



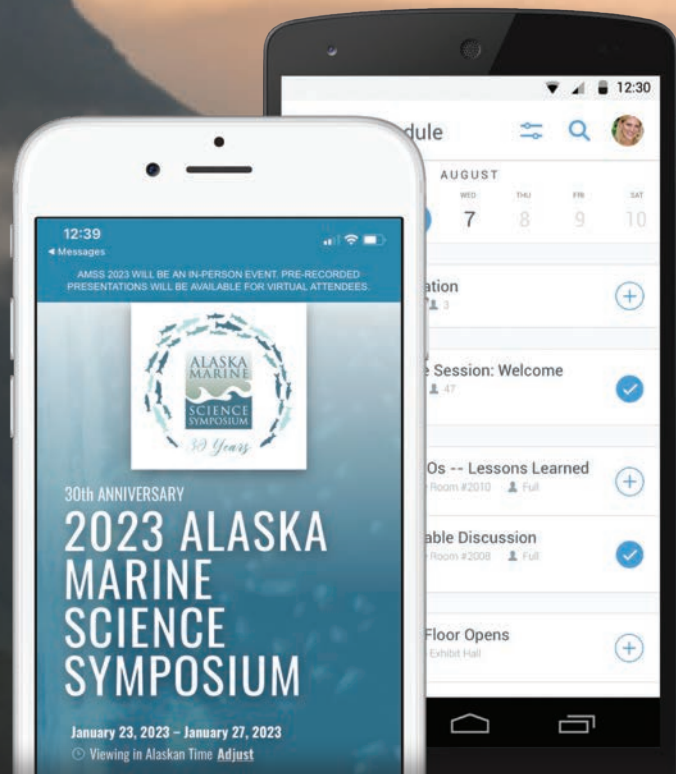
JANUARY 23–27, 2023

Showcasing Marine Research in the
Arctic Ocean, Bering Sea, and Gulf of Alaska

Dena'ina Civic and Convention Center, Anchorage, Alaska

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2023 Alaska Marine Science Symposium

MONDAY, JANUARY 23, 2023

1:00 p.m. – 1:30 p.m.

WELCOME & OPENING REMARKS — FIRST FLOOR

Lynn Palensky, Executive Director, North Pacific Research Board
Presentation of Ocean Leadership Awards by the Alaska SeaLife Center
Congressional Video Announcements

1:30 p.m. – 5:00 p.m.

KEYNOTES — FIRST FLOOR

6:00 – 7:30 p.m.

GULF OF ALASKA POSTER SESSION WAVE ONE — THIRD FLOOR

7:30 – 9:00 p.m.

GULF OF ALASKA POSTER SESSION WAVE TWO — THIRD FLOOR



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KEYNOTE SPEAKERS

Monday, January 23

1:30 p.m. – 2:15 p.m.

DR. CLARENCE PAUTZKE



PERSPECTIVES ON A 30-YEAR CAREER IN ALASKA MARINE RESEARCH AND FISHERY MANAGEMENT

Abstract

Clarence Pautzke will describe his early aspirations to be a biological oceanographer doing Arctic research in the Arctic Ocean and his revelatory transition into fisheries management with the North Pacific Fishery Management Council. His presentation will include the historical evolution of fisheries management off Alaska, the inner workings and accomplishments of the fishery council and its need for outstanding science, and his brief sojourn to NOAA Fisheries Headquarters in D.C. in 2000-2001. He will describe the formative years of the North Pacific Research Board and end with some thoughts on the value of the annual Alaska Marine Science Symposium.

Bio

Clarence Pautzke holds a doctorate in biological oceanography and was project leader for various Arctic Ocean expeditions in 1968, 1973 and 1975 on Ice Island T-3 and the Arctic Ice Dynamics Joint Experiment (AIDJEX), assessing the impacts of ice cover on water column productivity. He worked at the Pacific States Marine Fisheries Commission in Portland, Oregon as the Assistant to the Executive Director in 1978-1980. Starting in 1980, he worked for the North Pacific Fishery Management Council, first as Deputy Executive Director until 1988, and then as its Executive Director. After a brief sojourn to NOAA Fisheries in 2000 and 2001 as Acting Director of the Office of Sustainable Fisheries and Acting Deputy Assistant Administrator for Regulatory Programs, he returned to work for the North Pacific Research Board as its first Executive Director until he retired in 2011. He was honored with a Lifetime Achievement Award at the Marine Gala of the Alaska SeaLife Center in Seward. He served as a Naval intelligence officer on a guided missile destroyer off Vietnam in 1969-70 and retired from the Naval Reserves in 1992 with the rank of Captain (O-6). He spends his retirement with his wife, Maureen McCrea, and family, alternating between summers in Alaska and winters in Hawaii on the Big Island.





2:15 p.m. – 3:00 p.m.

DR. GORDON KRUSE AND SCOTT GOODMAN

ALASKA CRAB, RECENT STOCK COLLAPSE, AND PROSPECTS FOR RECOVERY



Scott Goodman is the Executive Director for the Bering Sea Fisheries Research Foundation and the President of Natural Resources Consultants, Inc. in Seattle. Scott has over 25 years of experience working on fisheries research projects with a strong focus on Bering Sea crab research with BSFRF over the last 15 years. He has helped BSFRF work through complicated crab research and management issues, collaborating with a growing number of scientists at NOAA, ADF&G, several academic partners, and the crab industry stakeholders that support BSFRF research. Scott has a BS in Fisheries Biology and a MS in Marine Affairs, both from the University of Washington. Scott's company NRC has a long-standing footprint as a fisheries consulting firm known for its ties to research in Alaska working with fishermen across several fish and

crab sectors on a variety of issues. Currently, Scott also serves as an advisor to the Aleutians King Crab Research Foundation, is a member of the Executive Committee for the Alaska Ocean Acidification Network, sits on the Climate Change Taskforce for the North Pacific Fishery Management Council, and is also a member of the Certified Seafood Cooperative representing Alaska's Responsible Fisheries Management (RFM) for the sustainable certification of several of Alaska's crab stocks. Scott is a western Washington native, lives in Everett with his family and greatly enjoys being on the water for both work and play.



