

SANDY RAIMONDO

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PROFESSIONAL EXPERIENCE (Since 2003)

- 2025 – present Chairperson, Department of Plant and Soil Sciences, College of Agriculture and Natural Resources, University of Delaware
- 2018 – 2025 Senior Research Ecologist, US Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Measurement and Modeling (CEMM), Gulf Ecosystem Measurement and Modeling Division (GEMMD; Formerly Gulf Ecology Division)
- 2013 – 2018 Branch Chief, Supervisory Research Ecologist, EPA/ORD, National Health and Environmental Effects Research Laboratory (NHEERL), Gulf Ecology Division (GED)
- 2016 – 2017 Director, Gulf Ecology Division (Acting; Senior Executive Service position), 1-year competitive detail. EPA/ORD/NHEERL/GED
- 2005 -2013 Research Ecologist GS-0408-14, EPA/ORD/NHEERL/GED
- 2009 Biologist, 60 day detail. EPA, Office of Pesticide Programs, Environmental Fate and Effects Division, Washington, DC
- 2003 - 2005 Postdoctoral Research Associate, EPA/ORD/NHEERL/GED
- 2003 Statistical Analyst, US Department of Agriculture Forest Service, Morgantown, WV. GS-0408-09

EDUCATION

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| Ph.D. | Entomology | West Virginia University |
| M.S. | Biology | Marshall University, magna cum laude |
| B.S. | Biology | Pennsylvania State University |

INVITED ENGAGEMENTS (Past 10 years)

- 2015 Invited presenter. *Spatially explicit case study of an estuarine fish following the Deepwater Horizon Oil spill: evaluating tradeoffs in model complexity*. SETAC North America 36th Annual Meeting, Salt Lake City, UT.
- 2015 Invited presenter. *Biological diversity and environmental conservation*. Institute of Human and Machine Cognition. Pensacola, FL.
- 2018 Invited manuscript submission, 100th Volume Special Edition. Barron, M.G., J. Krzykwa, C.R. Lilavois, S. Raimondo. 2018. Photo-enhanced toxicity of weathered crude oil in sediment and water to larval zebrafish. *Bulletin of Environmental Contamination and Toxicology*. 100: 49-53.

- 2018 Invited presenter. *How do you know? When does bias against uncertainty get in the way of making a decision?* SETAC North America 39th Annual Meeting, Sacramento, CA.
- 2019 Invited presenter. *Web-based acute toxicity estimation application (Web-ICE) augments species sensitivity data for chemicals with little information.* Federal-State Toxicology Risk Analysis Committee (FSTRAC).
- 2019 Invited Keynote Speaker. *Little fish, big world: Find opportunities beyond the research plan.* Southeast Regional Chapter of the Society of Environmental Toxicology and Chemistry (SE SETAC).
- 2019 Workshop participant. *Advancing Adverse Outcome Pathway Development for Nanomaterial Risk Assessment and Categorization.* Organisation for Economic Co-operation and Development (OECD). 11-12 September 2019, Paris, France. [virtual]
- 2020 Invited presenter. *Toxicity Translation: An emerging theme for modeling to understand adverse effects of chemical exposures on wildlife populations.* Society of Environmental Toxicology and Chemistry (SETAC) Europe, 3-7 May 2020, Dublin, Ireland. [virtual]
- 2020 Invited presenter. *Identifying uncertainty trade-offs of ecological risk assessment objectives to guide model complexity.* Society of Environmental Toxicology and Chemistry (SETAC) Europe, 3-7 May 2020, Dublin, Ireland. [virtual]
- 2020 Invited presenter. *Web-based Interspecies Correlation Estimation Models.* EPA Office of Water technical workgroup for PFAS chemicals.
- 2021 Invited presenter. *Population model Guidance, Use, Interpretation, and Development for Ecological Risk Assessment.* Crop Life America (CLA)-Responsible Industry for a Sound Environment (RISE) Regulatory Conference.
- 2021 Invited presenter. *Considerations for listed species within EPA's ecological risk assessment process.* National Academies of Sciences, Engineering, and Medicine public meeting on "Environmental Impacts of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage".
- 2022 Invited presenter. *The Web-based Interspecies Correlation Estimation (Web-ICE) tool for ecological risk assessment.* EPA Tools and Resources Training Webinar Series.
<https://www.epa.gov/research-states/epas-web-ice-toxicity-extrapolation-tool-training-webinar-archive>
- 2022 Invited presenter. *Application of Interspecies Correlation Estimation (ICE) models in EPA's regulatory frameworks.* SETAC 43rd North America Annual Meeting, Pittsburgh, PA. 13-17 Nov 2022.
- 2023 Invited presenter and panelist. *The importance of standardized toxicological methods for aquatic organisms.* National Academy of Sciences, Engineering, and Medicine workshop to advance research on understanding environmental effects of UV filters from sunscreens. Washington, D.C. 23-24 Jan 2023.
- 2023 Keynote speaker. *Reality Check: What can we expect from an Ecological Risk Assessment of UV-filters on coral reefs.* Personal Care Products Council Science Symposium. Washington, D.C.
- 2023 Invited presenter. *Improving realism in Ecological Risk Assessment.* Partnership for the Assessment of Risks from Chemicals | Parc (eu-parc.eu). Virtual. 12 May 2023.
- 2023 Invited presenter. *Accepting the separation of toxicology and statistics in New Approach Methodologies in Ecological Risk Assessment.* 12th World Congress for Alternatives and Animal Testing in the Life Sciences. Niagara Falls, Canada. 28-31 August 2023.
- 2023 Invited presenter. *Improving Realism in Ecological Risk Assessment (ERA) with Toxicity Translation.* European Food Safety Authority. 27 October 2023.
- 2024 Invited speaker. *Evaluating sunscreen impacts on the environment: EPA's path forward.* New York Society of Cosmetic Chemists. Weehawken, NJ, USA. 3 June 2024.

