

CURRICULUM VITAE

Katharina Anna Maria Engelhardt

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I. Education

- 1993 B. S., Oregon State University. Animal Science.
- 1997 M.S., Utah State University. Fisheries and Wildlife Ecology. Evaluation of translocation criteria for Trumpeter swans reintroduced to northern Utah: habitat quality and interactions with Tundra swans.
- 2000 Ph.D., Utah State University. Ecology. The role of species composition and biodiversity in wetland ecosystem resilience and processes.

II. Professional Background

- 2000-2008 Assistant professor, Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD.
- 2008-present Research associate professor, Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD.

III. Research

- A. Areas of professional expertise
Plant community ecology, biodiversity theory, functional traits, experimental ecology, aquatic botany, wetland ecology, submersed aquatic plants, tidal freshwater marshes

B. Publications

1. Papers in Refereed Journals

- Engelhardt, K. A. M., J. A. Kadlec, V. L. Roy, and J. A. Powell. 2000. Evaluation of translocation criteria: a case study with trumpeter swans (*Cygnus buccinator*). *Biological Conservation* 94: 173-181.
- Powell, J. A. and K. A. M. Engelhardt. 2000. Optimal trajectories for the short-distance foraging flights of swans. *Journal of Theoretical Biology* 204: 415-430.

- Engelhardt, K. A. M. and M. E. Ritchie. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. *Nature* 411: 687-689. UMCES Contribution #3878.
- Engelhardt, K. A. M. and J. A. Kadlec. 2001. Species traits, species richness and the resilience of wetlands after disturbance. *Journal of Aquatic Plant Management* 39: 36-39. UMCES Contribution #4025.
- Engelhardt, K. A. M. and M. E. Ritchie. 2002. The effect of aquatic plant species richness on wetland ecosystem functioning. *Ecology* 83: 2911-2924. UMCES Contribution #3555
- Solan, M., B. J. Cardinale, A. L. Downing, K. A. M. Engelhardt, J. L. Ruesink, and D. S. Srivastava. 2004. Extinction and ecosystem function in the marine benthos. *Science* 306:1177-1180. UMCES Contribution #3829,
- Rafaelli, D., B. J. Cardinale, A. L. Downing, K. A. M. Engelhardt, J. L. Ruesink, M. Solan, and D. S. Srivastava. 2005. Response to R. W. Flint and R. D. Kalke: Reinventing the wheel in ecology research? *Science* 307:1875-1876. UMCES Contribution #3775
- Engelhardt, K. A. M. 2006. Relating effect and response traits in submersed aquatic macrophytes. *Ecological Applications* 16:1808-1820. UMCES Contribution #4027
- Hopfensperger, K. N., K. A. M. Engelhardt, and S. W. Seagle. 2006. The use of case studies in establishing feasibility for wetland restoration. *Restoration Ecology* 14:578-586. UMCES Contribution #4026
- Hopfensperger, K. N., K. A. M. Engelhardt, and S. W. Seagle. 2007. Ecological feasibility studies in restoration decision making. *Environmental Management* 39:843-852. UMCES Contribution #4165
- Hopfensperger, K. N. and K. A. M. Engelhardt. 2007. Coexistence of *Typha angustifolia* and *Impatiens capensis* in a tidal freshwater marsh. *Wetlands* 27:561-569. UMCES Contribution #4166
- Chadwell, T. B. and K. A. M. Engelhardt. 2008. Effects of pre-existing submersed vegetation and propagule pressure on the invasion success of *Hydrilla verticillata*. *Journal of Applied Ecology*

45:515-523. *All authors contributed equally to this work.* UMCES Contribution #4251

Gardner, R. H. and K. A. M. Engelhardt. 2008. Spatial processes that maintain biodiversity in plant communities. *Perspectives in Plant Ecology, Evolution and Systematics* 9:211-228. UMCES Contribution #4154

Hopfensperger, K. N. and K. A. M. Engelhardt. 2008. Annual species abundance in a tidal freshwater marsh: germination and survival across an elevational gradient. *Wetlands* 28:521-526. UMCES Contribution #4250

Minor, E. S., S. M. Tessel, K. A. M. Engelhardt, and T. R. Lookingbill. 2009. The role of landscape connectivity in assembling exotic plant communities: a network analysis. *Ecology* 90:1802-1809. UMCES Contribution #4261

