

M KEITH COX, PhD
Senior Environmental Scientist
kcox@coxenv.com

Dr. Keith Cox is a senior-level scientist at Cox Environmental Services with more than 25 years of experience in aquatic biology, environmental research, and applied biotechnology. His multidisciplinary career spans federal research, academic leadership, fisheries science, and scientific device innovation. An expert in physiological ecology and bioelectrical impedance analysis (BIA), he has developed groundbreaking tools and methods used to assess environmental health, organism condition, and food quality. He has held multiple leadership roles, including directing university programs, founding scientific organizations, and serving as CEO for technology-focused companies. His applied research, grant leadership, and extensive scientific communication background support high-quality environmental project execution, strong interdisciplinary collaboration, and effective communication with clients, communities, and regulators.

EDUCATION

Ph.D. Forest Resource Science (Agricultural Physiology) – West Virginia University, 2004
M.S. Aquatic Biology – Texas State University, 1998
B.S. Biology – Centenary College of Louisiana, 1993
Post-Doctoral Research – University of Alaska Fairbanks; USDA National Center for Cool & Cold Water Aquaculture; Oregon State University (2004–2006)
Additional Professional Programs – ICorps (NSF), VentureWell Ocean Enterprises, gBeta Accelerator (2025)

ENVIRONMENTAL & SCIENTIFIC EXPERTISE:

- Environmental Sampling & Analysis (fish, wildlife, freshwater & marine systems)
- Physiological Ecology & Bioenergetics
- Bioelectrical Impedance Analysis (BIA) Development & Application
- Habitat Assessment, Survey Design & Field Data Collection
- Ecological Modeling & Energy Budget Evaluation
- Research Design, Statistical Analysis & Data Interpretation
- Scientific Instrument R&D and Validation
- Technical Reporting, Scientific Publishing & Public Presentations
- NEPA Evaluations (Environmental Impact Statements)

PROFESSIONAL EXPERIENCE

Cox Environmental Services – Juneau, AK

Senior Environmental Scientist (2024–Present)

Provides technical leadership for sampling programs and ecological assessments, applying expertise in physiology, bioenergetics, and field and analytical methods.

Bialume Technologies – Juneau, AK

Co-Founder & Chief Executive Officer (2025–Present)

Develops and commercializes handheld impedance spectroscopy technology for molecular- to tissue-level biomarker measurement. Leads strategic direction, research integration, product development, and scientific oversight.

Cox Environmental Services
11806 Glacier Highway Juneau, AK 99801
907.586.4447 www.coxenv.com



Certified Quality Foods, Inc. – Juneau, AK

Founder & Chief Scientific Officer (2020–Present)

Created and leads scientific development of food-quality assessment tools using BIA to evaluate freshness, degradation, and compositional metrics in seafood and agricultural products.

XPrize Foundation – Culver City, CA

Science Judge (2014–Present)

One of eight global judges shaping criteria and evaluating protein production technologies for the \$15M “Feed the Next Billion” XPrize competition.

University of Alaska Southeast – Juneau, AK

Director, ANSEP & Assistant Professor (2013–2018)

Led STEM education initiatives, taught microbiology and metabolism, and advised Alaska Native students in science and engineering fields.

NOAA National Marine Fisheries Service – Auke Bay Laboratory

Fisheries Research Scientist (2008–2013)

Conducted physiological and ecological studies on Pacific salmon and herring, advancing non-lethal assessments of fish condition.

Sitka Sound Science Center – Sitka, AK

Co-Founder & President (2007–2008)

Led establishment and operational management of the center, including research programs, education, permitting, and hatchery oversight.

SELECTED AWARDS & HONORS**Alaska Innovators Hall of Fame – Inductee (2021)**

Recognized for pioneering research in BIA technology and scientific innovation.

SELECTED PUBLICATIONS & CONTRIBUTIONS

Author of more than 40 peer-reviewed papers, theses, reports, patents, and conference proceedings focused on bioenergetics, BIA methods, fisheries physiology, food quality, and ecological modeling. Work has been published in North American Journal of Fisheries Management, Frontiers in Physiology, Canadian Journal of Fisheries, and others.

PROFESSIONAL MEMBERSHIPS

American Fisheries Society • International Impedance Society • Pacific Fisheries Technologists • University of New England Affiliations

JOB RELATED CERTIFICATES AND LICENSES

100 Gross Ton Inland Masters Boat License, 50 Gross Ton Near Shore, Uninspected Vessel Near Shore Boat License, SCUBA – Advanced Open Water, Private Pilot (mountain flying certified), Swift Water Rescue, Firearms Safety (including bear safety), OSHA 40-HR HAZWOPER

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