2024 Invited speaker. *Untangling coral sensitivity to UV filters and moving towards standardized methods for Ecological Risk Assessment*. Personal Care Products Council Science Symposium. Washington, D.C.

HONORS & AWARDS

EPA Awards

Scientific & Technical Achievement Awards (2006, 2007, 2009, 2011 x 2, 2014, 2017 x 2, 2021 x 2)
Office of Water Honor Award for Achievement in Science and Technology for developing the first U.S. national water quality criteria for PFOA and PFOS (2023)
Office of Water award for expert scientific support in developing draft estuarine/marine benchmark values for PFOA and PFOS ambient water quality criteria (2022)
Office of Water Honor Award for Achievement in Science and Technology for the development of the Biological Condition Gradient for coral reefs (2021)

EPA Office of Research and Development Honor Awards

Safe and Sustainable Water Resources Research Program award for expert scientific support in developing Statement of Task for National Academy of Sciences Sunscreen study (2021)
Bronze Medal for FY19-22 Research Planning Team (2009, 2011, 2014, 2020)
Impact Award for Web-ICE international application (2012, 2019)
Diversity Award for Supervisor/Manager (2012)
Special Accomplishment Award (2010, 2011)
Outstanding Technical Assistance to the Regions or Program Offices (2009)

EPA Division Awards (GED/GEMMD)

Mentor of the Year (2021)
Manuscript of the Year Awards (2005, 2016, 2018, 2019)
Service of the Year Award (2016)
Incentive Awards (2007, 2009, 2010, 2012)
Special Accomplishment Awards (2007 – 2009, 2011)
On the Spot Awards (2007, 2008)

External to EPA

Exceptional Reviewer, Society of Environmental Toxicology and Chemistry, *Integrated Environmental Management and Assessment* (2023, 2024)
Top Cited Article *Integrated Environmental Assessment and Management*, Raimondo et al. 2018 “A framework for linking population model development with ecological risk assessment objectives” (2019)
Paper of the Year, *Integrated Environmental Assessment and Management*, Raimondo et al. 2018 “A framework for linking population model development with ecological risk assessment objectives” (2018)
Exceptional Reviewer, Society of Environmental Toxicology and Chemistry, *Environmental Toxicology and Chemistry* (2013, 2014)
Exceptional Reviewer, Society of Environmental Toxicology and Chemistry, *Environmental Toxicology and Chemistry*.

LEADERSHIP, COMMITTEE, ADJUNCT FACULTY, ADVISORY, AND EDITORIAL APPOINTMENTS:

2022 – present Editorial board member *Integrated Environmental Assessment and Management*

2019 – present GEMMD Ecotoxicology Team Leader

2015 – present ORD Technical Qualification Board (TQB) promotions committee

2019 – 2023 EPA/ORD technical lead for Congressional mandate to EPA for National Academy of Sciences to evaluate environmental impacts of active ingredients of marketed sunscreens

2020 – 2023 Guest Editor, *Ecologies* special issue “Population Modeling for Ecological Risk Assessment and Management of Species”

2019 – 2023 Editorial board member *SAR and QSAR in Environmental Research*

2019 – 2021 Technical workgroup participant for EPA Office of Water expedited water quality criteria for PFAS chemicals

2019 – 2021 Project Officer for Regional Applied Research Effort with EPA Region 4 and the U.S. Geological Survey

2019 – 2021 Output lead, ORD Chemical Safety for Sustainability (CSS), Ecotoxicological Assessment and Modeling (ETAM), Output: Novel approaches to evaluate chemical mixtures and/or cumulative exposures in Ecological Risk Assessment of listed species

2019 Science Advisory Group, eco-epidemiology of UV filters on coral reef sustainability

2015 – 2019 Task lead, ORD Chemical Safety for Sustainability, *California case study- Pesticide Impacts to Aquatic Endangered Species*

2011 – 2019 Project lead, ORD Chemical Safety for Sustainability, Ecological Modeling

2018 Session Chair. *Improving Approaches to Assess Risks to Threatened and Endangered Species from Chemical Exposure*. SETAC North America 39th Annual Meeting, Sacramento, CA.

2018 Workshop organizer and moderator. EPA ORD Chemical Safety for Sustainability California Endangered Species Case Study. Sacramento, CA.

2015 Workshop organizer and moderator. EPA ORD Chemical Safety for Sustainability California Endangered Species Case Study. Sacramento, CA.

2012 – 2015 ORD Diversity Program Manager

2011 – 2014 Editorial Board, Environmental Toxicology and Chemistry

2011 – 2014 ORD Project Lead, “Systems approaches to assess human and ecological risks”, ORD Chemical Safety for Sustainability (CSS) Research Program

2010 – 2014 Project Officer for Regional Methods Development Program with EPA Region 10 and the U.S. Geological Survey

2011 – 2012 GED Ecotoxicology Team Leader

2008 – 2012 Adjunct Faculty, Clemson University. Clemson, SC.

2011 Topic Lead for *Extrapolation* in the development of ORD CSS Research Program. Worked directly with the CSS National Program Director in program development and implementation.

2010 Workshop organizer and moderator. EPA ORD/OCSP Research Prioritization for Ecological Risk Assessment. Washington, DC.

