Alaska Fisheries Science Center conducts fisheries independent surveys in Alaska. The scripts pull temperature content from google drive and then push the maps to google drive and our internal communications FTP server for the communications team to post on our [website](#).

2020

- **{FishEconProdOutput}: Measuring Output for U.S. Commercial Fisheries From Theory to Practice**

This [package](#) provides guidelines on fishery productivity measurement at the individual fishery and aggregate sector levels. Attention is given to the constructions of output and total factor productivity based on available data and a bottom-up approach. Given that there is no nation-wide standard cost survey, we recommend starting with measuring TFP at the fishery level based on a translog gross output production possibility frontier using index number techniques. Special attention is given to measuring quality-adjusted physical capital inputs in the bottom-up approach.

- 2020
- **(GAPsurvey): At-sea data management tools for RACE GAP surveys**  
Tools for working with at-sea survey data for AFSC's Groundfish Assessment Programs surveys.
- 2019
- **NOAA Fisheries Commerical, Recreational, and Aquaculture Fisheries Economic Impact R Shiny Model**  
I/O models are used to assess economic activity such as jobs, income, and sales generated by a given industry sector. This is currently used in industry statistics (such as in FEUS) and management applications (to determine how a change would affect the economy, such as in planning team meetings). The [R Package GitHub Repository](#) feeds the [R Shiny App](#).
- 2018
- **Modeling Environmentally Driven Distribution Shifts for Two Demersal, Migratory Species**  
Habitat suitability models (HSMs) of summer flounder (*Paralichthys dentatus*) and black sea bass (*Centropristes striata*) were created using the fishery-independent Northeast Fisheries Science Center (NEFSC) bottom trawl survey data in generalized additive models and cumulative distribution functions. These analyses were used to probabilistically link where different length classes of these fish would likely be across different environmental variables in spring and fall. These different environmental variables (surface and bottom temperature and salinity, depth, and bottom type) have similar influences on life history of these two demersal, migratory, and commercially important species. Then, the HSMs were used to illustrate how the population's distribution changed over time by hindcasting over regional ocean modeling systems (ROMS). The ROMS used in this analysis was a 1 Day Averaged ROMS for the Northeast US Coastline from 1958-2020. Learn more on our [lab website](#).
- 2018
- **NOAA Fisheries Marine Mammal Acoustic Thresholds**  
NMFS has provided this [guidence](#) and [R Shiny Web Calculator](#) as an optional tool to provide estimated effect distances (i.e., isopleths) where PTS onset thresholds may be exceeded. Results provided by this calculator do not represent the entirety of the comprehensive effects analysis, but rather serve as one tool to help evaluate the effects of a proposed action on marine mammal hearing and make findings required by NOAA's various statutes. Input values are the responsibility of the individual user. Code for this tool is available in this ([GitHub Repository](#)).

## TEACHING EXPERIENCE

- 2024
- **Guest lecturer**  
EH Markowitz  
📍 University of Washington Bothell
    - Introduced students to open science data products produced for AFSC bottom trawl surveys

We can take it upon ourselves to build an inclusive community for teams to collaborate with and learn from. Internally-driven investment in professional development extends the impact of a team member and takes the weight off the organization's experts as new users are able to

- 2023
- **Automated Scientific Reporting in R: Basics to Production**  
Markowitz, EH
    - 2023 UMass Dartmouth QuantFish Seminar WorkshopLinks: [Recording](#), [GitHub Repo](#)
- 2022
- **Co-teacher and co-organizer for conference short GitHub course**  
2022 Women in Statistics and Data Science Conference   
    - Git-tig It Together: Learn to Use Git and GitHub for Your Projects
    - Co-taught and co-organized with Eli Holmes
    - [Short course description](#)
    - [GitHub Repository](#)
- 2021
- **Co-teacher and Co-organizer**  
NOAA Fisheries Alaska Fisheries Science Center   
    - Co-host and organize a 5-week entry-level R-Users workshop for 15 coworkers in the AFSC RACE groundfish assessment program.
    - Developed a curriculum, lesson plans, and assignments.
    - [Lesson Website](#)
- 2020
- **Co-teacher and Co-organizer**  
NOAA Fisheries Office of Science and Technology Division of Economics and Social Analysis   
    - Co-hosted a Workshop for Social Scientists for over 60 participants from across the country and across centers
    - [Lesson Website](#)
- 2015
- **ArcGIS Teaching Assistant**  
Sustainability Studies Program, Stony Brook University   
    - Introduction to ArcGIS, taught by Professor Maria Brown.
    - Worked with students to develop multi-map projects aimed at answering questions in hydrology, weather, climate change, and marine science for unique final projects in ArcGIS.
    - Provided comments and assessments of presentations, quizzes, and homework assignments.
    - Held office hours and provided computer assistance.

