

**Cheryl L. Barnes, PhD** (she | they)

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## EDUCATION

PhD, Fisheries – UNIVERSITY of ALASKA FAIRBANKS (UAF) College of Fisheries and Ocean Sciences, Juneau Campus	2019
MS, Marine Science – MOSS LANDING MARINE LABORATORIES (MLML) Degree awarded by San José State University (SJSU)	2015
BS, Biology – SAN DIEGO STATE UNIVERSITY (SDSU) Emphasis: Marine Biology	2006

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## PROFESSIONAL EXPERIENCE (2006 to Date)

COASTAL OREGON MARINE EXPERIMENT STATION DEPARTMENT OF FISHERIES, WILDLIFE, AND CONSERVATION SCIENCES OREGON STATE UNIVERSITY [with support from Oregon Dept. of Fish and Wildlife] <i>Assistant Professor in Marine Fisheries</i>	2023-P
COOPERATIVE INSTITUTE for CLIMATE, OCEAN, and ECOSYSTEM STUDIES (CICOES) UNIVERSITY of WASHINGTON – Seattle, WA ALASKA FISHERIES SCIENCE CENTER, NOAA – Seattle, WA ALASKA REGIONAL OFFICE, NOAA – Juneau, AK <i>Research Scientist</i>	2022-2023
<i>Postdoctoral Scholar</i>	2020-2022
SCALE BACK CONSULTING, LLC – Anchorage, AK <i>Principal Investigator</i>	2020-2023
UNIVERSITY of ALASKA FAIRBANKS – Juneau, AK <i>Research Assistant</i>	2015-2019
CA COLLABORATIVE FISHERIES RESEARCH PROGRAM (CCFRP) – Moss Landing, CA <i>Lead Scientist</i>	2011-2014
<i>Volunteer Coordinator</i>	2010-2011
<i>Science Crew</i>	2010
CALIFORNIA SEA GRANT – San Diego, CA <i>Extension Program Representative</i>	2010-2014
SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA <i>Programs and Outreach Director</i>	2008-2010
<i>Marine Science Education Program Coordinator</i>	2008
MWR: COMMANDER FLEET ACTIVITIES – Sasebo, Japan <i>Head Lifeguard and Water Safety Instructor</i>	2007-2008
<i>Lifeguard</i>	2006-2007

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## TEACHING EXPERIENCE

AMERICAN FISHERIES SOCIETY – Virtual Workshop	2021
<i>Co-instructor: Spatiotemporal Analysis of Ecological Data</i>	
UNIVERSITY of ALASKA FAIRBANKS – Juneau, AK	
<i>Guest Lecturer: Making Ecological Inferences from Fisheries Data</i>	2018
<i>Teaching Assistant: Field Methods in Marine Ecology and Fisheries</i>	2017
UNIVERSITY of ALASKA SOUTHEAST: INTRO. to ALASKA FISHERIES – Juneau, AK	2016
<i>Guest Lecturer: Pacific Halibut Biology, Ecology, and Management</i>	
CA COLLABORATIVE FISHERIES RESEARCH PROGRAM – Moss Landing, CA	2011-2014
<i>Staff, Volunteer, and Participant Trainer: MPA Survey Objectives and Protocols</i>	
SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA	
<i>Marine Science Educator: Various 5-week K-12 Modules</i>	2008-2010
<i>Citizen Science Instructor: SCUBA Survey Methods and Species Identification</i>	2008-2010

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## AWARDS AND HONORS

Diversity and Inclusion Service Award, Western Division of the American Fisheries Society	2021
Top 10 Most Downloaded Papers <sup>^</sup> , Ecological Applications	2020
W.F. Thompson Award – Best Student Paper from 2018 <sup>*</sup> , American Institute of Fishery Biologists	2019
Dean's Recognition Award – Outstanding Graduate Student, UAF	2019
First Place – Student Talk <sup>1</sup> , Western Groundfish Conference	2018
Second Place – Student Poster <sup>2</sup> , Western Groundfish Conference	2016
Mirth Award, Western Groundfish Conference	2016
First Place – Student Poster <sup>3</sup> , Monterey Bay National Marine Sanctuary Symposium	2013
Dean's List – Honors Recognition, SDSU	2004, 2006
Student Travel Award, Wakefield Fisheries Symposium	2015, 2019
Student Travel Award, Alaska Chapter of the American Fisheries Society	2015, 2017, 2018
Student Travel Award, Western Groundfish Conference	2012, 2014, 2016, 2018
Student Travel Award, Western Division of the American Fisheries Society	2017
Student Travel Award, CSU Council on Ocean Affairs, Science, and Technology	2014
Student Travel Award, International Flatfish Symposium	2014