2010 ORD Oil Spill Research Strategy Team

2009 – 2010 Science Lead for the ORD SP2 research plan transition team. Provided scientific leadership in the ORD strategic planning to transition the Safe Pesticides Safe Products (SP2) multi-year plan to CSS.

2008 Program Committee, SETAC 29th Annual Meeting, Tampa, FL

2007 Toastmasters International, local chapter president

GRANTS

- 2019 U.S. EPA Regional Applied Research Effort, Development of a long-term toxicity test and a partial life-cycle toxicity test: Filling data gaps of conservations significance in freshwater mussel ecotoxicology (\$87K).
- 2018 U.S. EPA Regional Applied Research Effort, Development of a long-term toxicity test and a partial life-cycle toxicity test: Filling data gaps of conservations significance in freshwater mussel ecotoxicology (\$71K).
- 2009 U.S. EPA Regional Methods Development Program, *Toxicity estimation in threatened and endangered species: Fairy Shrimp* (\$72K).
- 2008 U.S. EPA Regional Methods Development Program, *Toxicity estimation in threatened and endangered species: Fairy Shrimp* (\$72K).

ORGANIZATION MEMBERSHIPS

2004 – present Society of Environmental Toxicology and Chemistry

CONTINUING EDUCATION, TRAINING, AND CERTIFICATES

- 2017 Multi-generational training
- 2015 Supervisory Development 2: Learning to Lead
- 2014 Supervisory Development 1: Fundamentals
- 2012 Project Management Principles
- 2012 Building a Positive, Motivated, and Cooperative Team
- 2012 Civil Rights National Training
- 2010 Interagency Agreements, Project Officer, EPA
- 2010 OSHA Hazardous Waste Site Safety, HAZWOPER certification
- 2006 Multivariate Statistics, North Central University
- 2004 Diversity Training, EPA

BIBLIOGRAPHY

Google scholar: 75 peer-reviewed manuscripts; Total citations = >2500, i10 index = 57, h-index = 29

Peer Review Journals

1. **Raimondo, S.M.**, C.L. Rowe, J.D. Congdon. 1998. Exposure to coal ash impacts swimming performance and predator avoidance in larval bullfrogs (*Rana catesbeiana*). J Herp. 32 (2): 289-291.
2. Jung, R.E., K.E. Boone, M.L. Rosenshield, A. De la Reza, **S. Raimondo**, S. Droege. 2002. Evaluation of canoe surveys for anurans along the Rio Grande in Big Bend National Park, Texas. J Herp. 36 (3): 390-397.
3. **Raimondo, S.**, T.K. Pauley, L. Butler. 2003. Potential impacts of *Bacillus thuringiensis* var. *kurstaki* on five salamander species in West Virginia. Northeastern Naturalist. 10 (1): 25-38.
4. **Raimondo, S.**, J.S. Strazanac, L. Butler. 2004. Comparisons of sampling techniques used in studying Lepidoptera population dynamics. Environmental Entomology. 33 (2):418-425.
5. **Raimondo, S.**, A.M. Liebhold, J.S. Strazanac, L. Butler. 2004. Population synchrony within and among Lepidoptera species in relation to weather, phylogeny, and larval phenology. Ecological Entomology. 29: 96-105.
6. **Raimondo, S.**, M. Turcáni, J. Patoèka, A.M. Liebhold. 2004. Interspecific synchrony among foliage-feeding forest Lepidoptera species and the potential role of generalist predators as synchronizing agents. Oikos. 107 (3): 462-470.

