

LISA M. WEDDING

Research Associate in Spatial Ecology and Analysis
Stanford University - Center for Ocean Solutions

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EDUCATION

- 2010 **Ph.D., Geography** with a specialization in Ecology, Evolution and Conservation Biology, University of Hawaii at Manoa
Dissertation title: *Applying a Landscape Ecology Approach to Quantify the Structure, Ecology and Use of the Seascape by Coral Reef Fish Assemblages at Multiple Scales.*
- 2006 **M.A., Geography**, University of Hawaii at Manoa
- 2003 **B.A., Marine Science**, University of Hawaii at Hilo
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PUBLICATIONS

- Young, M., Wedding, L.M., and Carr, M. (in press) Applying Landscape Ecology Metrics to Evaluate Networks of Marine Protected Areas. Chapter 14 in *Seascape Ecology: Taking Landscape Ecology into the Sea*. Pittman, S. J. eds. Wiley and Sons.
- Pittman, S., Lepczyk, C., Wedding, L.M., and Parrain, C. (in press) Advancing a Holistic Systems Approach in Applied Seascape Ecology. Chapter 12 in *Seascape Ecology: Taking Landscape Ecology into the Sea*. Pittman, S. J. eds. Wiley and Sons.
- Mach, M.M., L.M. Wedding, S.M. Reiter, F. Micheli, R.M. Fujita, and R.G. Martone (2017) Assessment and management of cumulative impacts in California's network of marine protected areas. *Ocean & Coastal Management* 137(1):1-11. <http://dx.doi.org/10.1016/j.ocecoaman.2016.11.028>
- Wedding, L.M., Reiter, S., Hartge, E., Guannel, G., et al. (2016) Modeling and Mapping Coastal Ecosystem Services to Support Climate Adaptation Planning. In Dawn J. Wright, ed.: 2016; *Ocean Solutions, Earth Solutions*. Chapter 20, pages 389-410. DOI: [10.17128/9781589483651_d](https://doi.org/10.17128/9781589483651_d)
- Reineman, D., Wedding, L.M., Hartge, E., McEnery, W., and J. Reiblich (2016) Access, Equity, and Environmental Change on the California Coast. *Stanford Environmental Law Journal*.
- Selkoe, K.S., Tremblay, E.A., Wren, J.A., Gaggiotti, O., Donovan, M., Wedding, L.M. et al. (2016) The DNA of Coral Reef Biodiversity – Predicting and Protecting Genetic Diversity of Reef Assemblages. *Proceedings of the Royal Society B: Biological Sciences* Vol. 283. No. 1829. DOI: [10.1098/rspb.2016.0354](https://doi.org/10.1098/rspb.2016.0354)
- Wedding LM, Maxwell SM, Hyrenbach D, Dunn DC, Roberts JJ, Briscoe D, Hines E, Halpin PN. (2016) Geospatial Approaches to Support Pelagic Conservation Planning and Adaptive Management. *Endangered Species Research*. Vol: 30, 1-9. 2016. DOI: [10.3354/esr00716](https://doi.org/10.3354/esr00716)
- Wedding, L.M., Reiter, S.R., Smith, C.R., Gjerde, K.M., Kittinger, J.N., Friedlander, A.M., Gaines, S.D., Clark, M.R., Thurnherr, A.M., Hardy, S.M. and L.B. Crowder. (2015) Managing Mining of the Deep Seabed. *Science* 349 (6244):144-145. DOI: [10.1126/science.aac6647](https://doi.org/10.1126/science.aac6647)
- Reiter, S.M., Wedding, L.M., Hartge, E., LaFeir, L and M.R. Caldwell (2015) Climate Adaptation Planning in the Monterey Bay Region: An Iterative Spatial Framework for Engagement at the Local Level. *Natural Resources*. 6, 375-379. DOI: [10.4236/nr.2015.65035](https://doi.org/10.4236/nr.2015.65035)
- Wedding, L.M. and M. Yoklavich (2015) Habitat-based Predictive Mapping of Rockfish Density and Biomass off the Central California Coast. *Marine Ecology Progress Series*, 540: 235–250, DOI: [10.3354/meps11442](https://doi.org/10.3354/meps11442)

