

Written Testimony of Mr. Tommy Sheridan
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Hearing on “The Blue Economy: Advancing American Fisheries, Maritime Industry, and Coastal
Economies”

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Chairman Sullivan, Ranking Member Blunt Rochester, and distinguished Members of the Committee, thank you for the opportunity to participate in the Subcommittee on Coast Guard, Maritime, and Fisheries Hearing on “The Blue Economy: Advancing American Fisheries, Maritime Industry, and Coastal Economies.” It is truly an honor to provide you with this written testimony.

My name is Tommy Sheridan, and I serve as the Director for the Alaska Blue Economy Center (ABEC) at the University of Alaska Fairbanks (UAF). ABEC is housed administratively in the university’s College of Fisheries and Ocean Sciences, or CFOS, where our world-class faculty educates future leaders in fisheries and marine science, while addressing pressing issues in aquatic ecosystems from the Arctic to Antarctica. ABEC’s role is to connect capacities throughout the University of Alaska, including CFOS, with problems, needs, and opportunities relating to the state’s blue economy. I come to you today with over two decades of experience living and working throughout and alongside Alaska’s blue economy, with experience as a hatchery manager in the state’s private nonprofit salmon fishery enhancement program, as a fishery manager for the State of Alaska Department of Fish and Game, in addition to roles in the seafood processing sector, most recently serving in a variety of capacities in academia. This written testimony and my accompanying oral comments are provided to you through my personal capacity as a private citizen, as a parent to two Alaskan schoolchildren, and as a resident of coastal Alaskan communities for the past 24 years.

Introduction

Alaska’s blue economy is as significant as the state is large. Alaska is about one-fifth the size of the contiguous United States, and if you overlaid a map of Alaska onto the “Lower 48,” it would stretch from the West Coast to the East Coast. Alaska’s coastline is equally immense and complex—it is longer than the coastlines of all other 49 U.S. states combined. The State of Alaska holds an abundant supply of natural resources including, among others, energy, mineral, timber, and seafood, presenting the country with unique opportunities for economic development and national security for generations to come.

Alaska is the fifth largest oil producing state in the country, and Alaskan natural gas reserves account for over 15% of the total proven gas available in the United States. Alaska holds over 56% of the total U.S. marine energy potential, and is home to significant hydroelectric and geothermal energy sources. Alaska is also a recognized global leader in microgrid technology, hosting an estimated 10% of all microgrids globally, and 50% of all microgrids in the United States. Alaskan oil and gas production and associated

activities are a linchpin for the state's blue economy, supporting over 45,000 direct, indirect, and induced jobs statewide.

Alaska's seafood industry continues to be one of Alaska's most important economic drivers, contributing about 7% to Alaska's gross domestic product (GDP), generating over \$5 billion in economic activity, and supporting more than 41,800 jobs. Alaskan seafood harvests account for roughly 63% of total U.S. seafood landings, producing more wild-caught seafood than all other states combined. For communities such as Cordova, where I've lived for 16 years, this economic activity is the lifeblood of the community, with associated taxes paying for critical services such as schools, harbors, and roads.

Alaska's tourism industry is considered a renewable natural resource and is a major contributor to Alaska's blue economy, generating \$5.6 billion in total economic impact in recent years, and supporting 48,000 jobs in Alaska. With recent and pending infrastructure investments in Whittier, Seward, Nome, and elsewhere, expectations are for future growth. Travelers are increasingly prioritizing nature, safety, open landscapes, and immersive outdoor experiences. Alaska's glaciers, fjords, wildlife, national parks, Indigenous cultural experiences, and increases in luxury expedition offerings are luring more visitors to Alaska, with a record 2.7 million out-of-state visitors traveling to Alaska between May and September 2025. Alaskan communities are collaborating with visitor industry leaders to develop innovative approaches, such as regenerative tourism, to ensure that this growth maximizes benefits to the state while preserving its inherent characteristics and value.