7. **Raimondo, S.** and C.L. McKenney, Jr. 2005. Projected population-level effects of thiobencarb exposure on the mysid, *Americamysis bahia*, and extinction probability in a concentration-decay exposure system. *Environ Toxicol Chem.* 24 (3): 564-572.
8. **Raimondo, S.** and C.L. McKenney, Jr. 2005. Projecting population-level responses of mysids exposed to an endocrine disrupting chemical. *Integr Comp Biol.* 45: 151-157.
9. **Raimondo, S.** and C.L. McKenney, Jr. 2006. From organisms to populations: Modeling aquatic toxicity data across two levels of biological organization. *Environ Toxicol Chem.* 25 (2):589-596.
10. **Raimondo, S.**, C.L. McKenney, Jr., M.G. Barron. 2006. Application of perturbation simulations in population risk assessment for different life history strategies and elasticity patterns. *Hum Ecol Risk Assess.* 12 (5): 983-999.
11. Verslycke, T.A., A. Ghekiere, **S. Raimondo**, C. Janssen. 2007. Mysid crustaceans as standard models for the screening and testing of endocrine-disrupting chemicals. *Ecotoxicology.* 16: 205-219.
12. Tarter, D.C., D.L. Chaffee, J.E. Bailey, **S. Raimondo**. 2007. New state record of the mayfly *Baetisca laurentina* McDunnough for West Virginia (Ephemeroptera: Baetiscidae) and new county records for *Baetisca* species in Kentucky and West Virginia. *Entomological News.* 118 (4): 407-416.
13. **Raimondo, S.**, P. Mineau, M.G. Barron. 2007. Estimation of chemical toxicity to wildlife species using interspecies correlation models. *Environ Sci Technol.* 41 (16): 5888-5894.
14. **Raimondo, S.**, B. Montague, and M.G. Barron. 2007. Determinants of variability in acute to chronic toxicity ratios for aquatic invertebrates and fish. *Environ Toxicol Chem.* 26 (9): 2019-2023.
15. Courtney, L.A., W. S. Fisher, **S. Raimondo**, L.M. Oliver, W.P. Davis. 2007. Estimating 3-dimensional colony surface area of field corals. *J Exper Mar Biol Ecol.* 351: 234-242.
16. Dyer, S. D., D.J. Versteeg, S.E. Belanger, J.G. Chaney, **S. Raimondo**, M.G. Barron. 2008. Comparison of species sensitivity distributions derived from interspecies correlation models to distributions used to derive water quality criteria. *Environ Sci Technol.* 42 (8): 3076-3083.
17. Awkerman, J.A., **S. Raimondo**, and M.G. Barron. 2008. Development of species sensitivity distributions for wildlife using interspecies toxicity correlation models. *Environ Sci Technol.* 42 (9): 3447-3452.
18. Barron, M.G., **S. Raimondo**, C. Russom, D.N. Vivian S.H. Yee. 2008. Accuracy of chronic aquatic toxicity estimates determined from acute toxicity data and two time-response models. *Environ Toxicol Chem.* 27 (10): 2196-2205.
19. **Raimondo, S.**, D.N. Vivian, C. Delos, M.G. Barron. 2008. Protectiveness of species sensitivity distribution hazard concentrations for acute toxicity used in endangered species risk assessment. *Environ Toxicol Chem.* 27 (12): 2599-2607.
20. **Raimondo, S.**, D.N. Vivian, M.G. Barron. 2009. Standardizing acute toxicity data for use in ecotoxicological models: influence of test type, life stage, and concentration reporting. *Ecotoxicology.* 18:918-928
21. Cripe, G.M., B.L. Hemmer, L.R. Goodman, J.W. Fournie, **S. Raimondo**, J. C. Vennari, R.L. Danner, K. Smith, B.R. Manfredonia, D.H. Kulaw, M.J. Hemmer. 2009. Multigenerational exposure of the estuarine sheepshead minnow (*Cyprinodon variegates*) to 17 β -estradiol. I. Organism-level effects over three generations. *Environ Toxicol Chem.* 28 (11):2397-2408.
22. **Raimondo, S.**, B.L. Hemmer, L.R. Goodman, G.M. Cripe. 2009. Multigenerational exposure of the estuarine sheepshead minnow (*Cyprinodon variegates*) to 17 β -estradiol. II. Population-level effects through two life cycles. *Environ Toxicol Chem.* 28 (11): 2409-2415.
23. Awkerman, J.A., **S. Raimondo**, M. G. Barron. 2009. Estimation of wildlife hazard levels using interspecies correlation models and standard laboratory rodent toxicity data. *J Toxicol Environ Health, Part A: Current Issues.* 72:1604-1609.
24. Cripe, G., B.L. Hemmer, **S. Raimondo**, L.R. Goodman, D.H. Kulaw. 2010. Exposure of three generations of the estuarine sheepshead minnow (*Cyprinodon variegates*) to the androgen, 17 β -

- trenbolone: Effects on survival, development and reproduction. *Environ Toxicol Chem.* 29 (9): 2079-2087.
25. **Raimondo, S.**, C.R. Jackson, M.G. Barron. 2010. Influence of taxonomic relatedness and chemical mode of action in acute interspecies estimation models for aquatic species. *Environ Sci Technol.* 44: 7711-7716.
 26. Awkerman, J.A., M.R. Marshall, A.B. Williams, G.A. Gale, R.J. Cooper, **S. Raimondo**. 2011. Assessment of indirect pesticide effects on worm-eating warbler populations in a managed forest ecosystem. *Environ Toxicol Chem.* 30 (8): 1843-1851.
 27. **Raimondo, S.** 2012. Incorporating temperature-driven seasonal variation in survival, growth, and reproduction into population models for small fish. *Marine Ecology Progress Series.* 469:101-112.
 28. Rutter, H., M. Norberg, **S. Raimondo**. 2012. Comparison of cultured and wild sheepshead minnow (*Cyprinodon variegatus*) health condition metrics used in toxicity effects assessment. *Gulf of Mexico Science.* 30 (1-2): 60-64.
 29. **Raimondo, S.**, H. Rutter, C.R. Jackson, B.L. Hemmer, and G.M. Cripe. 2013. The influence of density on adults and juveniles of the estuarine fish, the sheepshead minnow (*Cyprinodon variegatus*). *J Exper Mar Biol Ecol.* 439: 69-75.
 30. **Raimondo, S.** 2013. Density dependent functional forms drive compensation in populations exposed to stressors. *Ecological Modelling.* 265: 149-157.
 31. Feng, C., F. Wu, Y. Mu, W. Meng, S. D. Dyer, M. Fan, **S. Raimondo**, M. G. Barron. 2013. Interspecies Correlation Estimation – Applications in Water Quality Criteria and Ecological Risk Assessment. *Environ Sci Technol.* 47: 11382-11383.
 32. **Raimondo, S.**, C.R. Jackson, J. Krzykwa, B.L. Hemmer, M.G. Barron. 2014. Developmental toxicity of Louisiana crude oiled-spiked sediment to zebrafish. *Ecotox Environ Saf.* 108: 265-272.
 33. Awkerman, J.A., **S. Raimondo**, C. R. Jackson, M. G. Barron. 2014. Augmenting species sensitivity distributions with interspecies toxicity estimation models. *Environ Toxicol Chem.* 33: 688-695.
 34. Barron, M.G., J.A. Awkerman, **S. Raimondo**. 2015. Oil characterization and distribution in Florida estuary sediments following the Deepwater Horizon spill. *J Mar Sci Eng.* 2015: 1136-1148.
 35. **Raimondo, S.**, C.R. Jackson, L. Lee, T. Augspurger, N. Wang, C. Ingersoll, C. Bauer, E. Hammer, M.G. Barron. 2016. Assessing variability in chemical acute toxicity of unionid mussels: Influence of intra- and inter-laboratory testing, life stage, and species. *Environ Toxicol Chem.* 35: 750-758.
 36. **Raimondo, S.**, B.L. Hemmer, C.R. Jackson, J. Krzykwa, A. Almario, J.A. Awkerman, M.G. Barron. 2016. Effects of Louisiana crude oil on the sheepshead minnow (*Cyprinodon variegatus*) during a life-cycle exposure to laboratory oiled sediment. *Environ Toxicol.* 31: 1627-1639.
 37. Awkerman, J.A., B. Hemmer, A. Almario, C.R. Jackson, M.G. Barron, **S. Raimondo**. 2016. Spatially explicit risk assessment of estuarine fish after Deepwater Horizon Oil spill: trade-off in complexity and parsimony. *Ecol App.* 26:1708-1720.
 38. Brill, J.L., S.E. Belanger, J. Chaney, S.D. Dyer, **S. Raimondo**, M.G. Barron, M.G., C.A. Pittinger. 2016. Development of algal inter-species correlation estimation (ICE) models for chemical hazard assessment. *Environ Toxicol Chem.* 35: 2368-2378.
 39. Willming, M. M., C. R. Lilavois, M.G. Barron, **S. Raimondo**. 2016. Acute toxicity prediction to threatened and endangered species using Interspecies Correlation Estimation (ICE) models. *Environ Sci Technol.* 50: 10700-10707.
 40. Wang, N., C.D. Ivey, C.G. Ingersoll, W.G. Brumbaugh, D. Alvarez, E.J. Hammer, C.R. Bauer, T. Augspurger, **S. Raimondo**, M.C. Barnhart. 2017. Acute sensitivity of a broad range of freshwater mussels to chemicals with different modes of toxic action. *Environ Toxicol Chem.* 36: 786 – 796.
 41. Ivey, C.D., J. Besser, C.G. Ingersoll, N. Wang, D.C. Rogers, **S. Raimondo**. 2017. Acute sensitivity of the vernal pool fairy shrimp, *Branchinecta lynchi* (Anostraca: Branchinectidae), and surrogate species to 10 chemicals. *Environ Toxicol Chem.* 36: 797-806.