Gordon Kruse is Professor Emeritus of Fisheries with the University of Alaska Fairbanks, College of Fisheries and Ocean Sciences, where he was a professor for 17 years. Previously, he worked for the Alaska Department of Fish and Game for 16 years, most of that time as Chief Marine Fisheries Scientist. During his career, Gordon has conducted applied marine fisheries research, including stock assessments, population dynamics, fisheries oceanography, marine ecosystem dynamics, fishery management, and ecosystem-based fisheries management. He has worked on a wide variety of marine fish and invertebrates with an emphasis on crabs. Though "retired" Gordon serves as a science advisor to the North Pacific Research Board, Bering Sea Fisheries Research Foundation, and Exxon Valdez Oil Spill Trustee Council. Gordon was honored to

receive the inaugural Terry Quinn II Distinguished Scientist Award for Outstanding Science Contributions to Fishery Management in the North Pacific from the North Pacific Fishery Management Council in 2020, the Wally Noerenberg Award for Fishery Excellence from the Alaska Chapter of the American Fisheries Society in 2015, and the inaugural Alaska Ocean Leadership Award for Research from the Alaska SeaLife Center in 2010. Gordon is most proud of the 19 graduate students for whom he served as major professor, as well as the 41 other graduate students on whose committees he served.

KEYNOTE SPEAKERS

3:00 p.m. – 3:30 p.m. – BREAK

3:30 p.m. – 4:15 p.m.

DR. LIZA MACK



INDIGENOUS LEADERSHIP & RESPONSIBILITY: WHERE SCIENCE, CULTURE AND POLICY CONNECT

Abstract

Managing ocean resources in Alaska is multifaceted and contributes to the well-being of Alaska's communities and people. This keynote will highlight the importance of engagement of Indigenous people in the regulation process and the benefits of including Indigenous knowledge into the process. Dr. Mack will discuss fisheries, fisheries management, and changes in approaches to the incorporation and inclusion of knowledge systems into regulatory processes.

Bio

Dr. Liza Mack is Unangax, born and raised in King Cove, Alaska. She graduated with her PhD in Indigenous Studies from the University of Alaska Fairbanks in 2019. Her research focused on political ecology, natural resource management, knowledge transfer, and engagement of Native communities in the regulatory process. Dr. Mack has over 20 years of experience working in and around Indigenous organizations and communities. She has an A.A. in Liberal Arts from UAS Sitka, a B.A., and M.S. in Anthropology from Idaho State University. She lives and works in Anchorage with her son on the homelands of the Dena'ina People. Dr. Mack is the Transportation and Village Infrastructure Protection Program Manager at the Denali Commission. Prior to joining the Commission, Liza served as the Executive Director of the Aleut International Association, a non-profit organization that represents Unangan (Aleut people) at the Arctic Council.



4:15 p.m. – 5:00 p.m.

RAY TROLL



credit: Corey Arnold

MY FISH FILLED LIFE, AND HOW I BECAME AN ACCIDENTAL SCIENCE COMMUNICATOR

Bio

Ray Troll will share the twists and turns of his unique career as an artist and educator. Ray moved to the Pacific Northwest in the late 1970's and eventually on to Alaska with a couple of art degrees in his back pocket and a lifelong love of natural history. Settling in the rainswept, coastal town of Ketchikan, he began producing offbeat fish-inspired T-shirts that have gained him a global audience with anglers, cannery workers, commercial fishers and scientists around the world. He draws his inspiration from extensive field work and the latest scientific discoveries, bringing a street-smart sensibility to the worlds of ichthyology and paleontology. Ray earned a Bachelor of Arts degree from Bethany College in Lindsborg, Kansas in 1977 and an MFA in studio arts from Washington State University in 1981. Ray's unique blend of art and science evolved into exhibits that have travelled across the United States since 1995, including venues such as the California Academy of Sciences in San Francisco, the Oregon Coast Aquarium, the Academy of Natural Sciences in Philadelphia, Denver Museum of Nature and Science, Anchorage Museum, the Alaska Sealife Center, Point Defiance Zoo and Aquarium, among others. He now has another touring show based on his book *Cruisin' the Fossil Freeway* with Dr. Kirk Johnson. He has co-authored and illustrated 10 books including a collection of his piscine inspired humor called "Something Fishy This Way Comes". He is also an avid musician on the side and has released four albums with his band the Ratfish Wranglers.

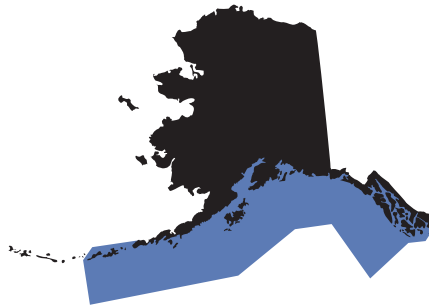
In 2007, Ray was awarded a gold medal for distinction in the natural history arts by the Academy of Natural Sciences in Philadelphia, and in 2006, received the Alaska Governor's award for the arts. In 2011, Ray and Kirk Johnson were jointly awarded a John Simon Guggenheim Memorial Foundation Fellowship to support their ambitious book project, "The Eternal Coastline: the Best of the Fossil West from Baja to Barrow." Ray has appeared on the Discovery Channel, lectured at Cornell, Harvard, and Yale, shown work at the Smithsonian and has been honored by the naming of a species of ratfish, *Hydrolagus trolli*, and a genus of extinct herring, *Trollichthys*. In 2008, he was awarded an honorary doctorate in fine arts from the University of Alaska Southeast.