Last, but not least, Alaska's construction industry is a key part of the state's blue economy, making up one of the largest sectors in the state, employing over 20,000 people, and accounting for over \$6.5 billion in economic output annually. Federal spending acts as a major catalyst for Alaska's construction industry, and with current and projected construction projects, including multi-billion dollar developments on the North Slope, federal port and shipyard upgrades, and massive transportation and pipeline expansions, the Alaska Department of Labor and Workforce Development anticipates at least 17,260 new skilled trade construction workers will be needed in Alaska by 2028.

These industries, and others such as healthcare, mining, and state and local government, are integral components to Alaska's blue economy. However, Alaska's greatest asset is its people—Alaskans embody the grit, resilience, and independent spirit necessary to thrive in this Last Frontier, making them the true foundation for the state. And, unfortunately, that foundation is cracking.

Alaska's workforce challenge

Despite Alaska's geographic prowess and abundant resources, the state's population has been among the country's smallest since statehood in 1959. With a population of approximately 738,000 residents (in 2025), Alaska is the third-least populous state in the U.S., and the most sparsely populated state in the country. Of relevance to blue economy development, contributing factors to the state's workforce challenge include a shrinking working-age demographic, which has declined by over 34,000 people over the past decade due to an aging population, declining birth rates, and net migration (the number of people who move to Alaska in a given year, minus the number who leave). According to the Alaska Department of Labor and Workforce Development, the prime working age of Alaskans (aged 18 to 64) reached its lowest level (449,171 people in 2024) since 2008, and Alaska's net migration has been negative for 13 consecutive years. Alaska's K–12 student enrollment has also declined by more than 10,000 students since

2017 from a then-total of just over 130,000 students, further reducing the potential for a “homegrown” workforce, and all the benefits this provides.

In the absence of a local Alaskan workforce, employers must increasingly turn to nonresident workers. According to the most recent data available, the number of out-of-state workers has continued to rise in recent years, is at its highest level in over 30 years, and is nearing an all-time high. According to the Alaska Department of Labor and Workforce Development, almost 23% of non-federal jobs in Alaska were held by non-Alaskans who earned approximately \$3.8 billion in 2024, or, in other words, about 17% of every dollar earned from a non-federal job is leaving the state. Among the largest blue economy industries in the state, the seafood industry saw the highest percentage of non-resident workers at 81.5% of its workforce, which was the second highest percentage on record for the industry. The Alaskan oil and gas industry employed 40.5% nonresident workers, in a sector that pays some of the highest average wages in the state. A variety of visitor-related industries (including restaurants, hotels, air transportation, and tour operators) hired a nonresident workforce that comprised 35.2% of its total employment in 2024, and the Alaskan construction sector workforce was 23.4% nonresident that same year.

I believe, and evidence suggests, that an expanded Alaskan-grown workforce would be a critical economic engine for the state, offering benefits ranging from reduced employee turnover to long-term community stability. Local Alaskan workers are more likely to remain in the state long-term relative to nonresident workers, thereby reducing high recruitment costs associated with out-of-state hires common to remote coastal and seasonal industries, such as seafood processing and healthcare. Further, wages earned by Alaskan employees are spent locally, thereby supporting small businesses in the communities where they live. Alaskan workers also possess unique understandings of local climate, geography, and cultural nuances, which are essential for resource development activities, tourism, and other rural services. Ultimately, by providing rewarding career paths where they live, it is hoped that an increased focus on retaining “homegrown talent” can be a boon for Alaska’s blue economy, and its communities.

Alaskan solutions

To stop the flight of young Alaskan families leaving our state, we must change the horizon. **We must imagine an Alaska where science, fisheries, workforce development, and innovation work together so the next generation can build thriving futures in coastal communities.**

In their 2021 book on developing a workforce for the New Blue Economy, Liesl Hotaling, Rick Spinrad, and numerous contributing authors, provide insights on how the U.S. can build off of traditional blue economy industries, such as oil and gas, shipping, fishing, and tourism, to a reenvisioned economy centered on data, information, and knowledge. The authors argue that this transition will require innovative approaches to technology, skills acquisition, and talent development. I argue that Alaska’s workforce struggles and abundance of opportunities make it the ideal testing ground for these innovations, and highlight several here that are well underway in the state.