- Gove, J., Williams, G.J., McManus, M.A., Clark, S. J., Ehses, J.S., Wedding, L.M. (2015) Coral Reef Benthic Regimes Exhibit Non-linear Threshold Responses to Natural Physical Drivers. *Marine Ecology Progress Series*. 522: 33–48.
- Jouffray, J.B., Nystrom, M., Norstrom, A., Williams, I., Wedding, L.M., et al. (2014) Identifying Multiple Coral Reef Regimes and their Drivers across the Hawaiian Archipelago. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 370: 20130268. DOI: [10.1098/rstb.2013.0268](https://doi.org/10.1098/rstb.2013.0268)
- Pittman, S.J., Monaco, M.E., Friedlander, A.M., Legare, B., Nemeth, R.S., Kendall, M.S., Poti, M., Clark, R.E., Wedding, L.M. et al. (2014) Fish with Chips: Tracking Reef Fish Movements to Evaluate Size and Connectivity of Caribbean Marine Protected Areas. *PLoS One* 9(5): e96028. DOI: [10.1371/journal.pone.0096028](https://doi.org/10.1371/journal.pone.0096028)
- Wedding, L.M., Friedlander A.M., Kittinger, J.N., Watling L., Gaines, S.D., et al. (2013) From Principles to Practice: A Spatial Approach to Systematic Conservation Planning in the Deep Sea. *Proceedings of the Royal Society B: Biological Sciences*. 280:20131684. DOI: [10.1098/rspb.2013.1684](https://doi.org/10.1098/rspb.2013.1684)
- S. Pittman, Wedding, L.M., and B. Costa (2013) LiDAR Applications. Chapter 6 in Goodman, Purkis & Phinn (eds.) *Coral Reef Remote Sensing*, 145-174, DOI: [10.1007/978-90-481-9292-2_6](https://doi.org/10.1007/978-90-481-9292-2_6)
- Wedding, L.M., C. Lepczyk, S. Pittman, Friedlander A. and S. Jorgensen. (2011) Quantifying Seascape Structure: Extending Terrestrial Spatial Pattern Metrics to the Marine Realm. *Marine Ecology Progress Series – special issue on seascape ecology*, 427: 219–232.
- Friedlander, A.M., L.M. Wedding, J. E. Caselle and B.M. Costa (2011) Integration of Remote Sensing and In-situ Ecology for the Design and Evaluation of Marine Protected Areas: Examples from Tropical and Temperate Ecosystems. Pages 246-272 in: *Remote Sensing of Protected Lands* (Y.Q. Wang, ed.). CRC Press, Boca Raton, Florida.
- Wedding, L.M., Gibson, B., Walsh, W. and T. Battista. (2011) Integrating Remote Sensing Products and GIS Tools to Support Marine Spatial Management in West Hawaii. *Journal of Conservation Planning*, 7; 60 - 73
- Byungyun Y., J. Kaplan, J. Sisskind, L. Wedding, M. Leh, M. Graham, N. Pai, and T. Kalayci (2009) Book Review: Manual of Geographic Information Systems. *Photogrammetric Engineering and Remote Sensing*, 75, 1263-1266.
- Wedding, L.M., and A. Friedlander. (2008) Determining the Influence of Seascape Structure on Coral Reef Fishes in Hawaii Using a Geospatial Approach. *Marine Geodesy*, 31, 246-266.
- Wedding, L.M., A. Friedlander, M. McGranaghan, R. Yost and M. Monaco (2008) Using Bathymetric LiDAR to Define Nearshore Benthic Habitat Complexity: Implications for Management of Reef Fish Assemblages in Hawaii. *Remote Sensing of Environment*, 112, 4159-4165.

TECHNICAL REPORTS

- Menza, C., L. Wedding, Clark R., Caldow, C., Monaco, M. (2012). *Baseline Assessment of Fish and Coral Bays, St. John, U.S. Virgin Islands in Support of Watershed Restoration Activities*. NOAA Technical Memorandum NOS NCCOS. Silver Spring, MD.
- Monaco, M., Battista, T., Kendall, M., Wedding, L., Clarke, A., Anderson, M., Rohman, S. (2012) *National Summary of NOAA's Shallow-water Benthic Mapping of U.S. Coral Reef Ecosystems*. NOAA Technical Memorandum NOA NCCOS 122. Silver Spring, MD.
- Friedlander, A., L. Wedding and M. Monaco (eds.) (2010) *Monitoring Hawaii's Marine Protected Areas: Examining Spatial and Temporal Trends Using a Seascape Ecology Approach*. NOAA Technical Memorandum NOS NCCOS. Silver Spring, MD.