## OPEN SCIENCE

2023  
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Present

- **National Openscapes Mentor Group for NOAA Fisheries**  
NOAA Fisheries Alaska Fisheries Science Center  Seattle, WA
  - Working to support a national-level, 3-year cohort with mentors across NOAA Fisheries and Openscapes.
  - [Openscapes Website](#)
  - [AFSC-Openscapes Landing Page](#)
  - [nmfs-opensci GitHub Organization](#)
  - [Blog](#)
- **Co-organizer and co-host for the Fall 2022 AFSC Openscapes Workshop**  
NOAA Fisheries Alaska Fisheries Science Center  Seattle, WA
  - Openscapes training for the center was funded for a second round with Megsie Siple and Josh London.
  - [AFSC News Article: Making Inroads to Open Science](#)
  - [AFSC Website Cohort Digest](#)
  - [Openscapes: AFSC Blog Digest Post](#)
  - [Openscapes Nation-Wide Cohort Blog Post](#)
- **Co-organizer and co-host for the Winter 2022 AFSC Openscapes Workshop**  
NOAA Fisheries Alaska Fisheries Science Center  Seattle, WA
  - Co-wrote a proposal to bring the inaugural Openscapes training workshops to AFSC with Megsie Siple and Josh London
  - [AFSC Website Cohort Digest](#)
  - [nmfs-opensci Workshop Digest](#)
  - [Openscapes: AFSC Blog Digest Post](#)
- **Co-organizer of the NMFS-wide R Users Group and GitHub Organization**  
NOAA Fisheries Alaska Fisheries Science Center  Seattle, WA
  - Organize meetings and speakers and foster the open science-R community across NMFS.
  - [NMFS-R-UG GitHub Organization](#)
  - [nmfs-opensci GitHub Organization](#)

2021  
|  
Present

## MENTORSHIP

2024

### ● **Mentor**

The William M. Lapenta - NOAA Student Internship Program  
 Seattle, WA/Remote

- Mentored Student building R Shiny application to show survey progress and bottom temperatures from bottom trawl surveys. Student also joined survey team on the 2024 eastern Bering Sea bottom trawl survey.

Links: [Link](#)

2020

### ● **Capstone Co-mentor**

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2021

University of Washington School on the Environment  
Undergraduate Capstone Program

 Seattle, WA

- Mentored student investigating the purple-orange sea star and bivalve climate change-driven distribution changes in Alaska's eastern Bering Sea.

2019

### ● **High School STEM Competition Mentor and Volunteer**

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2020

Blacks in Government

 Silver Spring, MD

- Mentor to student participant and assisted with marketing for the NOAA Chapter High School STEM Competition.

2017

### ● **Graduate Peer Mentor**

School of Marine and Atmospheric Sciences, Stony Brook University

 Stony Brook, NY

- Helped troubleshoot seabird telemetry home range metrics and marine mammal bycatch modeling

2016

### ● **High School Student Mentor**

Dr. Janet Nye, Quantitative Fisheries Ecology Laboratory, Stony Brook University

 Stony Brook, NY

- Mentored high school student assisting on assessment of Black Sea Bass (*Centropristes striata*) winter survival on the NE US shelf using MATLAB

## OUTREACH

2024

### ● **Guest speaker**

EH Markowitz

 Stony Brook University

- Discussed career path and insights from time at alma mater.