6:00 p.m. – 9:00 p.m. – GULF OF ALASKA POSTER SESSION – THIRD FLOOR



Ray Troll artwork

GULF OF ALASKA PLENARY SESSION



TUESDAY, JANUARY 24TH

* Master's Candidate
** Doctoral Candidate

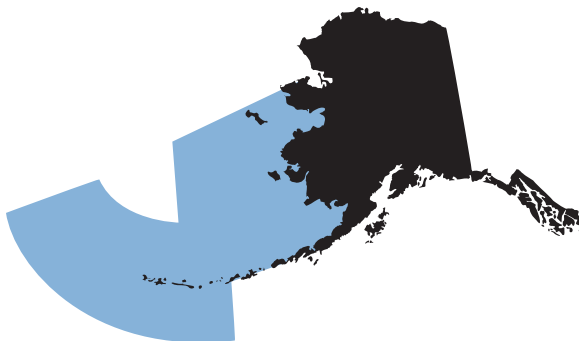
| TIME | TITLE | PRESENTER |
|-----------------------------------|--|-------------------|
| CLIMATE & OCEANOGRAPHY | | |
| 8:00-8:15 | Long-term interannual phytoplankton phenology changes within the bioregions of the Subarctic Pacific Ocean based on satellite observations | Marta Konik |
| 8:15 - 8:30 | Twenty-five years of observations reveal strong influence of climate indices along the Seward Line | Russ Hopcroft |
| LOWER TROPHIC LEVELS | | |
| 8:30 - 8:45 | Seaweeds' seasonal sweet spots: current production and future responses of kelps within high latitude macrocystis beds | Lauren Bell** |
| 8:45 - 9:00 | Molecular characterization of the deep-sea zooplankton community from the Gulf of Alaska Seamount Province | Jennifer Questel |
| 9:00 - 9:15 | Shifts in microbial community composition during the 2019-2020 Pacific marine heatwave in the northern Gulf of Alaska | Jacob Cohen* |
| FISHES & FISH HABITAT | | |
| 9:15 - 9:30 | Improving rockfish assessments via cooperative data collection in the Gulf of Alaska | Madison Hall |
| 9:30 - 10:00 | Coffee Break | |
| 10:00 - 10:15 | Thermal effects on early life stages of Gulf of Alaska Pacific cod: shifts in reproductive phenology, size, and growth | Jessica Miller |
| 10:15 - 10:30 | Size shifts and changing overwintering success of age-0 Pacific cod (<i>Gadus macrocephalus</i>) in the post-heatwave era | Ben Laurel |
| 10:30 - 10:45 | Investigation of the influence of hatchery straying on the population structure of pink salmon in Prince William Sound, Alaska | Wei Cheng** |
| 10:45 - 11:00 | Consequences of variation in body size, condition, physiological state, and in-river conditions for spawning migration success by Alaskan salmon: a three-year telemetry study of Copper River sockeye | Kristen Gorman |
| 11:00 - 11:15 | Leveraging multiple genomic approaches to investigate population structure and dynamics of Pacific halibut in the northeast Pacific Ocean | Andrew Jasonowicz |
| 11:15 - 11:30 | Maximizing success of red king crab stock enhancement in Kodiak, Alaska | Chris Long |
| 11:30 - 1:00 | Lunch (Provided) | |
| 1:00 - 1:15 | Evaluation of harvest control rules for Prince William Sound Pacific herring | Joshua Zahner* |



* Master's Candidate
 ** Doctoral Candidate

| TIME | TITLE | PRESENTER |
|-------------------------------|---|---------------------------------|
| SEABIRDS | | |
| 1:15 - 1:30 | Evaluating the sublethal and chronic effects of saxitoxin ingestion by common murrens | Matthew Smith |
| 1:30 - 1:45 | Oceanographic correlates of the non-breeding movements and distribution of tufted puffins throughout the northeast Pacific Ocean | Anne Schaefer |
| MARINE MAMMALS | | |
| 1:45 - 2:00 | Species distribution modeling of northern sea otters (<i>Enhydra lutris kenyoni</i>) in a data-limited ecosystem | Elizabeth Hasan* |
| 2:00 - 2:15 | How much do killer whales call? Quantifying calling rates for passive acoustic density estimation | Hannah Myers** |
| 2:15 - 2:30 | Diverse diet of resident killer whales in southern Alaska revealed by two distinct sampling methods | Dan Olsen |
| 2:30 - 3:00 | Coffee Break | |
| 3:00 - 3:15 | Assessing the effects of targeted acoustic startle technology on the foraging success of individual harbor seals | Kathleen McKeegan* |
| 3:15 - 3:30 | Acoustics of Cook Inlet beluga whales and anthropogenic noise in lower Cook Inlet rivers | Sonia Kumar* |
| 3:30 - 3:45 | Chugach Imaq Project: Developing marine mammal co-management and tribal ecological research programs in Prince William Sound | Raven Cunningham |
| ECOSYSTEM PERSPECTIVES | | |
| 3:45 - 4:00 | Development and calibration of an Atlantis ecosystem model for the Gulf of Alaska | Alberto Rovellini |
| 4:00 - 4:15 | Transition to pot fishing gear in the Gulf of Alaska sablefish fishery and implications for sperm whale depredation | Megan Williams |
| 4:15 - 4:30 | Can settlement on coralline algae ameliorate negative effects of ocean acidification and temperature increase on pinto abalone early life stages? | Eileen Bates** |
| 4:30 - 4:45 | Trophic pathways and their relationship to growth in nearshore consumers across the northern Gulf of Alaska | Katherine Corliss* |
| 4:45 - 5:00 | DNA metabarcoding reveals extensive marine resource utilization by coastal gray wolves in Katmai National Park & Preserve | Ellen Dymit** |
| 6:00 - 7:30 | Evening Poster Presentations Wave 1 Bering Sea & Arctic | Third Floor Tikahtnu |
| 7:30 - 9:00 | Evening Poster Presentations Wave 2 Bering Sea & Arctic | Ballroom A & B |

BERING SEA PLENARY SESSION



WEDNESDAY, JANUARY 25TH

* Master's Candidate
** Doctoral Candidate

| TIME | TITLE | PRESENTER |
|------------------------|--|--------------------|
| CLIMATE & OCEANOGRAPHY | | |
| 8:00 - 8:15 | Rate of change in bottom temperatures on the Bering and Chukchi Sea shelves and potential impact on fish assemblages | Phyllis Stabeno |
| 8:15 - 8:30 | Assimilation of continuous Bering Sea bottom temperature data into a regional circulation model | Albert Hermann |
| 8:30 - 8:45 | Human-induced borealization and the collapse of the Bering Sea snow crab fishery | Mike Litzow |
| 8:45 - 9:00 | All hands on deck data collection response to 2022 Bering Sea storm from Typhoon Merbok | Jacquelyn Overbeck |
| 9:00 - 9:15 | The journey of enhancing impact-based decision support services for coastal flood forecasting: preparation for Typhoon Merbok | Nicole Kinsman |
| 9:15 - 9:30 | National ocean exploration and characterization priorities in Alaska case study: mapping and exploration in the Aleutian Islands with uncrewed surface vehicle SAILDRONE Surveyor | Rachel Medley |
| 9:30 - 10:00 | Coffee Break | |
| FISHES & FISH HABITAT | | |
| 10:00 - 10:15 | Temperature-dependent survival and growth of early juvenile Bering Sea snow crab (<i>Chionoecetes opilio</i>) and Tanner crab (<i>Chionoecetes bairdi</i>): implications for optimal crab thermal habitat in a rapidly warming Alaska Arctic | Louise Copeman |
| 10:15 - 10:30 | Building a climate change and ocean acidification stress indicator for Bering Sea red king crab fisheries management | Esther Kennedy** |
| 10:30 - 10:45 | Drivers of bitter crab syndrome in eastern Bering Sea snow and Tanner crab | Erin Fedewa |
| 10:45 - 11:00 | Size and density-dependent incidence of BCD suggests cod predation more important than fishery for disease control | Laurinne Balstad** |
| 11:00 - 11:15 | Shifting fish distributions drive changes in predation in the eastern Bering Sea | Maurice Goodman** |
| 11:15 - 11:30 | A comparison of species distribution model structures for describing juvenile salmon distribution and abundance in the eastern and northern Bering Sea | Lilian Hart* |
| 11:30 - 1:15 | Lunch (On Your Own) | |
| 1:15 - 1:30 | Reconstructing migratory histories and age of Chinook salmon from the Yukon River and northern Bering Sea with oxygen isotopes and trace elements in otoliths | James Murphy |