Adams, S. and K. A. M. Engelhardt. 2009. The impact of *Microstegium vimineum* (Japanese stiltgrass) invasion on herbaceous plant communities. *Biological Conservation* 142:1003-1010. UMCES Contribution #4382

Hopfensperger, K. N., K. A. M. Engelhardt, and T. R. Lookingbill. 2009. Vegetation and seed bank dynamics in a tidal freshwater marsh. *Journal of Vegetation Science* 20:767-778. UMCES Contribution #4383

Burnett, R., Jr., M. Lloyd, K. Engelhardt, and M. Neel. 2009. Development of eleven polymorphic microsatellite markers in a macrophyte of conservation concern, *Vallisneria americana* Michaux (Hydrocharitaceae). *Molecular Ecology Resources* 9: 1427-1429. UMCES Contribution #4386

Lookingbill, T. R., A. J. Elmore, K. A. M. Engelhardt, J. B. Churchill, J. E. Gates, and J. Johnson. 2010. Influence of wetland networks on bat activity in mixed-use landscapes. *Biological Conservation* 143:974-983. UMCES Contribution #4387

Lookingbill, T. R., K.A.M. Engelhardt, A.J. Elmore, S. Tessel, and J.B. Churchill. 2010. Wetland networks in National Capital Region Parks: Enhanced inventory for Harpers Ferry National Historical Park. *Proceedings of the 2009 George Wright Society*: 297-304. UMCES Contribution #4462

Lloyd, M. W., R. K. Burnett, Jr., K. A. M. Engelhardt, and M. C. Neel. 2011. Genetic diversity and population structure of *Vallisneria*

americana in the Chesapeake Bay: Implications for restoration. Conservation Genetics 12:1269-1285. UMCES Contribution #4591

Lloyd, M. W., R. K. Burnett, Jr., K. A. M. Engelhardt, and M. C. Neel. 2012. Does genetic diversity of restored sites differ from natural sites? A comparison of *Vallisneria americana* (Hydrocharitaceae) populations within the Chesapeake Bay. Conservation Genetics 13:753-765. UMCES Contribution #4822

Palinkas, C. M., K. Engelhardt, and D. Cadol. 2013. Evaluating physical and biological influences on sedimentation in a tidal freshwater marsh with Be-7. Estuarine, Coastal, and Shelf Science 129:152-161. UMCES Contribution #4765

Marsden, B. W., K. A. M. Engelhardt, and M. C. Neel. 2013. Genetic rescue versus outbreeding depression in *Vallisneria americana*: Implications for mixing seed sources for restoration. Biological Conservation 167:203-214. UMCES Contribution #4823

Brickle, M. C., T. R. Lookingbill, and K.A.M. Engelhardt. 2013. Proposing New Barrens National Natural Landmarks. The George Wright Forum 30:253-260. UMCES Contribution #4853

Engelhardt, K. A. M., M. E. Ritchie, and J. A. Powell. 2014. Body size mediated coexistence in swans. The Scientific World Journal 2014: 643694. 12pp. UMCES Contribution #4870

Cadol, D, K. A. M. Engelhardt, A. Elmore, and G. Sanders. 2014. Elevation-dependent surface elevation gain in a tidal freshwater marsh. Limnology and Oceanography 59:1065-1080. UMCES Contribution #4880

Gardner, R. H., K. A. M. Engelhardt, A. Elmore, and D. Cadol. 2014. A trait-based model of species diversity. Ecological Modeling 288:178-194. UMCES Contribution #4935

Engelhardt, K. A. M., M. Lloyd, and M. Neel. 2014. Effects of genetic diversity on individual and population performance in a clonal plant. Biological Conservation 179:6-16. UMCES Contribution #4959

Palinkas, C. M. and K. A. M. Engelhardt. 2016. Spatial and temporal patterns of modern (similar to 100 yr) sedimentation in a tidal freshwater marsh: Implications for future sustainability. Limnology and Oceanography 61: 132-148. UMCES Contribution #5044