2024	<ul style="list-style-type: none"> <li> <b>Guest lecturer</b>            EH Markowitz   Mad Science Improv — Bandit Improv Comedy Theater           <ul style="list-style-type: none"> <li>Discussed career path and insights from time at alma mater.</li> </ul>           Links: <a href="#">Link</a> </li> </ul>
2022	<ul style="list-style-type: none"> <li> <b>What does a Fisheries Researcher Do?</b>            Markowitz, EH  <ul style="list-style-type: none"> <li>NOAA Live! Alaska Seminar Series</li> </ul>           Links: <a href="#">Recording</a>, <a href="#">NOAA Live! Alaska</a> </li> </ul>
2021	<ul style="list-style-type: none"> <li> <b>Counting Fish in Alaska!</b>            Diversity in STEM - Let's Talk Science Symposium   McGill University, Montreal, Quebec, Canada/Remote           <ul style="list-style-type: none"> <li>Presented to students in grades 3-8 from across Montreal, Quebec, Canada about NOAA Fisheries groundfish surveys in Alaska.</li> </ul> </li> </ul>
2018   Present	<ul style="list-style-type: none"> <li> <b>Skype and Scientist Visiting Scientist</b>            Remote             Skype a Scientist Program           <ul style="list-style-type: none"> <li>30+ schools across the country K-12</li> </ul> </li> </ul>
2018	<ul style="list-style-type: none"> <li> <b>Science Festival Booth Presenter</b>            USA Science and Engineering Festival             Washington, D.C.           <ul style="list-style-type: none"> <li>Used the Science on Sphere (SOS) to share relationships between temperature, climate change, and changes in fish distributions.</li> </ul> </li> </ul>
2018	<ul style="list-style-type: none"> <li> <b>Presenter</b>            Smithsonian National Museum of Natural History's Expert in Program             Washington, D.C.           <ul style="list-style-type: none"> <li>Hosted a table in the Smithsonian Natural History Museum Ocean Hall and engage with patrons about fisheries management.</li> </ul> </li> </ul>
2016   2017	<ul style="list-style-type: none"> <li> <b>WISE Program Assisting Researcher</b>            School of Marine and Atmospheric Sciences, Stony Brook University             Stony Brook, NY           <ul style="list-style-type: none"> <li>Stony Brook WISE (Women in Science and Engineering) working up some of the day's data from our mini-study on blue crab temperature-dependent aerobic and anaerobic metabolism.</li> </ul> </li> </ul>
2014	<ul style="list-style-type: none"> <li> <b>Plastic Pollution Outreach Program Organizer</b>            Coastal Steward Long Island             Across Long Island, NY           <ul style="list-style-type: none"> <li>Wrote, designed, and ran an outreach initiative teaching local elementary and middle school students about the global marine plastic pollution problem with Coastal Steward</li> </ul> </li> </ul>

## PUBLICATIONS

In review

- **Results of the 2023 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Markowitz, EH, EJ Dawson, CB Anderson, SK Rohan, NE Charriere, BK Prohaska, DE Stevenson
  - DOC NOAA Tech. Memo. NMFS-AFSC

In press

- **Shifting institutional culture to develop climate solutions with Open Science**  
Stewart Lowndes, J, et al.
  - Ecology and Evolution

Links: [pre-print](#)

2024

- **Advancing bioenergetics-based modeling will improve climate change projections for marine ecosystems**  
Rose, K, KK Holsman, JA Nye, EH Markowitz, TNS Banha, N Bednářek, J Bueno-Pardo, D Deslauriers, EA Fulton, KB Huebert, M Huret, S-I Ito, S Koenigstein, L Li, H Moustahfid, BA Muhling, P Neubauer, JR Paula, EC Siddon, MD Skogen, PD Spencer, PD van Denderen, GJ van der Meeren, MA Peck
  - Mar Ecol Prog Ser 732: 193–221

Links: [DOI](#)

2023

- **Workshop on Unavoidable Survey Effort Reduction 2 (WKUSER2)**  
ICES
  - ICES Scientific Reports

Links: [Link](#)

2023

- **Results of the 2022 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Markowitz, EH, EJ Dawson, CB Anderson, SK Rohan, NE Charriere, BK Prohaska, DE Stevenson
  - DOC NOAA Tech. Memo. NMFS-AFSC-469, 213 p.

Links: [DOI](#)

2023

- **Fisheries Economics of the United States, 2020**  
NMFS. Eds. Richardson, A, et al.
  - DOC NOAA Tech. Memo. NMFS-F/SPO-236, 231 p.