Superscripts correspond to items in 'PUBLICATIONS' and 'SELECTED PRESENTATIONS'

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## MENTORSHIP

### *Undergraduate Students*

A. Aines (2013)	D. Duncan (2013)	Z. Johanson (2016)	R. Rand (2011-12)
D. Anaya (2013)	A. Feck (2009)	A. Kamber (2017)	M. Schmidt (2012)
K. Askeland (2010)	A. Gile (2015)	L. Knopp (2009)	E. Schurig (2013)
M. Bargas (2017)	N. Giraud (2009)	K. Kuhn (2008)	S. Saadat (2010-11)
K. Beck (2014)	C. Giordano (2014)	J. Li (2020-21)	P. Saengcharoentrakul (2021)
E. Bjork (2008)	A. Hedger (2009)	S. Link (2016)	N. Siababa (2014)
S. Briley (2008)	E. Hetherington (2009)	S. Lomonico (2014)	E. Stollmeyer (2013)
K. Brown (2016)	F. Holman (2022-P)	M. Mairz (2010)	H. Wayner (2016-17)
A. Chorazyczewski (2014)	C. Homer (2018)	R. McCollough (2013)	D. Weir (2009)
C. Doles (2013)	C. Hope (2010)	P. Muehlenbeck (2012)	

### *Post-Baccalaureate Research Assistants*

J. Antus (2009)	S. Robinson (2011)	A. Sloan (2014)
H. Heath (2013-14)	K. Ros (2010)	

### *Graduate Students*

G. Hunt (2015)	H. Delgado-Nordmann (2016)
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## GRANTS AND FELLOWSHIPS

Alaska Sea Grant Program Development Award (AK Chapter AFS) – \$8,850	2022
California Sea Grant Program Development Award (WSN) – \$4,000; \$9,999	2021; 2022
Magnuson-Stevens Act Implementation, PIs: J. Thorson, J. Pirtle, T. Essington – \$229,306	2020-2022
Northern Gulf of Alaska Applied Research Award – \$10,000	2018-2019
Rasmuson Fisheries Research Center Graduate Fellowship – \$78,901	2017-2019
Pollock Conservation Cooperative Research Center, PI: A. Beaudreau – \$201,516	2015-2019
SJSU Associated Students Advocacy Award – \$500	2014
SJSU Graduate Equity Fellowship – \$3,000	2013-2014
Santa Monica Seafood's Responsible Sourcing Vendor Partner Grant (CCFRP) – \$15,000	2013-2014
Clarence F. and Lyle V. Burmahln Scholarship – \$500	2013
Dr. Earl M. Myers and Ethel M. Myers Oceanographic and Marine Biol. Trust Grant – \$1,500	2013
MLML Scholar Award: Michael Lee Environmental Foundation – \$2,200	2013
Xiphias Martin Scholarship: John H. Martin Family – \$500	2013
Lucille and David Packard Foundation Research and Travel Grant – \$1,000	2013
CSU Council on Ocean Affairs, Science, and Technology Graduate Student Award – \$3,000	2013
California Sea Grant: Program Development Award (SDOF) – \$9,900	2010

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## PUBLICATIONS

### Published, In Press, or Accepted

Thorson JT, **Barnes CL**, Friedman ST, Morano JL, and Siple MC. In press. Seven examples of how spatially-varying slope models are essential for species distribution models. *Ecogr.* Forthcoming.

Brodie S, Smith JA, Muhling BA, Kaplan IC, Barnett LAK, Carroll G, Fiedler P, Bograd SJ, Hazen EL, Jacox MG, Andrews KS, **Barnes CL**, Crozier L, Fiechter J, Fredston A, Haltuch MA, Harvey CJ, Holmes E, Karp MA, Liu OR, Malick MJ, Buil MP, Richerson K, Rooper CN, Samhoury J, Seary R, Selden RL, Thompson AR, Thorson J, Tommasi D, Ward EJ, and Zabel R. In press. Recommendations for quantifying and reducing uncertainty in projections of species distributions. *Glob Change Biol.* e16371.