42. Belanger, S., M. Barron, P. Craig, S. Dyer, M. Galay-Burgos, M. Hamer, A. Hart, S. Marshall, L. Posthuma, **S. Raimondo**, P. Whitehouse. 2017. Future needs and recommendations in the development of species sensitivity distributions: Estimating toxicity thresholds for aquatic ecological communities and assessing impacts of chemical exposures. *Integr Environ Assess Manage*. 13: 664-674.
43. Bejarano, A.C., **S. Raimondo**, M.G. Barron. 2017. Framework for optimizing selection of interspecies correlation estimation models to address species diversity gaps in an aquatic database. *Environ Sci Technol*. 51: 8158-8165.
44. Awkerman, J., **S. Raimondo**. 2018. Simulated developmental and reproductive impacts on amphibian populations and implications for assessing long-term effects. *Ecotox Environ Saf*. 149: 233-240.
45. Barron, M.G., J. Krzykwa, C.R. Lilavois, **S. Raimondo**. 2018. Photoenhanced toxicity of weathered crude oil in sediment and water to larval zebrafish. *Bull Environ Contam Toxicol*. 100: 49-53. [Invited submission]
46. **Raimondo, S.**, M. Etterson, N. Pollesch, K. Garber, A. Kanarek, W. Lehmann, J. Awkerman. 2018. A framework for linking population model development with ecological risk assessment objectives. *Integr Environ Assess Manage*. 14: 369-380.
47. **Raimondo, S.**, L. Sharpe, L. Oliver, K.R. McCaffrey, S.T. Purucker, S. Sinnathamby, J. Minucci. 2019. A unified approach for protecting listed species and ecosystem services in isolated wetlands using community-level protection goals. *Sci Tot Environ*. 663: 465-478.
48. **Raimondo, S.** and M. G. Barron. 2020. Application of Interspecies Correlation Estimation (ICE) models and QSAR in estimating species sensitivity to pesticides. *SAR and QSAR in Environ Res*. 31: 1-18.
49. Sinnathamby, S., J.M. Minucci, D.L. Denton, **S. Raimondo**, L. Oliver, Y. Yongping, D.F. Young, J. Hook, A.M. Pitchford, E. Waits, S.T. Purucker. 2020. A sensitivity analysis of pesticide concentrations in California Central Valley vernal pools. *Environ Poll*. 257: 113486. <https://doi.org/10.1016/j.envpol.2019.113486>.
50. Enzor, L.A., C. Hankins, M. Hamilton-Frazier, E. Moso, **S. Raimondo**, M.G. Barron. 2020. Elevated pCO₂ and hypoxia alter the acid-base regulation of developing sheepshead minnows, *Cyprinodon variegatus*. *Mar Ecol Prog Ser*. 636: 157-168.
51. Awkerman, J.A., **S. Raimondo**, A. Schmolke, N. Galic, P. Rueda-Cediel, K. Kapo, C. Accolla, M. Vaugeois, V. Forbes. 2020. Guidance for developing amphibian population models for ecological risk assessment. *Integr Environ Assess Manage*. 16: 223-233. <https://doi.org/10.1002/ieam.4215>.
52. Awkerman, J.A., C.M. Lavelle, W.M. Henderson, B.L. Hemmer, C.R. Lilavois, P. Harris, N. Zielinski, M.D. Hoglund, D.A. Glinski, D. MacMillan, J. Ford, R.F. Seim, E. Moso, **S. Raimondo**. 2020. Cross-taxa distinctions in mechanisms of developmental effects for aquatic species exposed to trifluralin. *Environ Toxicol Chem*. 39: 1797-1812. <https://doi.org/10.1002/etc.4758>.
53. **Raimondo, S.**, A.J. Schmolke, N. Pollesch, C. Accolla, N. Galic, A. Moore, M. Vaugeois, P. Rueda-Cediel, A. Kanarek, J. Awkerman, and V.E. Forbes. 2021. Pop-GUIDE: Population modeling Guidance, Use, Interpretation, and Development for Ecological Risk Assessment. *Integr Environ Assess Manage*. 17: 767-784. <https://doi.org/10.1002/ieam.4377>.
54. Pollesch, N.L., K.M. Flynn, S.M. Kadlec, J.A. Swintek, **S. Raimondo**, and M. A. Etterson. 2022. Developing integral projection models for ecotoxicology. *Ecological Modelling*. 464: 109813.
55. Seim, R.F., D.A. Glinski, C.M. Lavelle, J.A. Awkerman, B.L. Hemmer, P. Harris, **S. Raimondo**, M.N. Snyder, B.W. Acrey, S.T. Purucker, D.K. MacMillan, A.A. Brennan, W.M. Henderson. 2022. Metabolomic profiling to inform use of surrogate species in ecological risk assessment practices. *Comp Biochem Physiol – Part D: Genomics and Proteomics*. 41: 100947.