- Elmore, A. J., K. A. M. Engelhardt, D. Cadol, and C. M. Palinkas. 2016. Spatial patterns of plant litter in a tidal freshwater marsh and implications for marsh persistence. *Ecological Applications* 26:846-860. UMCES Contribution #5082
- Cadol, D., E. Elmore, S. Guinn, K. Engelhardt, and G. Sanders. 2016. Modeled trade-offs between developed land protection and tidal habitat maintenance during rising sea levels. *PLoS ONE*. UMCES Contribution #5271
- Weston, D. J., M. R. Turetsky, K. A. M. Engelhardt, and 31 co-authors. 2017. The Sphagnum Project: enabling ecological and evolutionary insights through a genus-level sequencing project. *New Phytologist*. UMCES Contribution #5411
- Arnold, T. M., R. C. Zimmerman, K. A. M. Engelhardt, and J. C. Stevenson. 2017. Twenty-first century climate change and submerged aquatic vegetation in a temperate estuary: the case of Chesapeake Bay. *Ecosystem Health and Sustainability*: <https://doi.org/10.1080/20964129.2017.1353283>. UMCES Contribution #5391

2. Books or Chapters

- Bengtsson, J., K. Engelhardt, P. Giller, S. Hobbie, D. Lawrence, J. Levine, M. Vila, and V. Wolters. 2002. Slippin' and slidin' between the scales: the scaling components of biodiversity – ecosystem functioning relations. *In*: M. Loreau, S. Naeem, and P. Inchausti (eds.). *Biodiversity and Ecosystem Functioning: Synthesis and Perspectives*. Oxford University Press. UMCES Contribution #3641
- Engelhardt, K. A. M., A. Symstad, A.H. Prieur-Richard, and M. Thomas. 2009. Opening communities to colonization – Forecasting the impacts of invaders on biodiversity and ecosystem functioning. *In* *Biodiversity and Human Impacts*, Naeem, S., D. E. Bunker, A. Hector, M. Loreau, and C. Perrings (eds.). Oxford University Press. Pp. 217-229. UMCES Contribution #4384
- Wright, J., A. Symstad, J. Bullock, K. A. M. Engelhardt, L. Jackson, and E. Bernhardt. 2009. Restoring biodiversity and ecosystem function: will an integrated approach improve results? *In* *Biodiversity and Human Impacts*, Naeem, S., D. E. Bunker, A. Hector, M. Loreau,

and C. Perrings (eds.). Oxford University Press. Pp. 167-178.
UMCES Contribution #4385

Engelhardt, K. A. M. 2011. Eutrophication – Aquatic. In *Encyclopedia of Biological Invasions*, Simberloff, S. and M. Rejmanek (eds.). University of California Press. Pp. 209-213. UMCES Contribution #4435

3. Published Abstracts

Engelhardt, K. A. M., and J. A. Kadlec. 1998. Predictions and observations of swans foraging in northern Utah. North American Ornithological Conference, St. Louis, Missouri.

Engelhardt, K. A. M., and J. A. Kadlec. 1998. Mechanisms of coexistence between Tundra and Trumpeter swans. Annual Meeting, Ecological Society of America, Baltimore, Maryland.

Engelhardt, K. A. M., and J. A. Kadlec. 1999. Biodiversity versus species effects on ecosystem processes and resilience in mesocosm wetlands. Annual Meeting, Ecological Society of America, Spokane, Washington.

Engelhardt, K. A. M., J. A. Kadlec, and V. L. Roy. 1999. Trumpeter swan translocations to northern Utah: evaluation of biological and socio-political criteria. Annual Meeting, Society for Conservation Biology, College Park, Maryland.

Engelhardt, K. A. M., and J. A. Kadlec. 1999. Effects of biodiversity and species assemblages on freshwater wetland productivity after a disturbance. Annual Meeting, Society of Wetland Scientists, Norfolk, Virginia.

Engelhardt, K. A. M., and J. A. Kadlec. 2000. Traits of four submersed aquatic macrophyte species: effects on resources, environmental conditions and resilience after clipping and drought disturbances. Annual Meeting, Aquatic Plant Management Society, San Diego, California.

Engelhardt, K. A. M., M. E. Ritchie, and J. A. Kadlec. 2000. Species richness does not always enhance productivity: priority effects and competition for space in wetland plant communities. Annual Meeting, Ecological Society of America, Snowbird, Utah.