**Barnes CL**, Essington TE, Pirtle JP, Rooper CN, Laman EA, Holsman KK, Aydin KY, and Thorson JT. 2022. Climate-informed models benefit hindcasting but present challenges when forecasting species-habitat associations. *Ecogr.* e06189.

Dorn MW and **Barnes CL**. 2022. Time-varying predation as a modifier of constant natural mortality for Gulf of Alaska pollock. *Fish Res. VSI Natural Mortality.* 254(2022):106291.

Grüss A, Thorson JT, Stawitz CC, Reum JCP, Rohan SK, and **Barnes CL**. 2021. Synthesis of interannual variability in spatial demographic processes supports the strong influence of cold-pool extent on eastern Bering Sea walleye pollock (*Gadus chalcogrammus*). *Progr Ocean.* 194(2021):102569

**Barnes CL**, Beaudreau AH, and Yamada RN. 2021. The role of size in trophic niche separation between two groundfish predators in Alaskan waters. *Mar Coast Fish.* 13:98–113. doi: 10.1002/mcf2.10141

**Barnes CL**<sup>^</sup>, Beaudreau AH, Dorn MW, Holsman KK, and Mueter FJ. 2020. Development of a predation index to assess trophic stability in the Gulf of Alaska. *Ecol Appl.* 30(4):e02141. doi:10.1002/eap.2141

**Barnes CL**<sup>\*</sup>, Beaudreau AH, Hunsicker ME, and Ciannelli L. 2018. Assessing the potential for competition between Pacific Halibut (*Hippoglossus stenolepis*) and Arrowtooth Flounder (*Atheresthes stomias*) in the Gulf of Alaska. *PLoS ONE.* 13(12):e0209402.

Superscripts correspond to items in 'AWARDS and HONORS'

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## PUBLICATIONS, CONT'D

- Barnes CL** and Starr RM. 2018. Reproductive tactics of California Halibut (*Paralichthys californicus*): combining spawning season, interspawning interval, and batch fecundity to estimate annual reproductive output for a multiple-batch spawning fish. CalCOFI Rep. 59:102–114.
- Lesyna KM and **Barnes CL (corresponding author)**. 2016. Assessment of length- and age-at-maturity for California Halibut (*Paralichthys californicus*), including a histologically-based description of the reproductive cycle. Calif Fish Game. 102(3):79–99.
- Barnes CL**, Starr RM, and Reilly PN. 2015. Growth, mortality, and reproductive seasonality of California Halibut (*Paralichthys californicus*): a biogeographic approach. CalCOFI Rep. 56:110–118.
- Starr RM, Wendt DE, **Barnes CL**, Marks CI, Malone D, Waltz G, Schmidt KT, Chiu J, Launer AL, Hall NC, and Yochum N. 2015. Variation in responses of fishes across multiple reserves within a network of marine protected areas in temperate waters. PLoS ONE. 10(3):e0118502.
- Starr RM, Cortés J, **Barnes CL**, Green K, and Breedy O. 2012. Characterization of deepwater invertebrates at Isla del Coco National Park and La Gemelas Seamount, Costa Rica. Int J Trop Biol. 60(3):303–319.
- In Preparation
- Barnes CL**, Dorn MW, Reum JCP, Essington TE, and Punt AE. In prep. The potential for trophic cascades in an ever-changing ecosystem recently impacted by marine heatwaves.
- Holsman KK, **Barnes CL**, Aydin KY, Thorson JT, Zador S, Barbeaux SJ, Laurel BJ, Hurst TP, and Heintz RA. In prep. Patterns in foraging and energetics of mid-trophic level predators in the Bering Sea.
- Barnes CL**, Waltz GT, Hamilton SL, Ruttenberg BI, Starr RM, *et al.* In prep. Synchrony as a measure of resilience for temperate groundfish communities.