* Master's Candidate
 ** Doctoral Candidate

| TIME | TITLE | PRESENTER |
|---------------------------------------|---|-------------------|
| 1:30 - 1:45 | Genotyping at sea informs in-season fisheries management in real-time | Tyler Dann |
| 1:45 - 2:00 | Assessing spawning behavior at the northern latitudinal extreme of a commercially exploited demersal flatfish | Austin Flanigan** |
| 2:00 - 2:15 | Advances in species distribution models for essential fish habitat and ecosystem-based fisheries management | Jodi Pirtle |
| SEABIRDS | | |
| 2:15 - 2:30 | What dead birds tell us about a warming world | Julia Parrish |
| 2:30 - 3:15 | Coffee Break | |
| MARINE MAMMALS | | |
| 3:15 - 3:30 | Increasing algal toxin exposure risks in Pacific walrus (<i>Odobenus rosmarus</i>) in the northern Bering Sea | Kathi Lefebvre |
| 3:30 - 3:45 | Evidence of adverse effects of mercury on pinnipeds? | Todd O'Hara |
| 3:45 - 4:00 | Spotted seal abundance and size composition at terrestrial haulouts in western Bering sea | Irina Trukhanova |
| 4:00 - 4:15 | Using georeferenced imagery data and Mask-RCNN neural network to detect and measure spotted seals | Alexey Altukhov |
| HUMANS | | |
| 4:15 - 4:30 | Reviewing the sea ice for walrus outlook to increase coastal resilience in Alaska | Amy Hendricks** |
| ECOSYSTEM PERSPECTIVES | | |
| 4:30 - 4:45 | Drivers and diversity of Chinook salmon productivity in the Arctic-Yukon-Kuskokwim region | Megan Feddern |
| STUDENT AWARDS – POSTER PRESENTATIONS | | |
| 4:45 - 5:00 | Best Student Poster Presentation Winners Announced | |

ARCTIC PLENARY SESSION



THURSDAY, JANUARY 26TH

* Master's Candidate
** Doctoral Candidate

| TIME | TITLE | PRESENTER |
|-----------------------------------|---|---------------------------|
| CLIMATE & OCEANOGRAPHY | | |
| 8:00 - 8:15 | Taking the pulse of the Arctic Ocean system, from the shelves to the pole – a U.S. contribution to the International Synoptic Arctic Survey Program | Carin Ashjian |
| 8:15 - 8:30 | Examining a multi-year seasonal ice record along the Icy Cape Line in the Chukchi Sea | Margaret (Peggy) Sullivan |
| 8:30 - 8:45 | Climate change impacts on marine light in Arctic ecosystems | Trond Kristiansen |
| 8:45 - 9:00 | Distributions of dinoflagellate cysts and diatoms in surface sediments of the Chukchi Sea in relation to the upper water masses | Vera Pospelova |
| LOWER TROPHIC LEVELS | | |
| 9:00 - 9:15 | Increasing importance of the marine cyanobacteria <i>Synechococcus</i> in a warming Chukchi Sea | Michael Lomas |
| 9:15 - 9:30 | Predicting epibenthic functional distribution on changing Arctic shelves | Lauren Sutton |
| 9:30 - 10:00 | Coffee Break | |
| 10:00 - 10:15 | Arctic lagoon benthos: spatial and temporal variation of infaunal communities | Danny Fraser* |
| FISHES & FISH HABITAT | | |
| 10:15 - 10:30 | The forgotten coast: current knowledge of Chukchi Sea lagoon ecosystems | Kevin Fraley |
| 10:30 - 10:45 | Pink salmon in the North American Arctic: natural expansions from the Pacific or invasions from the Atlantic? | Elizabeth Lee |
| SEABIRDS | | |
| 10:45 - 11:00 | Influence of water masses on the summer structure of the seabird community in the northeastern Chukchi Sea | Adrian Gall |
| 11:00 - 11:15 | Seabird-vessel traffic risk analysis for Alaska's oceans | Kelly Kapsar** |
| 11:15 - 11:30 | Communicating climate change through science, art, and education | Katie Morrison |
| MARINE MAMMALS | | |
| 11:30 - 1:00 | Lunch (Provided) | |
| 1:00 - 1:15 | Sea ice directs changes in bowhead whale phenology through the Bering Strait | Angela Szesciorka |
| 1:15 - 1:30 | Characterization of contributors to the U.S. Arctic soundscape | Catherine Berchok |



* Master's Candidate
 ** Doctoral Candidate

| TIME | TITLE | PRESENTER |
|--|---|------------------|
| 1:30 - 1:45 | Interannual variability in the acoustic presence of humpback whales (<i>Megaptera novaeangliae</i>), fin whales (<i>Balaenoptera physalus</i>), and gray whales (<i>Eschrichtius robustus</i>) in relation to environmental conditions in the Bering Strait | Erica Escajeda** |
| 1:45 - 2:00 | Indigenous Knowledge habitat use models: a case study of ringed seals (natchiq; <i>Pusa hispida</i>) in Alaskan waters | Rowenna Gryba |
| 2:00 - 2:15 | Ringed seal behavior and winter density in Prudhoe Bay, Alaska, determined by wildlife-detection dogs and instrumentation of subnivean lairs | Lori Quakenbush |
| 2:15 - 2:30 | Oceanographic influences on spotted seal foraging in the Pacific Arctic | Justin Olnes |
| 2:30 - 3:00 | Coffee Break | |
| 3:00 - 3:15 | Estimating Pacific walrus abundance and survival with multi-event mark-recapture models | William Beatty |
| 3:15 - 3:30 | 20-year synthesis of the effects of oil and gas activities on marine mammals of the U.S. Arctic and Cook Inlet, Alaska | Anne Southam |
| ECOSYSTEM PERSPECTIVES | | |
| 3:30 - 3:45 | The Beaufort Lagoon Ecosystems LTER: coastal ecosystem stability amidst extreme seasonal variation | Kenneth Dunton |
| 3:45 - 4:00 | <i>Alexandrium catenella</i> cell concentrations, morphology, and toxicity during a massive 2022 Bering Strait bloom | Evie Fachon** |
| 4:00 - 4:15 | An apparent multi-decadal decline in Arctic cod, a keystone species in the western Arctic marine ecosystem | George Divoky |
| 4:15 - 4:45 | Recent ecosystem research in the Chukchi Sea and northern Bering Sea: the Arctic Integrated Ecosystem Research Program | Lisa Eisner |
| STUDENT AWARDS — ORAL PRESENTATIONS | | |
| 4:45 - 5:00 | Best Student Oral Presentations Winners Announced & Closing Remarks | |