The authors assert that K-12 STEM (science, technology, engineering, math) education must move away from a traditional approach akin to a history course, where students memorize dates and accomplishments, to hands-on approaches where students learn practically, in collaborative learning environments, using technology-based problem-solving. This approach is alive and well in Alaska, where community-based scientific organizations such as the Sitka Sound Science Center and Prince William Sound Science Center

have bridged the gap between traditional research and the implicated communities, and have grown to include experiential learning opportunities for students both young and old (“K through grey”). These organizations work with and alongside traditional resource managers, university partners, and both in and outside of local school districts, oftentimes incorporating citizen science opportunities into their environmental education.

The authors further recommend intentional inclusion of workforce awareness and workforce preparation into K-12 STEM programs, regardless of where they occur. At the University of Alaska Fairbanks, Alaska Science Olympiad, and Teaching Through Technology (T3) work with middle school and high school students across the state of Alaska, where students are exposed to skills training aligned with Alaskan industry needs and standards, through a variety of skills assessments, tailored curriculum, and badging or certification programs. In Cordova, students in these programs have worked with Alaska Blue Economy Center (ABEC) and Cordova Chamber of Commerce to connect these opportunities with local and regional stakeholders as they observed real-world career pathways and emerging industries that promise to transform Alaska’s blue economy.

Improving access to connectivity and equipment, and addressing diversity, was recommended as well, and I note the role that ANSEP (historically known as the Alaska Native Science and Engineering Program) has played throughout the state for over 30 years as a sequential education model rooted in Alaska Native Values. Upward Bound is a federally funded program designed to help Alaskan high school students from low-income backgrounds and potential first-generation college students succeed academically and prepare for higher education. These programs serve students across the state, with regional hubs facilitating college-prep curriculum delivery, hands-on STEM activities, and cultural enrichment.

Hotaling and Spinrad highlight the need for engagement with and support of community colleges, vocational, and/or trade schools, as a prerequisite to workforce development for the New Blue Economy. In many cases, dual credit programs allow high school students to earn college credit while developing relevant and marketable skills, earning certificates and occupational endorsements along the way, with the potential of earning an Associate’s degree simultaneous to their traditional high school diploma. These students are then adequately prepared for direct entry into the workforce, or can pursue additional education in traditional university programs, such as those available at UAF CFOS, albeit with a different skillset than is common among entry-level undergraduate students. Prince William Sound College in Valdez, Alaska, is a notable Alaskan example whereby local high school students can learn from renowned instructors in areas such as Construction Skills, Marine Services Technology, Millwright, Natural Resources Technician, Marine Natural Resources Technician, and Outdoor Leadership. Another notable, relevant, and highly innovative Alaskan program is the Applied Fisheries Program at the University of Alaska Southeast’s Sitka Campus, where students are immersed in the exciting and emerging fields of aquaculture and mariculture through their highly regarded Alaska Aquaculture Semester.

Were we to invest in and support our students in these ways, the benefits would be significant, and our industries and communities would be armed with a locally rooted workforce prepared to address the many other complex problems facing Alaska. **If we are to build the state’s blue economy, we must build an Alaska where science, fisheries, workforce development, and innovation work together so the next generation can build thriving futures in coastal communities.**

Mariculture glidepath

As Alaskans look to reenvision coastal economies, and potentially repurpose their skillsets and assets towards new industries, mariculture (marine aquaculture of kelp and shellfish) has received significant attention and investment in recent years. The Exxon Valdez Oil Spill Trustee Council invested more than \$30 million in Alaskan mariculture-related projects and infrastructure in October 2021. The U.S. Economic Development Administration (EDA) awarded \$49 million to the “Alaska Mariculture Cluster” under its Build Back Better Regional Challenge (BBBRC) program in 2022. That same year, the Alaska Legislature allocated \$7 million to the University of Alaska to support mariculture research and development throughout the state. Finally, in 2024, the National Science Foundation (NSF) Established Program to Stimulate Competitive Research (EPSCoR) commenced its \$20 million “Interface of Change” project in select communities in northern Southeast Alaska, Prince William Sound, and Lower Cook Inlet, to develop partnerships between researchers, Gulf of Alaska community members, Tribes, educators, and entrepreneurs. Through these connections, project participants have worked collaboratively to investigate the resilience of marine species that are critical to the subsistence way of life as well as developments in the mariculture economy in the Gulf of Alaska.