- E. Naughton, Wedding, L. and P.Jokiell (eds.) (2010) *Processing Hawaii Shallow Water LiDAR Data into an Ecologically Relevant Bathymetric Framework*. Coral Reef Assessment and Monitoring Program Technical Paper 14. Honolulu, HI
- Friedlander, A., K. Keller, L. Wedding, A. Clarke and M. Monaco (eds.) (2009) *A Marine Biogeographic Assessment of the Northwestern Hawaiian Islands*. NOAA Technical Memorandum NOS NCCOS 84. Silver Spring, MD. 363 pp.
- Wedding, L. (2003) *Benthic Habitat Mapping of West Hawaii Marine Life Conservation Districts Utilizing Remotely Sensed Data*. Hawaii NASA Space Grant Consortium: Undergraduate Fellowship Reports. HSGC Report Number 03-11, pp. 66-71.

RESEARCH AWARDS AND FELLOWSHIPS

2015	\$175,000	Stanford Woods Institute for the Environment: Realizing Environmental Innovation Grant (PIs Gretchen Daily & Debbie Sivas)
2013	\$20,000	NOAA Pacific Islands Regional Species of Concern Grant (PI: Cindy Hunter)
2012	\$96,200	NMFS Stock and Habitat Assessment Improvement (PI: Mary Yoklavich)
2012	\$5,000	California Sea Grant Program Development Grant (PI: David Hyrenbach)
2012	\$200	NSF Advancement Towards Professorship in Biology, Ecology and Env't.
2011	\$200	H. J. Wiens Memorial Award for graduate scholarship in landscape ecology
2010	\$7,775	NSF Geography and Spatial Sciences Dissertation Improvement Award
2010	\$8,000	UH Graduate Division Dissertation Completion Award
2010	\$550	NASA MSU Professional Enhancement Award
2009	\$200	AAG International Geographic Information Fund Student Paper Award
2009	\$38,853	NOAA Biogeography Branch Research Assistantship
2009	\$20,102	NOAA Pacific Islands Regional Species of Concern Grant (PI: Cindy Hunter)
2008	\$500	Hawaii Geographic Information Coordinating Council GIS Student Award
2007	\$95,826	NOAA Biogeography Branch Research Assistantship
2005	\$99,930	NOAA Biogeography Branch Research Assistantship
2005	\$33,648	National Park Service Research Assistantship
2002	\$3,000	NASA Undergraduate Space Grant Fellowship

RESEARCH EXPERIENCE

- EARLY CAREER SCIENCE FELLOW** – Center for Ocean Solutions, Stanford University (October 2013 - present)
- MARINE SPATIAL ECOLOGIST - POSTDOCTORAL SCHOLAR** – University of California at Santa Cruz/NOAA Fisheries. (September 2011 - 2013)
- MARINE LANDSCAPE ECOLOGIST** - NOAA Biogeography Branch. (December 2010 to August 2011)
- GRADUATE RESEARCH ASSISTANT** - Hawaii Institute of Marine Biology, University of Hawaii/NOAA Biogeography Branch. (August 2006 to 2010)
- GRADUATE RESEARCH ASSISTANT** - Pacific Cooperative Studies Unit, University of Hawaii/National Park Service. (August 2003 to 2006)

TEACHING EXPERIENCE

- LECTURER** *ESM 296-4: Advanced GIS*. University of California at Santa Barbara, Bren School (2014-present)
- GUEST LECTURER** *BIOHOPK 173H/273H: Marine Conservation Biology*. Stanford University, Hopkins Marine Station (2013-2015)

LECTURER *ESM 296-3: GIS for Marine Ecology*. University of California at Santa Barbara, Bren School (2013)

GUEST LECTURER *Marine & Coastal Conservation and Spatial Planning - Lecture and Lab*. San Francisco State University, Romberg Tiburon Center for Environmental Studies (2014-2015)

LECTURER *BIOL 403: Field Problems in Marine Biology*. University of Hawaii at Manoa, Department of Biology (2009-2014)

GUEST LECTURER *Summer at SEA Field Program*. Sea Education Association/University of Hawaii at Manoa (2010)

GUEST LECTURER *BIOL 301: Marine Ecology and Evolution*. University of Hawaii at Manoa, Department of Biology (2010)

GUEST LECTURER *NREM 691: Landscape Ecology*. University of Hawaii at Manoa, Department of Natural Resources and Environmental Management (2009)

INSTRUCTOR *GEOG 488: Geographic Information Systems*. University of Hawaii at Manoa, Department of Geography (2009)

VOLUNTEER EDUCATOR *National Science Foundation GK-12 Program*, University of Hawaii at Manoa (2008-2009)