Superscripts correspond to items in 'AWARDS and HONORS'

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## SELECT PRESENTATIONS

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|---|------|
| WESTERN SOCIETY of NATURALISTS – Oxnard, CA   | 2022 |
| ECOSYSTEM STUDIES of SUBARCTIC AND ARTIC SEAS – Seattle, WA   | 2022 |
| — Climate-informed models benefit hindcasting but present challenges for forecasting species-habitat associations |      |
| ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Virtual  | 2022 |
| WESTERN SOCIETY of NATURALISTS – Virtual  | 2021 |
| — Model complexity has contrasting effects for hindcasting and forecasting species responses to climate change    |      |
| CENTER for the ADVANCEMENT of POPULATION ASSESSMENT METHODOLOGY – Virtual   | 2021 |
| — Predation as a modifier of constant natural mortality for Gulf of Alaska pollock                                |      |
| ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK   | 2020 |
| PICES (North Pacific Marine Science Organization) – Victoria, BC  | 2019 |
| — Development of a predation index to assess trophic stability in the Gulf of Alaska                              |      |
| ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Sitka, AK  | 2019 |
| — Spatiotemporal variation in consumption of Walleye Pollock by major groundfish predators in the Gulf of Alaska  |      |
| WAKEFIELD FISHERIES SYMPOSIUM – Anchorage, AK   | 2019 |
| — Comparative resource use by two groundfish species in nearshore SE Alaska                                       |      |
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## SELECT PRESENTATIONS, CONT'D

ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Sitka, AK	2019
INTERNATIONAL PACIFIC HALIBUT COMMISSION SEMINAR SERIES – Seattle, WA	2018
WESTERN GROUNDFISH CONFERENCE – Seaside, CA <sup>1</sup>	2018
WESTERN DIVISION of the AMERICAN FISHERIES SOCIETY – Anchorage, AK	2018
WESTERN SOCIETY OF NATURALISTS – Tacoma, WA	2018
— Assessing the potential for competition between Pacific Halibut and Arrowtooth Flounder in the Gulf of Alaska	
POLLOCK CONSERVATION COOP. RESEARCH CENTER – Anchorage, AK	2016, 2017, 2018, 2010
RASMUSON FISHERIES RESEARCH CENTER – Anchorage, AK	2018, 2019
ALASKA FISHERIES SCIENCE CENTER, NOAA: GROUNDFISH SEMINAR – Seattle, WA	2018
— Ecological interactions among major groundfish species in the Gulf of Alaska	
ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK	2017
ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Fairbanks, AK	2017
— A comparative assessment of resource use by Pacific Halibut and Arrowtooth Flounder throughout the Gulf of Alaska	
AMERICAN FISHERIES SOCIETY: WESTERN DIV. STUDENT COLLOQUIUM – McCall, ID	2017
WESTERN SOCIETY of NATURALISTS   Monterey, CA	2016
— A comparative assessment of resource use by Pacific Halibut and Arrowtooth Flounder: results from a small-scale field study	
ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK	2016
WESTERN GROUNDFISH CONFERENCE – Newport, OR <sup>2</sup>	2016
— Calculating an index of predation to improve the stock assessment for Walleye Pollock in the Gulf of Alaska	
WESTERN GROUNDFISH CONFERENCE – Newport, OR	2016
AMERICAN FISHERIES SOCIETY: ALASKA CHAPTER, STUDENT SYMPOSIUM – Juneau, AK	2015
WAKEFIELD FISHERIES SYMPOSIUM – Anchorage, AK	2015
— Growth, mortality, and reproductive seasonality of CA Halibut: a biogeographic approach	
ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Homer, AK	2015
— Effects of demography, trophic interactions, and the environment on major groundfish species in the Gulf of Alaska	
— Exploring environmental and demographic drivers of resource overlap among major groundfishes in the Gulf of Alaska	
INTERNATIONAL FLATFISH SYMPOSIUM – Cle Elum, WA	2014
— Age, growth, and reproductive potential of California Halibut	
MARINE: OCEANS COLLOQUIUM   Moss Landing, CA	2014
MONTEREY BAY NAT'L MARINE SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA <sup>3</sup>	2014
— Reproductive biology of California Halibut: results from the Central Coast	
MOSS LANDING MARINE LABORATORIES: OPEN HOUSE SEMINAR – Moss Landing, CA	2014
— Flatfish fecundity: evaluating the reproductive nature of a prolific spawner	
MPA COLLABORATIVE NETWORK	2014
— Key findings from monitoring Monterey Bay's marine protected areas	

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**SELECT PRESENTATIONS, CONT'D**