Leveraging this momentum and these resources, and by following guidance laid out in the Alaska Mariculture Workforce Development Plan, the Alaska Blue Economy Center at UAF has partnered with Prince William Sound College (at the University of Alaska Anchorage) and the Applied Fisheries Program (at the University of Alaska Southeast) in developing an inspirational “glidepath” for mariculture-related workforce development in the state. Through these efforts, Alaskan middle school and high school students were introduced to mariculture through Science Olympiad and Teaching Through Technology, respectively, and were provided with opportunities for learning and potentially for direct entry into the state’s developing mariculture industry, along with opportunities for postsecondary vocational-technical education and/or matriculation into baccalaureate programs. Although this “glidepath” was developed for the state’s nascent mariculture industry, we believe that this approach can be modified and adopted for needs and opportunities in the state’s oil and gas industry, traditional seafood industry, visitor industry, and construction industry, and elsewhere.

Collaboration is key (capacity building)

Alaska’s blue economy succeeds when we invest in people, particularly K-12 students, connecting science, education, workforce development, and sustainable coastal industries so future generations can survive and thrive. In Alaska, these investments have always involved external partners and partnerships, such as those with the federal government and its agencies, both U.S. and international academic partners, and leaders from around the country and beyond, well before the phrase “blue economy” was first prominently introduced by Belgian economist Gunter Pauli in 1994. Internal collaboration in Alaska is equally essential for economic development in the state, as its vast geography and complex land ownership require diverse groups to work together. Partnerships between Alaska Native Corporations, municipalities, regional organizations, and state entities are vital to building resilient industries and communities.

These same approaches have been implemented at ABEC, albeit on a smaller, and oftentimes more local scale. For example, in 2022, the City of Valdez partnered with ABEC to support the city’s interests in mariculture development and the broader blue economy, with a goal of building capacity at ABEC, and helping to connect the City and its stakeholders with beneficial capacities at UAF. Located in Southcentral

Alaska, Valdez is a seamlessly connected hub accessible by land, air, and sea. Perched along miles of the pristine, clean, and deep waters of Prince William Sound, Valdez enjoys easy access to Alaska, the Arctic, and the world. Its strategic location allows Port of Valdez to be a gateway to Alaska's Interior, the Arctic, the U.S. Pacific Northwest, and the Pacific Rim. With direct access to Alaska's road system, as a regular stop on the Alaska Marine Highway System, and as the southern terminus of the Trans Alaska Pipeline System, the Port of Valdez ensures unparalleled access to the state and world beyond. As I (Sheridan) am moving to Valdez in 2026, it is hoped that ABEC can be of greater service to Valdez and its interests, including those pertaining to port and harbor infrastructure development, and discussions surrounding potentially home-porting U.S. Coast Guard Fast Response Cutters, icebreakers, and joint interagency operations. Leaders across Alaska, including those in Valdez, celebrated the Senate's passage of the Fiscal Year 2026 National Defense Authorization Act (NDAA), which includes the Coast Guard Authorization Act of 2026, and are grateful to Senator Sullivan and this Committee's work on that legislation.

Successful outcomes from this unique municipal-university relationship between ABEC and the City of Valdez include the Alaska Mariculture Cluster (AMC) being awarded \$49 million through the Economic Development Administration's (EDA) Build Back Better Regional Challenge grant program, which benefited from instigation and support by the city, including a \$6 million matching resource from the City in support of the AMC application. Further, ABEC catalyzed and supported of K-12 STEM programming in the local school district, including Science Olympiad and T3. ABEC has also worked closely with Prince William Sound College over the years on a variety of initiatives, especially mariculture.