ALASKA MARINE MAMMAL STRANDING NETWORK ANNUAL MEETING

JANUARY 23RD | 8AM - 12PM | KAHTNU ROOM 2

Annual meeting of the Alaska Marine Mammal Stranding Network members and partners. Stranding Network members will be presenting summaries on stranding responses and other events from their area, highlighting lessons learned and considerations for future events or other participants to consider.

INFORMED DATASETS: UNMET NEEDS AND SYNERGISTIC PATHS FORWARD FOR ARCTIC OCEAN DATASETS

JANUARY 23RD | 9AM - 12PM | TUBUGHNENQ ROOM 3

The Arctic is presently undergoing rapid environmental change, yet baseline and process-based understandings of Arctic Ocean plankton are only just beginning to emerge from our multidisciplinary, long-term data sets. In this workshop we will (1) review the current state of bio-geochemical observations in the Pacific Arctic and (2) discuss our roles in facilitating Arctic Ocean model development and evaluation. This workshop will center on identifying opportunities for collaboration and delineating current unmet needs for data sharing and analysis within the Pacific Arctic community. This will be an annual workshop held by SEAS the Change, an NPRB funded synthesis project, seeking to build conceptual and quantitative models of nutrient supply and utilization in the Pacific Arctic. Coffee and baked goods will be provided and all are welcome.

AOOS OCEAN DATA EXPLORER: GETTING THE DATA AND INFORMATION YOU NEED!

JANUARY 23RD | 10AM - 12PM | KAHTNU ROOM 1

The Alaska Ocean Observing System (AOOS) maintains the Ocean Data Explorer (ODE) portal to make scientific and management information publicly discoverable and accessible. The ODE contains data layers such as real-time sensor feeds, operational oceanographic and atmospheric models, satellite observations and GIS data sets that describe the biological, chemical, and physical characteristics of Alaska and its surrounding waters. Please join AOOS and Axiom Data Science for an interactive workshop introducing the ODE to new users, providing demonstrations of new user features in the ODE, and answers to your burning questions about how to use the ODE, or how to find the data and information you need. Whether you are new to the ODE or are a "super user" with questions, if you are interested in publicly accessible ocean data in Alaska, this workshop is for you.

U.S.-RUSSIA SCIENTIFIC COLLABORATION: WHAT'S HAPPENING NOW AND WHAT DOES THE FUTURE LOOK LIKE?

JANUARY 23RD | 8AM - 10AM | TUBUGHNENQ ROOM 4

Since Russia's invasion of Ukraine, nearly all American agencies and most of academia have ceased communication with Russian counterparts. As a result, US-Russia bi-lateral science work—not only field work but shared analyses and data exchange—has halted. (One exception is the contingency for the USCG District 17 to communicate with the Russian Federal Border Guard on matters involving incursions of the US-Russia maritime boundary; and to communicate with the Marine Rescue Service in case of an oil spill in shared waters.). This hiatus in collaboration is occurring at a critical time to understand the massive climate-induced changes in the Arctic and Bering Sea. Molly McCammon/AOOS and Margaret Williams/Independent Russia/Arctic expert will host a roundtable discussion to share any updates on work that may be proceeding effectively, and to discuss what programs and needs may be jeopardized as a result of non-communication. In advance, we will do an informal survey of experts to understand whether, and where there may be openings to re-ignite collaboration with Russia, and to see how the US science community can support each other, as well as Russian counterparts at this time.



EXPLORE WAYS TO CONTRIBUTE TO A DYNAMIC SEA TRAFFIC MANAGEMENT SYSTEM TO PROMOTE SAFE SHIPPING IN THE ARCTIC

JANUARY 25TH | 5:30PM - 6:30PM | TUBUGHNENQ ROOM 3

The Marine Exchange of Alaska is leveraging the capabilities of its maritime operations center to create a dynamic sea traffic management system for the Arctic. Such a system will use input from a variety of agency stakeholders and the maritime community to provide crucial weather and environmental data to mariners, deconflict waterways use, and minimize impacts to wildlife as traffic in the Arctic increases. In this workshop we will give a brief overview of the Marine Exchange's capabilities and what a dynamic vessel management system may look like. We would like to learn about current and upcoming research that is collecting environmental data in the Bering and/or Chukchi Seas, as different types of data could improve safety for vessels moving through areas where traffic has historically been light and industry experience is limited. Specifically, we are interested in understanding the characteristics of the data produced so that we can develop approaches to integrate a diverse array of data sources for marine operators. We will also solicit ideas for types of data that vessel operators could collect for researchers, such as current programs where ships report marine mammal sightings and weather. Our goal is to start a conversation with researchers and residents of the Arctic that could continue past the workshop to turn current data and knowledge into actions that prevent harm to people, wildlife, and maritime users.

ALASKA MARINE RESEARCH PLANNING WORKSHOP

JANUARY 25TH | 6PM - 8PM | KAHTNU ROOM 1

In past years, Fairweather Science hosted an Arctic Research Planning Night, to provide an opportunity for marine researchers working in the Arctic to share information on their program for networking and collaboration. Sheyna Wisdom has moved to the Alaska Ocean Observing System (AOOS) so our team would like to reinstitute this fun and collaborative event and expand the area of discussion to all Alaskan waters. AOOS encourages marine researchers throughout Alaska to provide 1-5 slides that highlights cruise timing, location, duration, disciplines, vessel, and opportunities for bunk space or data collection. AOOS will provide appetizers and a cash bar (we are Federally funded, so sadly we can't provide the same free drinks). Please send slides to Sheyna Wisdom at wisdom@aoos.org.