WESTERN GROUNDFISH CONFERENCE – Victoria, Canada	2014
— MPA monitoring: more than just the latest and greatest in marine conservation trends	
WESTERN GROUNDFISH CONFERENCE – Victoria, Canada	2014
WESTERN SOCIETY of NATURALISTS – Tacoma, WA	2014
— Reproductive biology of California Halibut: results from the Central Coast	
CCFRP – Half Moon Bay & Moss Landing, CA	2014, 2013, 2012
— Research objectives, data collection procedures, data analyses and results	
— MPA monitoring, project results, and data interpretations	
CALIFORNIA DEPARTMENT of FISH and WILDLIFE – Belmont, CA	2013
— CCFRP workshop: objectives, results, and interpretations	
MONTEREY BAY NAT'L MAR. SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA	2013
— Reproductive characteristics of California Halibut off central California, with comparisons to the Southern California Bight <sup>1</sup>	
MOSS LANDING MARINE LABORATORIES, OPEN HOUSE SEMINAR – Moss Landing, CA	2013
— Spawning characteristics of California Halibut in Monterey Bay	
WATSONVILLE AREA TEENS CONSERVING HABITATS PROGRAM – Watsonville, CA	2013
— Reproductive characteristics of California Halibut off central California, with comparisons to the Southern California Bight	
WESTERN SOCIETY of NATURALISTS – Oxnard, CA	2013
— Reproductive biology of California Halibut: evidence from the Central Coast	
EXPANDING YOUR HORIZONS NETWORK – Monterey, CA	2012
— Fishing for our future: fisheries biology and resource management	
MONTEREY BAY NAT'L MARINE SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA	2012
— Collaborative fisheries research: a transition from data-poor to data-rich management	
MOSS LANDING MARINE LABORATORIES, OPEN HOUSE SEMINAR – Moss Landing, CA	2012
— Fishing for science: the California Collaborative Fisheries Research Program	
WESTERN GROUNDFISH CONFERENCE – Seattle, WA	2012
— Collaborative fisheries research: a transition from data-poor to data-rich management	
SAN DIEGO BAY SYMPOSIUM – San Diego, CA	2009
— SDOF's White Seabass Restoration Project and its relevance to San Diego Bay	

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## PROFESSIONAL SERVICE AND OUTREACH ACTIVITIES

SCIENTIFIC AND STATISTICAL COMMITTEE, PACIFIC FISHERY MGMT COUNCIL Oregon Department of Fish and Wildlife Appointment	2023-P
PEER REVIEWS Ecosphere, Exxon Valdez Oil Spill Trustee Council, Fisheries Research, Fishery Bulletin, Frontiers in Marine Science, ICES Journal of Marine Science, Journal of Applied Ecology, Journal of Fish Biology, PLoS ONE, Bulletin of the Southern California Academy of Sciences	
NEWPORT PRIDE, Planning Committee / Founding Board of Directors	2022-P
AMERICAN FISHERIES SOCIETY, ALASKA CHAPTER Annual Meeting Planning Committee Diversity, Equity, and Inclusion Committee (Chair) Program, Awards (co-Chair), and Entertainment Committees Executive Committee	2017, 2019, 2021, 2022, 2023 2018-P 2018-2019 2015-2017
AMERICAN FISHERIES SOCIETY, WESTERN DIVISION Diversity and Inclusion Committee Annual Meeting Planning Committee	2018-P 2021
AMERICAN FISHERIES SOCIETY, Diversity, Equity, and Inclusion Committee	2021-2023
WESTERN GROUND FISH CONFERENCE, Steering Committee	2019-2022
WESTERN SOCIETY of NATURALISTS (WSN), Diversity, Equity, & Inclusion Committee	2018-2022
SKYPE A SCIENTIST, Volunteer	2018-2022
ALASKA FISHERIES SCIENCE CENTER (AFSC, NOAA), Gender Equity Working Group	2021
UNIVERSITY OF ALASKA FAIRBANKS Assistant Professor in Quantitative Fisheries Search Committee Graduate Academic and Advising Committee Professional Development Workshop Organizer	2018-2019 2017-2019 2018
SOUTHEAST ALASKA LGBTQIA+ ALLIANCE Volunteer; Board Member	2015-2019; 2018-2019
SITKA SOUND SCIENCE CENTER, Scientist in the Schools Volunteer	2018
PARTNERSHIP for INTERDISCIPLINARY STUDIES of COASTAL OCEANS, Volunteer	2013-2014, 2018
ALASKA FISHERIES SCIENCE CENTER (NOAA), Bottom Trawl Survey Volunteer	2017
MOSS LANDING MARINE LABORATORIES Curriculum Committee Donations Committee Chair <sup>a</sup> ; Advisor <sup>b</sup> Associated Student Body Vice President	2012-2014 <sup>a</sup> 2011-2012; <sup>b</sup> 2013-2014 2011-2012
MPA COLLABORATIVE NETWORK, Participant	2011-2014
TEACHER ENHANCEMENT PROGRAM, Marine Science Educator	2013
WATSONVILLE AREA TEENS CONSERVING HABITATS PROGRAM, Science Mentor	2012-2013
EXPANDING YOUR HORIZONS NETWORK, Young Women in Science Volunteer	2011-2013
MONTEREY BAY AQUARIUM, DSCVR Young Women in Science Mentor	2011, 2013
SAN DIEGO STATE UNIVERSITY, Graduate Research Assistant	2010
SAN DIEGO SCIENCE & ENGINEERING FAIR, Professional Society Judge	2009-2010
SAN DIEGO COASTKEEPER, Outreach and Community Event Intern	2005-2006