56. Santavy, D.L., S.K. Jackson, B. Jessup, J. Gerritsen, W.S. Fisher, C. Rogers, E. Weil, A. Szmant, D.C. Miranda, B.K. Walker, C. Jeffrey, R. Clark, P. Bradley, D. Ballantine, L. Roberson, H.R. Torres, B. Todd, E. Diaz, J. Bauzá-Ortega, C. Horstmann, and **S. Raimondo**. 2022. A Biological Condition Gradient for Caribbean Coral Reefs: Part I. Narrative Rules. *Ecological Indicators*. 138: 108805.
57. Santavy, D.L., S.K. Jackson, B. Jessup, C. Horstmann, C. Rogers, E. Weil, A. Szmant, D.C. Miranda, B.K. Walker, C. Jeffrey, D. Ballantine, W.S. Fisher, R. Clark, H.R. Torres, B. Todd, and **S. Raimondo**. 2022. A Biological Condition Gradient for Caribbean Coral Reefs: Part II. Numeric Rules using Sessile Benthic Organisms. *Ecological Indicators*. 135: 108576.
58. Hankins, C., **S. Raimondo**, D. Lasseigne. 2022. Microplastic ingestion by coral as a function of the interaction between calyx and microplastic size. *Sci Tot Environ*. 810: 152333.
59. Lambert, F.N., **S. Raimondo**, M.G. Barron. 2022. Assessment of a new approach method for grouped chemical hazard estimation: the toxicity-normalized Species Sensitivity Distribution (SSDn). *Environ Sci Tech*. 56: 8278 – 8289. doi.org/10.1021/acs.est.1c05632
60. **Raimondo, S.** and V.E. Forbes. 2022. Moving beyond risk quotients: advancing chemical risk assessment to reflect better, more robust and relevant methods. *Ecologies*. 3: 145-160.
61. Lambert, F.N., D.N. Vivian, **S. Raimondo**, C.T. Tebes-Stevens, and M.G. Barron. 2022. Relationships between aquatic toxicity, chemical hydrophobicity, and mode of action: log Kow revisited. *Arch Environ Contam Toxicol*. 83: 326-338. <https://doi.org/10.1007/s00244-022-00944-5>
62. Hong, Y., C. Feng, X. Jin, H. Xie, N. Liu, Y. Bai, F. Wu, **S. Raimondo**. 2022. A QSAR-ICE-SSD model prediction of the PNECs for alkylphenol substances and application in ecotoxicological risk assessment for rivers of a megacity. *Environmental International*. 167: 107367.
63. Miller, D.H., M. Etterson, L. Oliver, E. Paulukonis, N. Pollesch, T. Purucker, D.C. Rogers, S. Sinnathamby, and **S. Raimondo**. 2022. Investigating vernal pool fairy shrimp exposure to organophosphate pesticides: Implications for population-level risk assessment. *Ecologies*. 3: 308-322.
64. McCaffery, K.R., E.A. Paulukonis, **S. Raimondo**, S. Sinnathamby, S.T. Purucker, L.M. Oliver. 2023. A multi-scale approach for identification of potential pesticide use sites impacting vernal pool critical habitat in California. *Sci Tot Environ*. 857: 159274.
65. Santavy, D.L., C.L. Horstmann, E. Huertas, **S. Raimondo**. 2023. Comparison of coral reef communities in proximity to ocean effluent pipes off the north coast of Puerto Rico. *Environ Monitor Assess*. 195: 162. <https://doi.org/10.1007/s10661-022-10756-8>
66. Brooks, B.W., S. van den Berg, D.A. Dreier, C.A. LaLone, S.F. Owens, **S. Raimondo**, X. Zhang. 2023. Towards precision ecotoxicology: Leveraging evolutionary conservation of pharmaceutical and personal care product targets to understand adverse outcomes across species and life stages. *Environ Toxicol Chem*. 43: 526–536. <https://doi.org/10.1002/etc.5754>.
67. **Raimondo, S.**, C. Lilavois, and S.A. Nelson. 2024. Uncertainty analysis and updated user guidance for Interspecies Correlation Estimation models and low toxicity compounds. *Integr Environ Assess Manage*. 20: 1554–1565. doi.org/10.1002/ieam.4884
68. Forbes, V.E., C. Accolla, T. Banitz, K. Crouse, N. Galic, V. Grimm, **S. Raimondo**, A. Schmolke, M. Vaugeois. 2024. Mechanistic population models for ecological risk assessment and decision support: The importance of good conceptual model diagrams. *Integr Environ Assess Manage*. 20: 1566 – 1574. Doi: 10.1002/ieam.4886
69. **Raimondo, S.** 2024. Reality Check: What can we expect from an Ecological Risk Assessment of UV filters on coral reefs? *Integr Environ Assess Manage*. 20: 309–311. <https://doi.org/10.1002/ieam.4889>
70. Wang, N., J.L. Kunz, D. Cleveland, R.A. Dorman, J.A. Steevens, **S. Raimondo**, T. Augspurger, M.C. Barnhart. 2024. Evaluation of chronic effects of potassium chloride and nickel on survival, growth,