Links: [Link](#)

- 2023 ● **2023 Northern Bering Sea Groundfish and Crab Trawl Survey Community Highlights**  
EH Markowitz, EH, L Dawson, Anderson CB, S Rohan, N Charriere, and Stevenson, DE,  
• Outreach material  
Links: [Link](#)
- 2022 ● **North Pacific Fishery Management Council: Chapter 6. Assessment of the arrowtooth flounder stock in the Bering Sea and Aleutian Islands**  
Shotwell, SK, M Bryan, DH Hanselman, EH Markowitz, E Siddon, I Spies, and J Sullivan  
• NPFMC Bering Sea and Aleutian Islands SAFE  
Links: [Link](#)
- 2022 ● **North Pacific Fishery Management Council: Assessment of the Yellowfin Sole Stock in the Bering Sea and Aleutian Islands**  
Spies, I, L Barnett, R Haehn, J Ianelli, EH Markowitz, Z Oyafuso, E Siddon, and C Yeung  
• NPFMC Bering Sea and Aleutian Islands SAFE  
Links: [Link](#)
- 2022 ● **North Pacific Fishery Management Council: Chapter 15: Assessment of the shortraker rockfish stock in the Bering Sea and Aleutian Islands**  
Shotwell, SK, J Sullivan, K Echave, EH Markowitz, I Ortiz, E Siddon, P Spencer, and I Spies  
• NPFMC Bering Sea and Aleutian Islands SAFE  
Links: [Link](#)
- 2022 ● **SocioEconomic Aspects in Stock Assessments Workshop (SEASAW) Report**  
NMFS  
• DOC NOAA Tech. Memo. U.S. DOC, NOAA Tech. Memo. NMFS-F/SPO-232, 96 p.  
Links: [Link](#)
- 2022 ● **2022 Northern Bering Sea Groundfish and Crab Trawl Survey Community Highlights**  
EH Markowitz, EH, L Dawson, N Charriere, J Richar, S Rohan, B Prohaska, and Stevenson, DE,  
• Outreach material  
Links: [Link](#)

- 2022 ● **Results of the 2021 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Markowitz, EH, EJ Dawson, CB Anderson, SK Rohan, NE Charriere, BK Prohaska, DE Stevenson  
• DOC NOAA Tech. Memo. NMFS-AFSC-452, 227 p.  
Links: [DOI](#)
- 2022 ● **Results of the 2019 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Markowitz, EH, EJ Dawson, NE Charriere, BK Prohaska, SK Rohan, DE Stevenson, and LL Britt  
• DOC NOAA Tech. Memo. NMFS-AFSC-451, 225 p.  
Links: [DOI](#)
- 2022 ● **Results of the 2018 Eastern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Markowitz, EH, EJ Dawson, NE Charriere, BK Prohaska, SK Rohan, RA Haehn, DE Stevenson, and LL Britt  
• DOC NOAA Tech. Memo. NMFS-AFSC-450, 183 p.  
Links: [DOI](#)
- 2022 ● **Fisheries Economics of the United States, 2019**  
NMFS. Eds. Richardson, A, and EH Markowitz  
• DOC NOAA Tech. Memo. NMFS-F/SPO-229, 236 p.  
Links: [Link](#)
- 2021 ● **North Pacific Fishery Management Council: Assessment of the Yellowfin Sole Stock in the Bering Sea and Aleutian Islands**  
Spies, I, R Haehn, E Siddon, J Conner, EH Markowitz, C Yeung, and J Ianelli  
• NPFMC Bering Sea and Aleutian Islands SAFE  
Links: [Link](#)
- 2021 ● **Measuring Output, Inputs, and Total Factor Productivity for the U.S. Fishery: A Proposal**  
Wang, SL, Walden J, and EH Markowitz  
• NOAA Tech. Memo. NMFS-F/SPO-217, 14 p.  
Links: [Link](#)

- 2021 ● **Fisheries Economics of the United States, 2017**  
NMFS. Eds. Markowitz, EH, and A Richardson  
• DOC NOAA Tech. Memo. NMFS-F/SPO-219, 259 p.  
Links: [Link](#)
- 2021 ● **2021 Northern Bering Sea Groundfish and Crab Trawl Survey Highlights**  
Britt, LL, EH Markowitz, L Dawson, N Charriere, J Richar, S Rohan, B Prohaska, R Haehn, and DE Stevenson  
• Outreach material  
Links: [Link](#)
- 2021 ● **Fisheries Economics of the United States, 2018**  
NMFS. Eds. Richardson, A, and EH Markowitz  
• DOC NOAA Tech. Memo. NMFS-F/SPO-225, 246 p.  
Links: [Link](#)
- 2019 ● **Fisheries Economics of the United States, 2016 Addendum**  
NMFS. Ed. Markowitz, EH  
• DOC NOAA Tech. Memo. NMFS-F/SPO-187a, 243 p.  
Links: [Link](#)
- 2019 ● **Proceedings of the 2nd National Protected Species Assessment Workshop**  
Srinivasan, M, SK Brown, EH Markowitz, M Soldevilla, E Patterson, K Forney, K Murray, E Ward, JM Ver Hoef, J Redfern, and T Eguchi (eds.)  
• NOAA Tech. Memo. NMFS-F/SPO-198, 46 p. Memo.  
Links: [Link](#)
- 2018 ● **Fisheries Economics of the United States, 2016**  
NMFS. Ed. EH Markowitz  
• U.S. DOC, NOAA Tech. Memo. NMFS-F/SPO-187a, 243 p.  
Links: [Link](#)