- Engelhardt, K. A. M. 2001. Consequences of diversity loss on ecosystem functioning: can we extrapolate to landscape scales? Annual Meeting, Ecological Society of America, Madison, Wisconsin.
- Engelhardt, K. A. M. 2002. Biodiversity in restoration. Annual Meeting, Aquatic Plant Management Society, Keystone, Colorado.
- Chadwell, T. and K. Engelhardt. 2003. Submersed aquatic plant communities in Maryland reservoirs: Management and control. Annual Meeting, Aquatic Plant Management Society, Portland, Maine.
- Chadwell, T. and K. Engelhardt. 2004. Effects of preexisting submersed macrophytes on the invasion success of *Hydrilla verticillata*: Is native plant restoration an effective biological management technique? Annual Meeting, Aquatic Plant Management Society, Tampa, Florida.
- Engelhardt, K. A., M. Solan, B. J. Cardinale, A. L. Downing, J. L. Ruesink, and D. S. Srivastava. 2004. Extinction scenarios and ecosystem effects in the marine benthos. Annual Meeting, Ecological Society of America, Portland, Oregon.
- Hopfensperger, K.N., K.A.M. Engelhardt, and S.W. Seagle. 2005. The use of case studies in establishing feasibility for wetland restoration. Annual Meeting, Society of Wetland Scientists, Charleston, South Carolina.
- McChesney, L. and K. Engelhardt. 2005. Using a Markov model to predict *Hydrilla verticillata* coverage at Otter Point Creek, MD. Annual Meeting, Society of Wetland Scientists, Charleston, South Carolina.
- Engelhardt, K. A. M. 2005. Effect of tree diversity and width on nativeness of riparian buffers. Annual Meeting, Ecological Society of America, Montreal, Canada.
- Hopfensperger, K. N. and K. A. M. Engelhardt. 2005. The effect of landscape pattern and seed bank dynamics in a tidal freshwater wetland. Annual Meeting, Ecological Society of America, Montreal, Canada.
- McChesney, L. D., K. Engelhardt, and J. Bortz. 2005. Prediction of *Hydrilla verticillata* coverage at Otter Point Creek (MD) using a Markov model. Annual Meeting, Ecological Society of America, Montreal, Canada.

- Hopfensperger, K. N. and K. A. M. Engelhardt. 2006. Effects of functional plant groups on nitrogen cycling in a tidal freshwater marsh. Annual Meeting, Ecological Society of America, Memphis, Tennessee.
- McChesney, L. D. and K. A. M. Engelhardt. 2006. Fluctuating trends in *Hydrilla verticillata* abundance at Otter Point Creek, MD. Annual Meeting, Ecological Society of America, Memphis, Tennessee.
- Adams, S. N., S. M. Tessel, and K. A. M. Engelhardt. 2006. *Microstegium vimineum* (Japanese stiltgrass) abundance and native diversity. Annual Meeting, Ecological Society of America, Memphis, Tennessee.
- Tessel, S. M. and K. Engelhardt. 2006. Beta-diversity across a fragmented landscape. Annual Meeting, Ecological Society of America, Memphis, Tennessee.
- Minor, E., K. Engelhardt, and T. Lookingbill. 2007. Using graph theory to identify patterns of exotic plant invasions in fragmented landscapes. Annual Meeting, Ecological Society of America, San Jose, California.
- Wright, J., A. Symstad, L. Jackson, J. M. Bullock, K. Engelhardt, A. Sutton-Grier, and E. Bernhardt. 2007. Biodiversity and ecosystem restoration in a changing world. Annual Meeting, Ecological Society of America, San Jose, California.
- Wright, J., A. Symstad, L. Jackson, J. M. Bullock, K. Engelhardt, A. Sutton-Grier, and E. Bernhardt. 2007. Conclusions and Synthesis. Annual Meeting, Ecological Society of America, San Jose, California.
- Engelhardt, K. A. M., R. H. Hilderbrand, L. McChesney, and J. Bortz. 2008. Scaling relations between submersed aquatic macrophytes and water quality. Annual Meeting, Society of Wetland Scientists, Washington, DC.
- Gardner, R. and K. Engelhardt. 2008. The stabilizing effect of spatial dynamics. Annual Meeting, International Association of Landscape Ecologists. Madison, Wisconsin.
- Granberg, J. E., K. A. M. Engelhardt, T. M. Beser, M. Lloyd, R. Burnett, and M. C. Neel. 2008. The response of *Vallisneria americana* to

climate change: does genetic structure matter? Annual Meeting, Society of Wetland Scientists, Washington, DC.

McChesney, L. D. and K. A. M. Engelhardt. 2008. Effects of sediment grain size on competitive ability of *Hydrilla verticillata* and *Vallisneria americana* at Otter Point Creek, MD, USA. Annual Meeting, Society of Wetland Scientists, Washington, DC.

Tessel, S. and K. Engelhardt. 2008. Beta diversity across a fragmented landscape. Annual Meeting, International Association of Landscape Ecologists. Madison, Wisconsin.