FORUM ON ALASKAN MARINE ECOACOUSTICS

JANUARY 25TH | 6:30PM - 8PM | THE ANCHORAGE MUSEUM AUDITORIUM

This forum will explore how ecoacoustic methods can be applied for scientific discovery, artistic and musical creation, and community engagement. Focused specifically on Alaska marine science, the Forum will feature a panel of scientists and artists, convened by composer/sound artist/ecoacoustician, Matthew Burtner. The panel will discuss topics such as marine biophonic, sea ice and anthropogenic underwater noise, community engagement with ecoacoustics, art/science collaboration, sonification of coastal data, marine habitat monitoring, among other topics. Participants will learn about varied techniques for incorporating sound into Alaskan marine science research along with broader impacts in convergent research. The event is part of the "Pass the Mic" Exhibition at the Anchorage Museum and will take place at the Anchorage Museum Auditorium in downtown Anchorage (within walking distance from the Dena'ina Convention Center).

WORKSHOPS

MOVIE NIGHT: FILMS ABOUT THE RESULTS OF THE ARCTIC INTEGRATED ECOSYSTEM RESEARCH PROGRAM 2016-2021

JANUARY 26TH | 5:30PM - 7:30PM | KENAKATNU ROOM 6

Movie Night! Join the North Pacific Research Board for a screening of films about the Arctic Integrated Ecosystem Research Program. This multi-disciplinary program sampled the ocean in 2017-2019 during anomalously warm conditions and found profound changes in every aspect of the marine ecosystem. The program involved members of Arctic communities at every stage. Come aboard the research vessels and learn about how we did it, what we found, and why it matters. Let's make movie stars of our colleagues and cheer their accomplishments. We'll serve some fun snacks, too! See you there.

The films will also be screened continuously during the Symposium in the K'enakatnu 6 room.

THE PCCRC SYMPOSIUM

JANUARY 27TH | 8AM - 12PM | NPRB/AOOS CONFERENCE ROOM

The presentations will describe the progress and results of eight current research projects supported by the Pollock Conservation Cooperative Research Center (PCCRC). The symposium is open to AMSS attendees. A schedule of presentations will be available in mid-January.

ALASKA HABS RESEARCH: CURRENT STATE AND FUTURE DIRECTIONS

JANUARY 27TH | 9AM - 12PM | KAHTNU ROOM 1

The Alaska Ocean Observing System (AOOS) is hosting a workshop that will focus on sharing the current state of HABs research in Alaska's marine waters, followed by an in-depth discussion on the information gaps, future research goals and coordination needs to better understand HABs around Alaska. Outcomes of this workshop will be a better understanding of work currently being conducted and a roadmap of HAB research activities.

INTRODUCING THE ALASKA MARINE ECOSYSTEM NETWORK

JANUARY 27TH | 1PM - 3PM | KAHTNU ROOM 1

The mission of the Alaska Marine Ecosystem (AME) network is to enhance coordination of marine ecosystem research and monitoring activities in the waters around Alaska. Through virtual and in-person meetings, we hope that this network will provide a hub for connecting marine ecosystem stakeholders and activities, and support the development and dissemination of data products synthesized across research and monitoring programs.

The Alaska Ocean Observing System (AOOS) is planning an information workshop at AMSS to let people know about this new AME network, and to solicit feedback and participation in the network. We are hoping that new network members will help us further develop and refine the goals and scope of the network.

PLANNING FOR THE DBO ARCTIC CRUISE 2023

JANUARY 27TH | 8:30AM - 10:30AM | TUBUGHNENQ ROOM 3

The Distributed Biological Observatory (DBO) Arctic cruise in 2023 will occur on the Sikuliaq. This a planning meeting for that cruise and will include mission logistics, science objectives and coordination among cruise participants.



2023 AMSS Exhibitors

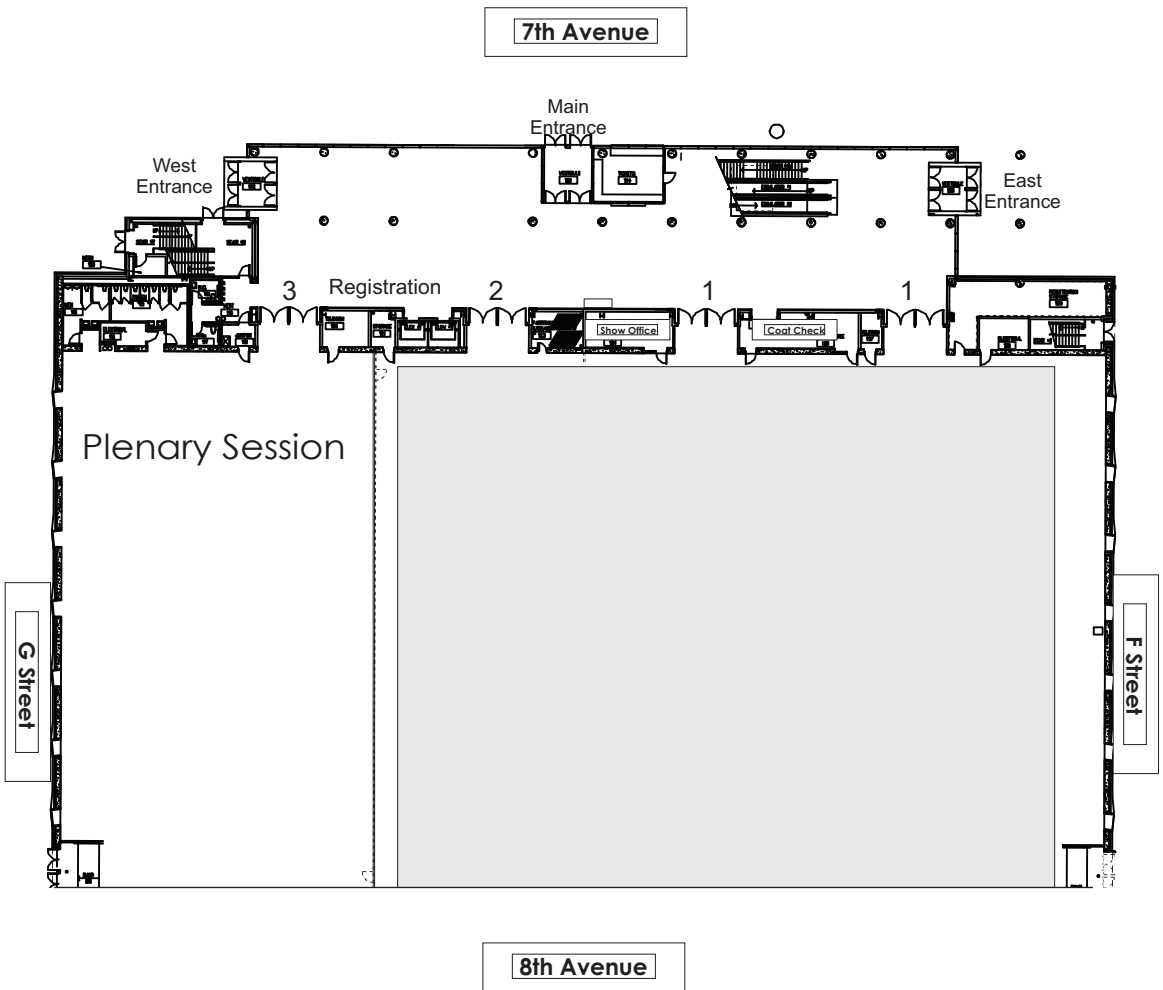
Alaska Mariculture Alliance
Alaska NSF EPSCoR
Alaska Ocean Observing System
ASL Environmental Sciences, Inc.
Bureau of Ocean Energy Management
Marine Mammal Commission
NOAA Alaska Regional Team
North Pacific Research Board
Oil Spill Recovery Institute