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## SELECT ASSOCIATIONS, TRAININGS, AND CERTIFICATIONS

500 QUEER SCIENTISTS: Member	2017-P
500 WOMEN SCIENTISTS: Member	2017-P
ALASKA CLIMATE INTEGRATED MODELING (ACLIM): Collaborator	2020-P
ALASKA MARINE SAFETY EDU ASSOC: Cold Water Survival, Skiff Operator	2015, 2017
AMERICAN ACADEMY of UNDERWATER SCIENCES: Scientific Diver, Member	2010-P
AMERICAN FISHERIES SOCIETY: Western Division and Alaska Chapter Member	2015-P
AMERICAN INSTITUTE OF FISHERY RESEARCH BIOLOGISTS: Member	2019-P
AMERICAN RED CROSS:	
CPR, AED, First Aid, Administering Emergency O <sub>2</sub>	2006-2015
Lifeguard and Water Safety Instructor; Fundamentals of Instructor Training	2006-2008
AMERICAN STATISTICAL ASSOCIATION: Alaska Chapter Member	2019-P
CA DEPT. of BOATING and WATERWAYS: Boating Education Certificate	2011
CA OCEAN SCIENCE TRUST, CA Citizen Science Initiative: Participant	2014
CAREERSTONE GROUP, Managing Up: Workshop Participant	2021
COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE:	
Working with the IACUC; Field and Lab Animal Researchers	2015-2018
ECOLOGICAL SOCIETY of AMERICA: Member	2019-P
EPSCoR, Mindful Leadership   Creating a Diverse and Inclusive UA: Workshop Participant	2018
EQUAL EMPLOYMENT OPPORTUNITY COMM., Beyond the Binary: Workshop Participant	2021
MORALE, WELFARE, and RECREATION, COMM. FLEET ACT: Power Boat Operator	2007
NAT'L ASSOC. of UNDERWATER INSTRUCTORS: Master SCUBA Diver and Nitrox Diver	2010
NAT'L CENTER for ECOLOGICAL ANALYSIS and SYNTHESIS (NCEAS):	
Reproducible Research Techniques for Synthesis Workshop Participant	2019
NAT'L COUNCIL FOR BEHAVIORAL HEALTH: Mental Health First Aid USA	2018
NOAA Pride Employee Resource Group: Member	2020-P
oSTEM: Member	2019-P
PROFESSIONAL ASSOCIATION of DIVING INSTRUCTORS:	
Open Water, Advanced Open Water, Rescue Diver; Dive Master	2006, 2007, 2009; 2010
REEF CHECK CALIFORNIA: UPC, Algae, Invertebrate, and Fish Surveyor	2010
REEF ENVIRON. EDU. FDN: Marine Algal, Invertebrate, and Expert Fish Surveyor	2008
SACNAS: Member	2022-P
SACNAS Native Initiatives, Creating More Inclusive Spaces in STEM: Workshop Participant	2021
TRIMBLE: Intermediate Mapping and GIS Certificate	2011
UNDERGRAD. RES. OPPORTUNITIES CTR, CSU MONTEREY BAY: Mentor	2014
UNITED STATES COAST GUARD: Small Vessel Operator	2015
WESTERN SOCIETY of NATURALISTS: Member	2010-P

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REFERENCES AVAILABLE UPON REQUEST