Lloyd, M.W., R. K. Burnett Jr., K. A. M. Engelhardt, M. C. Neel. 2010. Genetic Diversity and Population Structure of *Vallisneria americana* in the Chesapeake Bay: Implications for Restoration. University of Maryland Bioscience Day, College Park, MD.

Cadol, D., A. Elmore, K. Engelhardt, C. Palinkas. 2011. Vegetation influences on tidal freshwater marsh sedimentation and accretion, Abstract EP52B-04 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Cadol, D., A. Elmore, K. Engelhardt. 2011. Using inundation timing to estimate flow resistance through marsh vegetation, 2011 Biennial Coastal and Estuarine Research Federation Meeting, Daytona Beach, FL, 6-10 Nov.

Elmore, A. J., K. A. M. Engelhardt, and C. M. Palinkas. 2011. Vegetation complexity and plant species richness in a tidal freshwater marsh. 2011 Biennial Coastal and Estuarine Research Federation Meeting, Daytona Beach, FL, 6-10 Nov.

Palinkas, C. M., K. A. M. Engelhardt, and A. J. Elmore. 2011. Spatial variability of marsh sedimentation processes in Dyke Marsh Preserve (VA, USA). 2011 Biennial Coastal and Estuarine Research Federation Meeting, Daytona Beach, FL, 6-10 Nov.

Lloyd, M. W., R. K. Burnett, JR., K. A. M. Engelhardt, M. C. Neel. 2011. The Structure of Population Genetic Diversity in *Vallisneria americana* in the Chesapeake Bay: Implications for Restoration. GRID, University of Maryland.

West, B. E., K. A. M. Engelhardt, M. C. Neel. 2011. The Effects of Maternal and Paternal Origin on Seed Production and germination in *Vallisneria americana*: Implications or Restoration. GRID, University of Maryland.

- Lloyd, M. W., R. K. Burnett, JR., K. A. M. Engelhardt, M. C. Neel. 2011. The Structure of Population Genetic Diversity in *Vallisneria americana* in the Chesapeake Bay: Implications for Restoration. Ecological Society of America Mid-Atlantic Chapter Meeting. April 9-11. Montclair State University, NJ.
- Lloyd, M. W., R. K. Burnett, JR., K. A. M. Engelhardt, M. C. Neel. 2011. The Structure of Population Genetic Diversity in *Vallisneria americana* in the Chesapeake Bay: Implications for Restoration. 96th Ecological Society of America Annual Meeting. August 7-12. Austin, TX.
- West, B. E., K. A. M. Engelhardt, M. C. Neel. 2011. The Effects of Origin in Submersed Aquatic Vegetation Growth and Persistence: Implications or Restoration. EPA STAR Graduate Fellowship Conference. September 19-20. Georgetown University, Washington, DC.
- Palinkas, C., K. Engelhardt, D. Cadol. 2012. Spatial and temporal variability of marsh sedimentation in Dyke Marsh Preserve (VA, USA): potential controlling factors and relevance for models. Chesapeake Modeling Symposium, Annapolis, MD, May.
- Stylinski, C. K. Engelhardt, and S. Keller. 2012. Engaging Appalachian citizens in restoring American chestnuts. Annual Meeting, Ecological Society of American, Portland, USA.
- Engelhardt, K. A. M., D. Cadol, A. J. Elmore, and C. M. Palinkas. 2012. Linking elevation and vegetation change in tidal freshwater marshes. AGU Chapman Conference on Hydrogeomorphic feedbacks and sea level rise in tidal freshwater river ecosystems. Reston, VA 13-16 Nov.
- Elmore, A. J., S. M. Guinn, D. Cadol, K. Engelhardt, and M. C. Fitzpatrick. 2012. Modeling Coastal Vulnerability for tidal reaches of the Potomac and Anacostia. AGU Chapman Conference on Hydrogeomorphic feedbacks and sea level rise in tidal freshwater river ecosystems. Reston, VA 13-16 Nov.
- Palinkas, C. M., K. Engelhardt, and D. Cadol. 2012. Dynamic feedbacks between sediment and vegetation in a tidal freshwater marsh. AGU Chapman Conference on Hydrogeomorphic feedbacks and sea level rise in tidal freshwater river ecosystems. Reston, VA 13-16 Nov.