and reproduction of a Unionid mussel (*Lampsilis siliquoidea*). Environ Toxicol Chem. 43: 1097-1111. <https://doi.org/10.1002/etc.5843>.

71. Oliver, L., S. Sinnathamby, S. Purucker, **S. Raimondo**. 2024. A Probabilistic Approach to Chronic Effects Assessments for Listed Species in a Vernal Pool Case Study. Integr Environ Assess Manage. 20: 1654-1666. DOI: 10.1002/ieam.4932.
72. Awkerman, J.A., S.T. Purucker, **S. Raimondo**, L. Oliver. 2024. Long-term, landscape-level assessment of aquatic pesticide exposure to identify amphibian ontological traits affecting vulnerability. Integr Environ Assess Manage. 20: 1667–1676. <https://doi.org/10.1002/ieam.4924>
73. **Raimondo, S.**, C.R. Lilavois, S.L. Nelson, K. Koehn, K. Fay, K. Eisenreich, E.V. Nolan, C. Green, J. Bressette. 2025. Evaluation of Interspecies Correlation Estimation (ICE) models to increase taxonomic diversity while reducing reliance on animal testing for chemicals evaluated under the Toxic Substances Control Act. Integr Environ Assess Manage. 21: 184-194. <https://doi.org/10.1093/inteam/viae006>
74. **Raimondo, S.**, C. Hankins, W.M. Henderson. 2025. Significant research needs for defensible hazard assessment of UV Filters in aquatic ecosystems Part 1: Effects data. Environ Toxicol Chem. 44: 867-869. <https://doi.org/10.1093/etoinl/vgaf018>
75. Henderson, W.M., C. Hankins, **S. Raimondo**. 2025. Significant research needs for defensible hazard assessment of UV Filters in aquatic ecosystems Part 2: Analytical methods of organic UV filters. Environ Toxicol Chem. 44: 870-871. <https://doi.org/10.1093/etoinl/vgaf019>

Ecological Risk Assessments

1. Sappington, K., G. Thursby, **S. Raimondo**, M. Ruhman. 2009. Risks of Endosulfan Use to Federally Threatened California Red-legged Frog (*Rana aurora draytonii*), Bay Checkerspot Butterfly (*Euphydryas editha bayensis*), Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*), and California Tiger Salamander (*Ambystoma californiense*) and the Federally Endangered San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*), San Joaquin Kit Fox (*Vulpes macrotis mutica*), and Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*). Internal Review April 15, 2009.
2. Sappington, K., G. Thursby, **S. Raimondo**, M. Ruhman. 2010. Endosulfan: 2010 Environmental Fate and Ecological Risk Assessment.
3. USEPA. 2016. Biological Evaluation chapters for chlorpyrifos ESA assessment. Attachment 4-3. <https://www.epa.gov/endangered-species/biological-evaluation-chapters-chlorpyrifos-esa-assessment>
4. USEPA. 2016. Biological Evaluation chapters for malathion ESA assessment. Attachment 4-3. <https://www.epa.gov/endangered-species/biological-evaluation-chapters-malathion-esa-assessment>
5. USEPA. 2016. Biological Evaluation chapters for diazinon ESA assessment. Attachment 4-3. <https://www.epa.gov/endangered-species/biological-evaluation-chapters-diazinon-esa-assessment>
6. USEPA. 2024. Appendix L: Estuarine/Marine Protective Acute Benchmark for Aquatic Life for PFOS Developed using a New Approach Method: Web-ICE. In. AQUATIC LIFE AMBIENT WATER QUALITY CRITERIA: PFOS. EPA Office of Water, Washington, DC.
7. USEPA. 2024. Appendix L: Estuarine/Marine Protective Acute Benchmark for Aquatic Life for PFOA Developed using a New Approach Method: Web-ICE. In. AQUATIC LIFE AMBIENT WATER QUALITY CRITERIA: PFOA. EPA Office of Water, Washington, DC.
8. USEPA. 2024. Acute Freshwater Aquatic Life Benchmarks for Eight Data-Limited PFAS: PFBA, PFHxA, PFNA, PFDA, PFBS, PFHxS, 8:2 FTUCA, and 7:3 FTCA
9. USEPA. 2024. Biological Evaluation: EPA's proposed approval of Acrolein, Carbaryl, and Diazinon Idaho Water Quality Standards. Appendix E. Salmon Translator. EPA Region 10. Seattle, WA.