RBR
Support Vessels of Alaska, Inc.
The Indigenous Sentinels Network: Community-
Based Environmental Monitoring
Tsunami Bowl 2023
UAF College of Fisheries and Ocean Sciences
U.S. Arctic Research Commission
U.S. Geological Survey
U.S. Navy

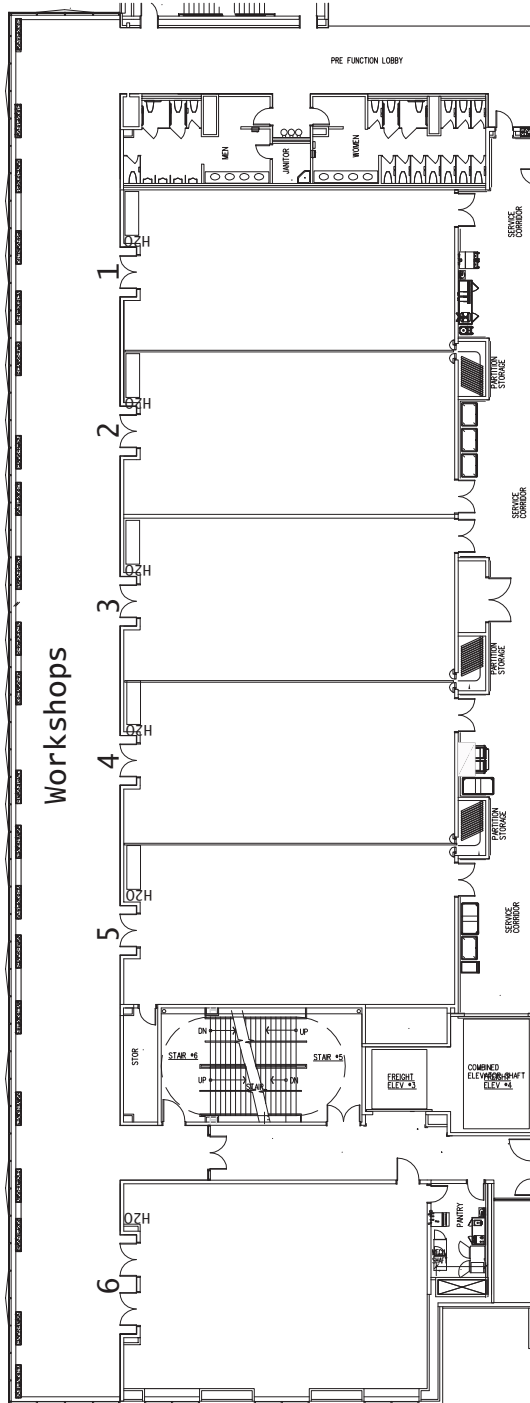


VENUE MAPS

Dena'ina Center – First Floor

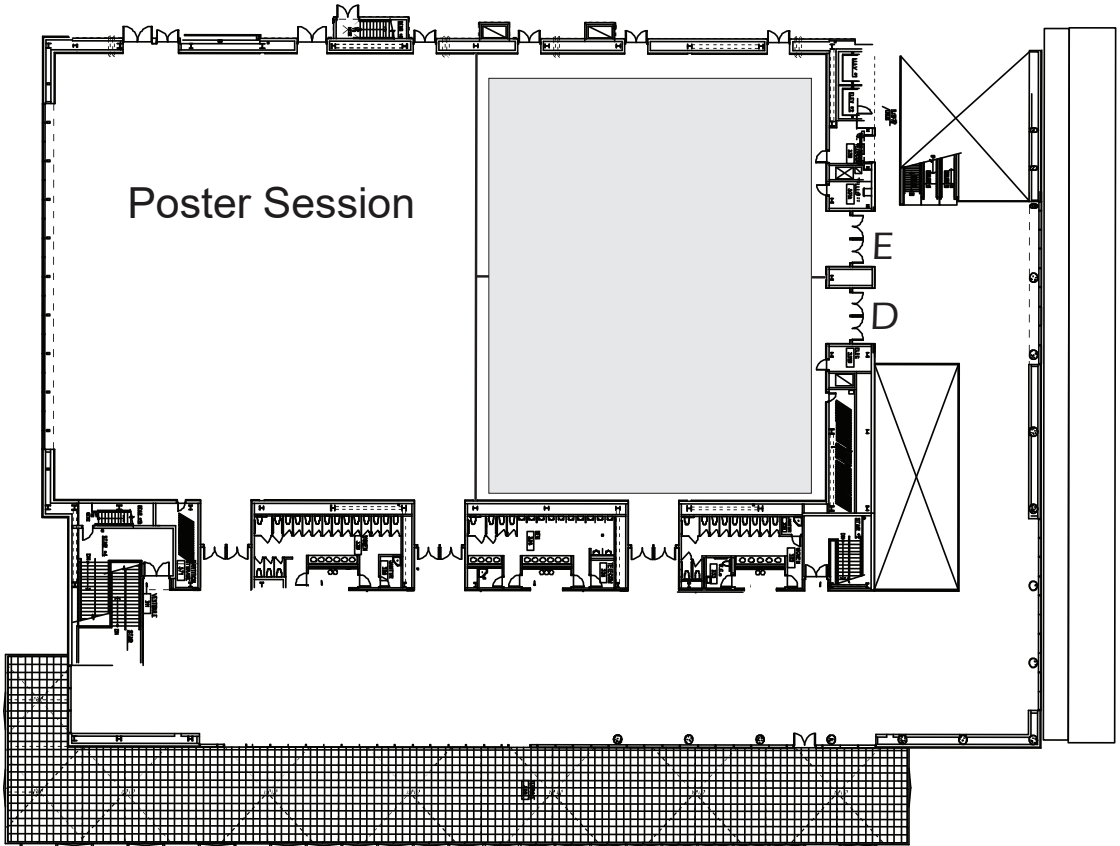


Dena'ina Center – Second Floor

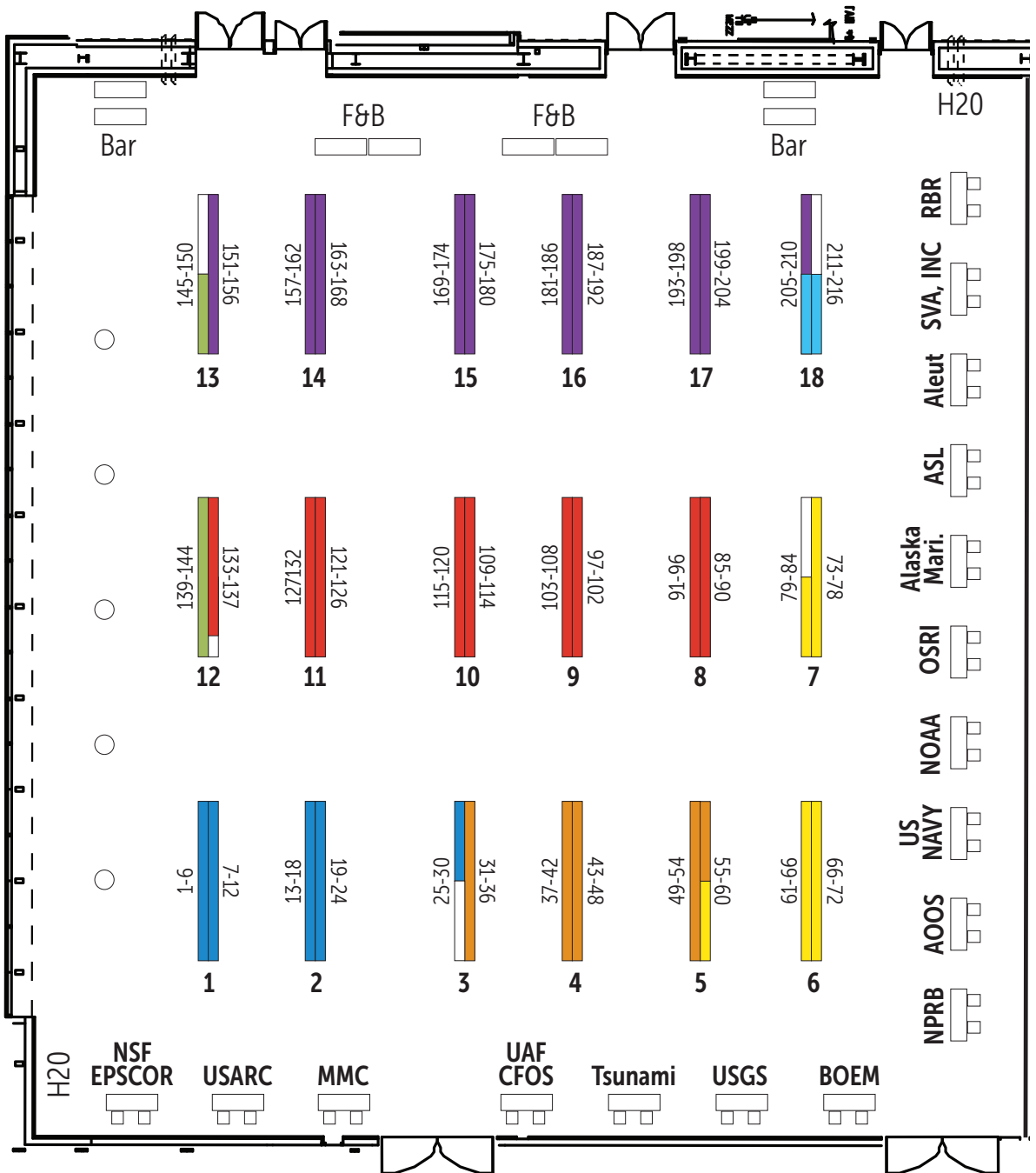


VENUE MAPS

Dena'ina Center – Third Floor



Dena'ina Center – Third Floor Guide Poster Presentations and Exhibitors



- Oceanography & Productivity
- Lower Trophic Levels
- Ecosystem Perspectives
- Fishes & Fish Habitats
- Seabirds
- Mammals
- Human

THANK YOU!

AMSS 2023 would not have been possible without the help of many volunteers!

Thank you to the AMSS Founders (NOAA, BOEM, NPRB, AOOS and EVOST). And a special thanks to the following individuals for coordinating key aspects of the Symposium:

Event Organizer

Kayla Wagenfehr, NPRB

Poster Session Coordinator

Kayla Wagenfehr, NPRB

Jill Prewitt, AOOS

Abstract Review Committee Chair

Danielle Dickson, NPRB

Abstract Book Production

Eric Cline, Terragraphica

Brendan Smith, NPRB

Exhibits Coordinator

Kayla Wagenfehr, NPRB

Keynote Speakers Chair

Matthew Baker, NPRB

Media Coordinator, Website, & Cvent Mobile App

Brendan Smith, NPRB

Workshops Coordinator

Holly Kent, AOOS

Student Awards Coordinator

Thomas Farrugia, AOOS

Registration, Time Keeping, Student Judging, and Poster Volunteers

We cannot thank you enough for donating your time!

THANK YOU, CONTRIBUTORS!



**North Pacific
Research Board**



**Alaska Ocean
Observing System**



**U.S. Bureau of Ocean Energy
Management**



**United States Arctic
Research Commission**



**Exxon Valdez Oil
Spill Trustee Council**



**Marine Mammal
Commission**



**National Oceanic and
Atmospheric Administration**



**North Pacific Fishery
Management Council**



**North Pacific Marine
Science Organization**



**United States
Geological Survey**



**Oil Spill Recovery
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