External relationships made possible through federally funded university initiatives have also been beneficial to ABEC's development, and hold promise for the broader blue economy in the state. For example, ABEC has benefitted from funding through the Alaska Regional Collaboration for Technology Innovation and Commercialization (ARCTIC) Program. ARCTIC is sponsored by the Department of the Navy, Office of Naval Research (ONR), and is housed at the Alaska Center for Energy and Power (ACEP) at UAF. The ARCTIC Program is a partnership designed to promote capacity building and cooperation between Alaska and the Arctic and Pacific regions through advancements in energy technology through resiliency research, and technology development and deployment. ARCTIC's work to explore and establish Community Innovation Hubs in communities like Cordova and Kotzebue holds promise as testbeds for concepts and technologies of likely benefit elsewhere in the state. Similarly, ABEC has worked with the RISE-UP Program, which is another ONR-funded project underway in Alaska as part of a tri-state initiative uniting Rhode Island, Alaska, and Hawai'i, connecting education, research, and industry to accelerate ideas into real-world defense and commercial impact. Both programs have a core mission of building capacity within the communities they serve, the likes of which bode well for blue economy development in Alaska.

I also wish to illuminate the opportunity for ocean-based economic development in coastal states and communities through the support and development of increasingly successful ocean cluster models. The movement towards clusters is exemplified by organizations such as the Iceland Ocean Cluster, Maritime Blue in Seattle, the Oregon Ocean Cluster, TMA BlueTech in San Diego, the Rhode Island Ocean Tech Hub, along with new state efforts in Maine, Hawaii, and the Great Lakes. Academic-based development underway at schools such as Texas A&M University Galveston, the University of Southern Mississippi, and Oregon State University, are all good examples of public seed funding at the state level that is leading to systemic change and blue economy development.

These efforts stem from increasing recognition that ocean industries are among the fastest growing economic opportunities globally. Organizations such as the World Bank and the European Union have projected the value of the global blue economy will exceed \$3 trillion by 2030. And in addition to growth in traditional industries such as seafood, shipping, and energy development, emerging sectors such as marine biotechnology, coastal resilience, mariculture, and innovations in boatbuilding represent massive development potential. The Ocean Regional Opportunity and Innovation (Ocean ROI) Act of 2025 (S. Bill 1392) would provide the investment needed to develop the blue economy in Alaska, and elsewhere. Ocean ROA aspires to establish a federal Blue Economy strategy, creates Ocean Innovation Clusters in each National Marine Fisheries (NMFS) region, would grant up to \$10 million per cluster through 2030, and requires coordination among the EDA, National Oceanographic and Atmospheric Administration (NOAA), and Sea Grant.

Finally, I'll end with encouragement that we strive to develop Alaskan leaders, and the organizations they work for and through. In 2008, the renowned American political scientists Ed Weber and Anne Khademian describe the role that collaborative capacity-builders (CCBs) play in fostering the transfer, receipt, and integration of knowledge across networks, which can build long-term collaborative problem-solving capacity strong enough to address complex public, or wicked, problems, such as many that are facing Alaska today. Weber and Khademian define a CCB as someone who has been assigned a lead role in a network's problem-solving activities through the individual's legal authority, whose expertise is valued within the network, and who has a reputation as an honest broker. Although public managers are almost always involved with such networks, Weber and Khademian contend that CCBs do not always need to be public managers. In my opinion, any effort to identify and foster CCBs in Alaska's blue economy is essential to its development, and to the future of the state. An interdisciplinary PhD program is underway at UAF that aspires to develop such Alaskan leaders, drawing from pools of "changemakers" in a variety of fields. This program offers its students the opportunity to shape a dynamic curriculum that aligns with their unique goals and passions. This flexible and innovative program allows students to design a doctoral degree that spans multiple disciplines, going beyond the traditional offerings of the university, and I believe that such efforts can help to build and sustain Alaska's blue economy into the future.

In closing, I encourage this subcommittee to support four pillars: **first**, investment in K-12 STEM and local workforce development; **second**, funding for fisheries science and NOAA partnerships; **third**, expanded community-based education and applied research; and **fourth**, innovation to ensure our communities remain economically unshakeable.

So, let us choose to invest, and let us finalize a reality where we no longer have to just **imagine an Alaska where science, fisheries, workforce development, and innovation work together so the next generation can build thriving futures in coastal communities.**

Chairman Sullivan, Ranking Member Blunt Rochester, and distinguished Members of the Committee and staff, thank you once again for your invitation to testify here today, and I look forward to answering any questions you may have.