CURRICULUM DEVELOPMENT *Hawaii Geographic Information Coordinating Council*. Created curriculum to integrate GIS and remote sensing into Hawaii public schools (2008-2009)

GUEST LECTURER *TPSS 680: Geospatial Analysis of Natural Resource Data*. University of Hawaii at Manoa, Department of Tropical Plant and Soil Science (2007)

STUDENT ADVISING AND MENTORING

Masters internship advisor: UCSB, Hilary Walecka (2014)

Masters internship advisor: CSUMB, Jessica Blakely (2012-2013)

PhD Dissertation Comprehensive Exam Committee member: UCSC, Mary Young (2013)

Young Women in Science Volunteer Mentor. Monterey Bay Aquarium, Young Women in Science program, Monterey, CA (2012-present)

Volunteer Mentor. MentorNet. (2010 – 2012)

INVITED PRESENTATIONS

ESRI Ocean GIS Forum. *Evaluating the Role of Natural Habitat in Increasing Coastal Resilience*. Redlands, CA. November 2014.

Moss Landing Marine Lab. *Quantifying spatial patterns across the seascape to support marine management at multiple scales*. April 18, 2013. Seaside, CA.

California State University at Monterey Bay. *Predictive Modeling and Mapping of Demersal Fish Assemblages*. October 8, 2012. Seaside, CA.

USGS GIS Working Group. *GIS Applications in Spatial Fisheries Management.* Santa Cruz, CA. March 19, 2012.

NOAA Fisheries Ecology Division. *Quantifying Spatial Patterns across the Seascape to Support Marine Management at Multiple Scales.* Santa Cruz, CA. March 20, 2012.

University of California at Santa Barbara, Marine Science Institute. *Seascape-level Assessment of Marine Protected Areas in Hawaii: Implications for Management.* Santa Barbara, CA. February 2012.

Scripps Institute of Oceanography. *Applying a Geospatial Approach to Marine Research.* San Diego, CA. May 30 2011.

University of the Virgin Islands. *Applying a Landscape Ecology Approach to Quantify the Structure, Ecology and Use of the Seascape by Coral Reef Fish Assemblages.* St. Thomas, USVI. March 2, 2010.

MAPPS Association of Photogrammetry, Mapping, and Geospatial Firms. *Hawaii Marine Geospatial Applications.* Kahului, Maui. January 26, 2010.

Coastal and Estuarine Research Federation. *Quantifying Marine Landscape Structure: Extending Terrestrial Spatial Pattern Metrics to the Marine Realm.* Portland, OR. November 2, 2009.

University of Hawaii at Hilo, Geospatial Seminar *Using GIS to Support Marine Research and Management.* April 24, 2009.

University of Hawaii at Manoa, Map Library *Coastal Geographic Information System (GIS) Applications in Hawaii .* February 4, 2009.

NOAA Center for Coastal Monitoring and Assessment Research Seminar. *Quantifying Spatial Patterns of Fish Assemblages to Inform Marine Management Actions in Hawaii.* Silver Spring, MD. April 22, 2008.

Hawaii Geographic Information Coordinating Council. *Integrating GIS and Remote Sensing to Support Marine Conservation and Management Actions.* Honolulu, HI. March 6, 2008.

Pacific Coral Reef Monitoring and Mapping Meeting. *Refining Benthic Habitat Maps to Incorporate Finer-Scale Features in Hawaii's Marine Life Conservation Districts.* Honolulu, HI. April 28, 2006.

NOAA Center for Coastal Monitoring and Assessment Research Seminar. *Assessing the Role of Habitat Structuring Coral Reef Fish Assemblages in Hawaii: Implications for MPA Design at Multiple Spatial Scales.* Silver Springs, MD. April 6, 2006.

INVITED WORKSHOPS

San Francisco State University. *Marine GIS Applications.* San Francisco, CA. March, 2016.

University of the Virgin Islands. *GIS Tools to Support Marine Spatial Planning.* St. Thomas, USVI. March 2, 2010.

Hawaii Geographic Information Coordinating Council. *Planning Marine Field Surveys Using Geospatial Technology.* Honolulu, HI. September 22, 2009.

Society for Conservation GIS. *Using a GIS Framework to Apply a Spatially Integrated Approach to Marine Conservation and Management.* Monterey, CA. August 12, 2008.