Book Chapters

1. **Raimondo, S.** and M.G. Barron. 2008. Risk Assessment of Mercury Exposure on a Florida Panther Metapopulation. In: H. R. Akcakaya, J. D. Stark, T. S. Bridges (Ed.), Demographic Toxicity: Case Studies in Ecological Risk Assessment. Chapter 3, pp. 40-53.
2. **Raimondo, S.**, J.A. Awkerman, S. Yee, M.G. Barron. 2019. Case Study: Using a Combined Laboratory, Field, and Modeling Approach to Assess Oil Spill Impacts. In: Murawski S., C.H. Ainsworth, S. Gilbert, D.J. Hollander, C.B. Paris, M. Schlüter, D.L. Wetzel (eds). Scenarios and Responses to Future Deep Oil Spills. Springer, Cham. 272-284 pp.
3. **Raimondo, S.**, C. Lavelle, and M.G. Barron. 2021. Interspecies Correlation, Genomic, and QSAR Approaches for Aquatic Toxicity Extrapolation. In: Kunal Roy (ed) Chemometrics and Cheminformatics in Aquatic Toxicology. Wiley & Sons, Inc. pp. 181 – 199.
4. **Raimondo, S.** 2025. The northern slimy salamander, *Plethodon glutinosus*. In: Thomas Pauley (ed) Amphibians and Reptiles in West Virginia. University of Pittsburg Press.
1. **Raimondo, S.** 2025. Fowler's toad, *Anaxyrus fowleri*. In: Thomas Pauley (ed) Amphibians and Reptiles in West Virginia. University of Pittsburg Press.

Technical Reports

1. Sutton, W.B., M.B. Watson, **S. Raimondo**, and T.K. Pauley. 2005. Salamander Studies. In: J. S. Strazanac and L. Butler (eds), Long-term evaluation of the effects of *Bacillus thuringiensis kurstaki*, Gypsy moth nucleopolyhedrosis virus product Gypchek, and *Entomophaga miamiaga* on nontarget organisms in mixed broadleaf-pine forests in the central Appalachians. USDA Forest Service, Forest Health Technology Enterprise Team. FHTET-2004-14. pp. 67-78.
2. **Raimondo, S.**, D. Vivian, M.G. Barron. 2007. Web-based Interspecies Correlation Estimation (Web-ICE) for Acute Toxicity: User Manual. Version 2.0. EPA/600/R-07-071. Gulf Breeze, FL. 26pp. <http://www.epa.gov/ceampubl/fchain/webice/index.htm>.
3. **Raimondo, S.**, D.N. Vivian, and M.G. Barron. 2010. Web-based Interspecies Correlation Estimation (Web-ICE) for Acute Toxicity: User Manual. Version 3.1. EPA/600/R-10/004. Office of Research and Development, U. S. Environmental Protection Agency. Gulf Breeze, FL.
4. Garber, K., **S. Raimondo**, P. TenBrook. 2010. Exploration of Methods for Characterizing Effects of Chemical Stressors to Aquatic Animals. White Paper. https://owpubauthor.epa.gov/scitech/swguidance/standards/criteria/aqlife/upload/whitepaper_to_ols.pdf
5. Hoff, D., Lehmann, W., A. Pease, **S. Raimondo**, C. Russom, and T. Steeger. 2010. Predicting the Toxicities of Chemicals to Aquatic Animal Species. White Paper. http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/upload/whitepaper_effects.pdf
6. Corbin, M., Garber, K., Pease, A., Sankula, S., Steeger, T., Beaman, J., Delso, C., Eignor, D., Lehman, W., Huff, L., Erickson, R., Etterson, M., Hoff, D., Lewis, M., Mount, D., **Raimondo, S.**, Roberts, C., Russom, C., Stephan, C., Thursby, G., TenBrook, P. 2011. Review of Methods for Characterizing Effects of Pesticides and Other Chemical Stressors to Aquatic Organisms. White Paper.
7. **Raimondo, S.**, C. R. Jackson, and M.G. Barron. 2013. Web-based Interspecies Correlation Estimation (Web-ICE) for Acute Toxicity: User Manual. Version 3.2. EPA/600/R-12/603. Office of Research and Development, U. S. Environmental Protection Agency. Gulf Breeze, FL.
8. European Centre for Ecotoxicology and Toxicity of Chemicals (ECETOC). 2014. Estimating toxicity thresholds for aquatic ecological communities from sensitivity distributions. 11-13 February 2014. Workshop Report No. 28. Brussels. ISSN-2078-7200-28.

9. **Raimondo, S.**, C.R. Lilavois, and M.G. Barron. 2015. Web-based Interspecies Correlation Estimation (Web-ICE) for Acute Toxicity: User Manual. Version 3.3, EPA/600/R-15/192, U.S. Environmental Protection Agency, Office of Research and Development, Gulf Ecology Division. Gulf Breeze, FL.
10. Lilavois, C.R., S.A. Nelson, and **S. Raimondo**. 2024. Web-based Interspecies Correlation Estimation (Web-ICE) for Acute Toxicity: User Manual. Version 4.0. EPA/600/B-24/158. U.S. Environmental Protection Agency, Office of Research and Development, Gulf Ecosystem Measurement and Modeling Division. Gulf Breeze, FL.