## SELECTED PRESENTATIONS

- 2024 ● **{sdmgamindex} GAM for Abundance Index Standardization of Alaska Bottom Trawl Survey Data**  
Markowitz, EH, Siple, MC, Kotwicki, S, Thorson, J, Barnett, LAK, Berg, CW  
• 2024 World Fisheries Congress

- 2023 • **Data Strategies for Future Us: Data to Product Workflows**  
EH Markowitz  
• California Water Board 2023 Openscapes Cohort
- 2023 • **Results of the 2023 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna.**  
Stevenson, DE, Markowitz, EH, EJ Dawson, and CB Anderson  
• North Pacific Fishery Management Council  
Links: [Groundfish Plan Team Meeting Page](#), [Presentation](#)
- 2023 • **Advancing agency research and building accessibility through open science practices: NOAA Fisheries Alaska Bottom Trawl Survey public data products**  
Markowitz, EH, S Rohan, D Stevenson, and E Laman  
• 2023 PICES Annual Meeting  
Links: [Workshop Presentation 10: Towards climate-informed ecosystem-based fisheries management by building international collaborations and standardizing indicators](#), [Poster](#)
- 2023 • **Advancing agency research and building accessibility through open science practices: NOAA Fisheries Alaska Bottom Trawl Survey public data products**  
Markowitz, EH, S Rohan, D Stevenson, and E Laman  
• 2023 Western Groundfish Conference  
Links: [Poster](#)
- 2023 • **NMFS R UG Lightning Talks: Open science in R**  
EH Markowitz et al.  
• NOAA Library Seminar Series  
Links: [Recording](#), [Slides](#)
- 2023 • **2023 Northern Bering Sea Groundfish and Crab Trawl Survey Community Highlights**  
EH Markowitz, EH, L Dawson, Anderson CB, S Rohan, N Charriere, and Stevenson, DE,  
• University of Alaska Fairbanks Strait Science Seminar.  
Links: [Video](#), [UAF Strait Science Lecture Series](#)

- 2022 ● **2022 Northern Bering Sea Groundfish and Crab Trawl Survey Community Highlights**  
Stevenson, DE, EH Markowitz, L Dawson, N Charriere, J Richar, S Rohan, and B Prohaska  
• University of Alaska Fairbanks Strait Science Seminar.  
Links: [Video](#)
- 2022 ● **Results of the 2022 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna.**  
Stevenson, DE, Markowitz, EH, EJ Dawson, NE Charriere, BK Prohaska, and SK Rohan  
• North Pacific Fishery Management Council  
Links: [Groundfish Plan Team Meeting Page](#), [Presentation](#)
- 2022 ● **GAM for Abundance Index Standardization of Alaska Bottom Trawl Survey Data**  
Markowitz, EH, M Siple, S Kotwicki, J Thorson, LAK Barnett, and C Berg  
• 2022 ICES Workshop WKUSER2
- 2022 ● **NMFS R UG Lightning Talks: Creating reproducible and robust fisheries science workflows using R and GitHub**  
Holmes, E, EH Markowitz et al.  
• NOAA Library Seminar Series  
Links: [Recording](#)
- 2022 ● **What does a Fisheries Researcher Do?**  
Markowitz, EH  
• NOAA Live! Alaska Seminar Series  
Links: [Recording](#), [NOAA Live! Alaska](#)
- 2021 ● **Results of the 2021 Eastern and Northern Bering Sea Continental Shelf Bottom Trawl Survey of Groundfish and Invertebrate Fauna**  
Stevenson, DE, Markowitz, EH, EJ Dawson, NE Charriere, BK Prohaska, and SK Rohan  
• North Pacific Fishery Management Council  
Links: [Groundfish Plan Team Meeting Page](#)