- Cadol, D., A. Elmore, K. Engelhardt, G. Sanders. 2012. Estimating the rate and elevation dependence of net accretion in a freshwater tidal marsh using DEM-registered surveys, Abstract EP31C-0834 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.
- West, B. E., K. A. M. Engelhardt, M. C. Neel. 2012. Linking Genotype With Reproductive Success of *Vallisneria Americana* from the Chesapeake Bay to Enhance Restoration Strategies. Ecological Society of America Mid-Atlantic Chapter Meeting. April 9-11. Virginia Tech, Blacksburg, VA.
- West, B. E., L. Peterson, K. A. M. Engelhardt, M. C. Neel. 2012. Linking Genotype With Reproductive Success of *Vallisneria americana* from the Chesapeake Bay to Enhance Restoration Strategies. 97th Ecological Society of America Annual Meeting. August 6-10. Portland, OR.
- Litwin, R.J., Smoot, J.P., Pavich, M.J., Markewich, H.W., Oberg, E., Helwig, B., Steury, B., Santucci, V.L., Durika, N.J., Rybicki, N.B., Engelhardt, K.A.M., Sanders, G., Verardo, S., Elmore, A.J., and Gilmer, J.. 2013. Dyke Marsh: Observations on the construction, deconstruction, and reconstruction of a freshwater tidal wetland, GWMP. George Wright Society Annual Meeting, Denver, CO, March 11-15.
- Gardner, R. H., K. A. M. Engelhardt, A. Elmore, and D. Cadol. 2013. Spatial dynamics, species traits and patterns of biodiversity. US International Association of Landscape Ecology, Annual Symposium, Austin, TX, April 14-18.
- Palinkas, C. M., and K. A. M. Engelhardt. 2013. Ecogeomorphological feedbacks in a tidal freshwater marsh. AGU Fall Meeting Oral Presentation, San Francisco, CA, December.
- Tumas, H., M. Neel, B. West Marsden, and K. Engelhardt. 2013. Determining the effect of water quality on submerged aquatic vegetation growth and ecosystem benefits. International Congress for Conservation Biology. July 21-25. Baltimore, MD.
- Stylinski, C., K. Engelhardt, S. Keller, K. Hawkins, and C. Doty. 2013. Engaging rural volunteers in American chestnut research. North American Association for Environmental Education Conference. October 7-11. Baltimore, MD.

- Palinkas, C. M. K. A. M. Engelhardt, G. Sanders, P. Delgado, and M. Milton. 2014. The role of sediment and vegetation feedbacks in tidal freshwater marsh restoration. Joint Aquatic Sciences Meeting. May 18-23. Portland, MD.
- Elmore, A., D. Cadol, C. Palinkas, and K Engelhardt. 2014. Spatial patterns of plant litter and sedimentation in a tidal freshwater marsh and implications for marsh persistence. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA.
- Palinkas, C. and K. Engelhardt. 2015. Response of a Chesapeake Bay tidal freshwater marsh to variability in sea level and suspended-sediment concentrations. Geological Society of America Annual Meeting. 1-4 November, Baltimore, MD.
- Marsden, B., K. Engelhardt, and M. Neel. 2015. Comparing genetic diversity, relatedness, and growth performance in *Vallisneria Americana* collected from three rivers. Coastal and Estuarine Research Federation Annual Meeting. 8-12 November, Portland, OR.

4. Technical Reports

- Engelhardt, K. A. M., J. A. Kadlec, T. W. Aldrich, and V. L. Roy. 1999. The Utah Trumpeter Swan reintroduction program: proposal to evaluate reintroduction success. *In* Proceedings and papers of the sixteenth Trumpeter Swan Society Conference. J. R. Balcomb, M. H. Linck, A. L. Price (eds.). Pp. 61-65.
- Koch, E. W., K. A. M. Engelhardt, J. K. Bortz, R. F. Murphy, R. M. Thur, K. A. Yee, and K. G. Sellner. 2004. SAV Restoration Handbook: A Guide for Restoring SAV on DoD Installations. U. S. Department of Defense.
- Getsinger, K., M. D. Moore, E. Dibble, E. Kafcas, M. Maceina, V. Mudrak, C. Lembi, J. Madsen, R. M. Stewart, L. Anderson, K. Getsinger, W. Haller, C. Layne, A. Cofrancesco, R. Newman, F. Nibling, K. Engelhardt, and J. Madsen. 2004. Best Management Practices Handbook for aquatic plant management in support of fish and wildlife habitat. Aquatic Ecosystem Restoration Foundation, Lansing, Michigan. 74pp. UMCES Contribution #TS-477-04.