PAPER PRESENTATIONS

Restoring America's Estuaries. *Mapping and Modeling Coastal Vulnerability to Inform Climate Adaptation Planning.* New Orleans, Louisiana, December 13, 2016.

International Coral Reef Society. *Quantifying Anthropogenic and Environmental Drivers of Coral Reef Ecosystem Change.* Honolulu, Hawaii. June 21, 2016.

International Congress for Conservation Biology. *Session Synthesis: Integrated Social-Ecological Framework to Support Marine Spatial Planning.* Montpellier, France. August, 6 2015.

American Geophysics Union Fall Meeting. *Incorporating Natural Capital into Climate Adaptation Planning: Exploring the Role of Habitat in Increasing Coastal Resilience.* San Francisco, CA. December 2014.

GEOHAB. *Predictive Mapping of Groundfish Species to Advance Stock Assessments.* Rome, Italy. May 9, 2013.

American Society of Photogrammetry and Remote Sensing. *Applying Bathymetric LiDAR Data to Support Spatially Explicit Modeling of Reef Fish Assemblages.* San Antonio, TX. November 18, 2009.

International Marine Conservation Congress. *Coupling GIS and Remote Sensing to Support Predictive Mapping of Fish Assemblages and Effective MPA Design.* Washington, D.C. May 23, 2009.

American Association of Geographers. *Integrating Geomorphological, Biological, and Human Dimension Information in GIS to Aid in the Design of Effective Deep Sea Marine Protected Areas.* Las Vegas, NV. March 25, 2009.

American Society of Photogrammetry and Remote Sensing. *Extracting Ecologically Relevant Geomorphic Metrics from Bathymetric LiDAR Data.* Baltimore, MD. March 13, 2009.

American Association of Geographers. *The Influence of Seascape Structure on Reef Fishes: Evaluating the Efficacy of MPA Design in Hawaii.* Boston, MA. April 16, 2008.

Western Society of Naturalists. *Exploring the Relationship between Fish Assemblage Structure and Habitat Complexity Using Remote Sensing Data in Hawaii.* Ventura, CA. November 10, 2007.

American Association of Geographers. *Deriving Digital Surface Models from Bathymetric LiDAR Data for Benthic Terrain Analysis.* San Francisco, CA. April 21, 2007.

Coastal Zone Asia-Pacific Conference. *Evaluating Coral Reef Fish Nursery Habitat in a Hawaiian Marine Protected Area.* Batam, Indonesia. August 29, 2006.

Society for Conservation Biology. *Using LiDAR Data to Examine Habitat Complexity and Ecology of a Coral Reef.* San Jose, CA. June 28, 2006.

ESRI International User Group Conference. *The Creation of a Marine Geodatabase to Support Management at Pacific Island National Parks.* San Diego, CA. July 27, 2005.

George Wright Society. *Preliminary Results of the US National Park Service Pacific Islands Coral Reef Program Marine Spatial Database Efforts.* Philadelphia, PA. March 14, 2005.

GIS Mapping in Asia and the Pacific (GISMAP). *Development of the US National Park Service Pacific Islands Coral Reef Program Marine Spatial Database.* June 8, 2004.

ESRI Regional User Group Conference. *Benthic Habitat Mapping of West Hawaii Marine Life Conservation Districts Utilizing Remotely Sensed Data.* March 3, 2003.

PROFESSIONAL SERVICE

Reviewer: *Deep Sea Research; Ecosphere; Environmental Biology of Fishes; Environmental Management, Estuarine, Coastal and Shelf Science; Fisheries Research; International Journal of Tropical Biology, Marine and Freshwater Research; Marine Biology; Marine Ecology Progress Series; Marine Geodesy; Remote Sensing; PLOS One; Remote Sensing of Environment*

Session Chair: *Integrated Social-Ecological Framework to Support Marine Spatial Planning.* International Congress for Conservation Biology. Montpellier, France. August, 6 2015.

Professional GIS User Group and Workshop Organizer: *Monterey Bay Marine GIS User Group. User Group Meeting and Marine Geospatial Ecology Tools Workshop.* (2011 to present)

Session Co-Chair: *Advances, Challenges and Future Directions in Geospatial Technology to Support Open Ocean and Deep Sea Conservation and Management.* Society for Conservation Biology. July, 2012.

NOAA 2012 Ernest F. Hollings Undergraduate Scholarship Reviewer. NOAA Office of Education, Student Scholarships Program

Marxan Workshop Organizer: *PACMARA Introduction to Marxan.* Honolulu, HI. August 16-17, 2011.