- 2021
- **2021 Northern Bering Sea Groundfish and Crab Trawl Survey Highlights**  
Britt, LL, EH Markowitz, L Dawson, N Charriere, J Richar, S Rohan, B Prohaska, R Haehn, and DE Stevenson
    - University of Alaska Fairbanks Strait Science Seminar.Links: [Presentation](#)
- 2021
- **Data to Product Workflows**  
Markowitz, EH
    - NOAA NMFS NWFSC Openscapes Fall 2021Links: [Recording](#), [Slides](#)
- 2021
- **Reproducible Reports in R Markdown - Perspectives and {NMFSReports}**  
Markowitz, EH
    - R Cascadia Conf., June 2021. Remote.Links: [Recording](#), [Slides](#)
- 2021
- **Different Strategies for Teaching Your Colleagues R: Lessons Learned and Recommendations**  
Davis, C, EH Markowitz, and D Dishman
    - R Cascadia Conf., June 2021. Remote.Links: [Recording](#)
- 2020
- **Reproducible National-level Reports: Using Rmarkdown to Recode the Fisheries Economics of the United States Report**  
Markowitz, EH
    - Women in Statistics and Data Science Conf., September 2020. Remote.
    - American Fisheries Society, September 2020. Remote. (5 minute speed talk)
    - SatRDay Conference, March 2020. Washington, D.C.Links: [Recording](#)
- 2020
- **Commercial and Recreational Fisheries Economic Impact Input/Output Model: Tool Update and Increasing Accessibility for Managers and Scientists**  
Markowitz, EH and S Steinback
    - American Fisheries Society, September 2020. Remote.
    - Socioeconomic Aspects in Stock Assessments Workshop (SEASAW), February 2020. New Orleans, LA.

- 2020 ● **Measuring Output for U.S. Commercial Fisheries - From Theory to Practice**  
Markowitz, EH and SL Wang  
• Fishery Productivity Workshop 2020: Measurement, Data Sources, and the Pattern of Growth, April 2020. Silver Spring, MD/Remote.
- 2019 ● **Science News Fatigue Battlefront. How do we do better? An observation-based discussion piece**  
Markowitz, EH  
• NOAA DataComm Group, November 2019. Silver Spring, MD (60 minutes with demo and discussion).
- 2018 ● **Assessing the Impact of Underwater Sound on Marine Mammal Hearing in R Shiny: Increasing Accessibility of Tools for Managers and Stakeholders**  
Markowitz, EH, AR Scholik-Schlomer, M Srinivasan, and J Gedamke  
• NOAA DataComm Group, May 2019. Silver Spring, MD (60 minutes with demo and discussion)  
• NOAA NMFS OST Brown Bag series, October 2018. Silver Spring, MD (45 minutes with demo)  
• International Marine Conservation Congress, June 2018. Kuching, Malaysia (15 minutes)
- 2018 ● **Modeling Environmentally Driven Distribution Shifts in Regional Ocean Model Systems for the Demersal, Migratory, Commercially Important Summer Flounder**  
Markowitz, EH, M Frisk, S Sagarese, and JA Nye  
• ICES ASC, September 2018. Hamburg, Germany.  
• American Fisheries Society's National Meeting, August 2018. Atlantic City, NJ.  
• International Marine Conservation Congress, June 2018. Kuching, Malaysia.



## AWARDS AND SCHOLARSHIPS

- **NOAA Fisheries Science and Technology Assessment and Monitoring Branch, Employee of the Quarter, 2019**
- **CPAES/UCAR Conference Travel Award, 2017**
- **Southern New England Conference Student Travel Award, 2017**
- **Maze-Landeau Conference Travel Award, 2017**
- **SoMAS Travel Award, 2017**
- **Undergraduate Student Leadership Award, 2017**
- **Evan R. Liblit Memorial Fund Scholarship for Waste Management, 2015**



## FELLOWSHIPS

- **NOAA-wide Mentoring Program mentee, 2023 - 2024**
- **Openscapes Mentor-Coach Community Program, 2023**
- **American Fisheries Society Climate Ambassador Program, 2021 - 2022**
- **American Meteorological Society Early Career Leadership Academy, 2019**
- **New York Sea Grant - John A. Knauss Marine Policy Fellowship, 2018**
- **Waterfront Alliance Conference Scholar, 2017**
- **Stony Brook University's Mote Marine Lab Fellowship, 2015**



## PROFESSIONAL AFFILIATIONS

- **500 Women Scientists, Silver Spring Pod, 2020 - 2021**
- **American Institute of Fishery Research Biologists, 2018 - Present**
- **NOAA DataComm, 2018 - Present**
- **American Fisheries Society (AFS), 2016 - Present**