Scholarship Committee Reviewer. *Hawaii Geographic Information Coordinating Council.* Honolulu, HI. 2009-2010.

Session Chair: *Hawaii Marine Geospatial Applications.* MAPPS Association of Photogrammetry, Mapping, and Geospatial Firms. Kahului, Maui. January 26, 2010.

Session Chair: *The Hiring Process: Tips for Success.* American Society of Photogrammetry and Remote Sensing annual meeting, San Antonio, TX. November, 18 2009.

Webinar Organizer and Panelist. *Introduction to Digital Elevation Models.* ASPRS Student Advisory Council and Intermap Technologies. November 12, 2009.

Invited Session Panelist. *Marine Geomorphology and Mapping II.* American Association of Geographers. Las Vegas, NV. March, 2009.

Session Chair: *(1) Career Planning and Professional Development for Graduate Students (2) Academic Publishing (3) Preparing Competitive Scholarship and Grant Proposals.* American Society of Photogrammetry and Remote Sensing annual meeting, Baltimore, MD. March 9-13, 2009.

Educational Development Counselor: *American Society of Photogrammetry and Remote Sensing Student Advisory Council.* 2008-2010.

Graduate Student Representative: *UH Department of Geography representative for the Graduate Student Organization and grant review committee member* 2008-2010.

Session Co-Chair: *Marine Conservation and MPA Networks Session*. Coastal Zone Asia-Pacific Conference. Batam, Indonesia, August 30, 2006.

PRESS

- U.N. body issues exploration contracts as era of deep sea mining nears, July 26, 2015, *The Japan Times*
 - Deep-sea mining regulations need stronger environmental protections. July 16, 2015, *IndyBay*
 - Call for halt on deep-sea mining could impact Vancouver's Nautilus Minerals. July 13, 2015 *Business Vancouver*
 - Scientists want to try eco-friendly approach to deep-sea mining. July 13, 2015 *Tech Times*
 - Scientists show rising concern about deep-sea mining, July 13, 2015, *CNBC*
 - Calls for more deep sea mining protections. July 11, 2015, *Scoop*
 - Environmental groups call for regulation as world dives into deep sea mining. July 10, 2015, *The Washington Post*
 - Waters southeast of Hawaii a center of debate on sea mining. July 10, 2015 *West Hawaii Today*
 - Scientists, environmentalists call for freeze in deep sea mining permits. July 10, 2015, *mining.com*
 - US researchers propose eco-friendly strategy to extract deep sea resources. July 10, 2015, *mining-technology.com*
 - Marine protection zones should come before deep sea mining, say scientists. July 9, 2015, *Popular Science*
 - Scientists want balance between deep-sea mining and ecosystem sustainability. July 9, 2015, *Honolulu Civil Beat*
 - Managing mining of the deep seabed. July 9, 2015, *Phys.org*
 - Conservation group calls for more deep sea mining protections. July 9, 2015, *UPI*
 - Managing mining of the deep seabed. July 9, 2015, *Science Daily*
 - Conservation group calls for more deep sea mining protections. July 9, 2015, *Big News Network*
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CERTIFICATIONS AND TRAINING

AAUS Scientific Diver (100 foot depth rating); PADI Divemaster, NAUI Nitrox Diver; CPR and First Aid Training; DAN Oxygen Administration

SOFTWARE/ANALYSIS SKILLS

ArcGIS, R and Python programming languages, GS+, JMP, Microsoft Word, Excel, Access and Powerpoint

PROFESSIONAL REFERENCES

Dr. Jennifer Smith (Scripps Institute of Oceanography, UCSD – Associate Professor in Marine Ecology and Conservation) Scripps Institution of Oceanography, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92083-0202; Phone: (858) 246-0803; Email: smithj@ucsd.edu;

Dr. Chris Lepczyk (Auburn University- Associate Professor, Department of Fisheries and Wildlife) School of Forestry and Wildlife Sciences, 602 Duncan Drive, Auburn University, Alabama 36849; Phone: 808-725-9063; Email: lepczyk@auburn.edu

Dr. Cynthia Hunter (University of Hawaii at Manoa - Associate Professor, Biology & Director of Marine Option Program); Department of Biology, 2538 McCarthy Mall, Edmondson Hall, Room 216, Honolulu, HI 96822; Phone: 808-956-4748; Email: cindyh@hawaii.edu

Dr. Dawn Wright (Environmental Systems Research Institute –Chief Scientist) Phone: 909 793 2853 x2182; Email: dwright@esri.com