- Hopfensperger, K., K. Engelhardt, and S. Seagle. 2004. Should we restore Dyke Marsh? A management dilemma facing George Washington Memorial Parkway. Handbook in support of a workshop organized for the National Park Service. 98pp. UMCES Contribution #SS-86-05
- Engelhardt, K. A. M. 2004. Developing a research program: The effects of SAV diversity on restoration success. Final Report – Fed Award #NOAA NA06RG0101. UMCES Contribution # TS-476-04
- Hopfensperger, K., K. Engelhardt, and S. Seagle. 2005. Feasibility of Restoration for Dyke Marsh Preserve: Workshop Report. UMCES Contribution #TS-257-06.
- Engelhardt, K. A. M. and L. McChesney. 2005. Developing a submersed aquatic vegetation (SAV) monitoring program at Otter Point Creek, Maryland. Final Report - May 1, 2004-March 31, 2005. UMCES Contribution #TS-486-05
- Engelhardt, K. A. M. 2005. A vascular plant inventory for four parks of the National Capital Network. Final Report – April 30, 2005. UMCES Contribution #TS-489-05.
- Adams, S. and K. A. M. Engelhardt. 2005. Grassland Restoration Workshop: Aiding Managers in National Capital Region Parks. UMCES Contribution #SS-88-05.
- Engelhardt, K. A. M. and R. H. Hilderbrand. 2006. Otter Point Creek Submerged Aquatic Vegetation Grid Study. Final Report – February 1, 2005-March 31, 2006. UMCES Contribution #TS-255-06.
- Engelhardt, K. A. M. 2006. Grassland Restoration Workshop: Summary of Workshop # 2. UMCES Contribution #TS-256-06.
- Lookingbill, T., K. A. M. Engelhardt, L. N. Florkowski, J. B. Churchill, and L. J. Ashley. 2007. Evaluation of the Nottingham Park Serpentine Barrens. UMCES Contribution #TS-529-07.
- Tessel, S., T. Lookingbill, K. Engelhardt, A. Elmore, and J. Churchill. 2007. Enhanced Wetland Inventory for Harpers Ferry Historical Park. UMCES Contribution #TS-538-07.
- Engelhardt, K. A. M. and A. H. Elmore. 2008. Vegetation and elevation modeling at Dyke Marsh Wildlife Preserve using remote sensing. UMCES Contribution #TS-573-08.

- Engelhardt, K. A. M., A. J. Elmore, and K. N. Hopfensperger. 2008. Sea Level rise at Dyke Marsh Preserve. Potential consequences to vegetation and ecosystem processes. UMCES Contribution #TS-572-08.
- Engelhardt, K. A. M., S. Tessel, and S. Adams. 2008. A sedge, grass and rush inventory of 7 parks in the National Capital Region. UMCES Contribution #TS-571-08.
- Engelhardt, K., M. Neel, and M. Lloyd. 2010. The role of genetic diversity in restoration success of *Vallisneria americana* in the Chesapeake Bay. UMCES Contribution #TS-600-10.
- Litwin, R. J., J. P. Smoot, M. J. Pavich, H. W. Markewich, E. Oberg, B. Helwig, B. Steury, V. L. Santucci, N. J. Durika, N. B. Rybicki, K. A. M. Engelhardt, G. Sanders, S. Verardo, A. J. Elmore, and J. Gilmer. 2011. Analysis of the deconstruction of Dyke Marsh, George Washington Memorial Parkway, Virginia: Progression, Geologic and Manmade Causes, and Effective Restoration Scenarios, National Park Service - USDA and USGS, National Park Service - USDA and USGS. UMCES Contribution #TS-619-11.
- Engelhardt, K., T. Lookingbill, and J. Mayfield. 2011. Evaluation of Ice Mountain Hampshire County, West Virginia. UMCES Contribution #TS-629-11.
- T. Lookingbill, M. C. Brickle, and K. A. M. Engelhardt. 2013. Evaluation of Albany Pine Bush, Albany County, New York. UMCES Contribution #TS-654-13.
- Elmore, A. J., D. Cadol, S. M. Guinn, G. M. Sanders, K. A. M. Engelhardt, and M. C. Fitzpatrick. 2015. Spatially Explicit Modeling of Coastal Vegetation Change Associated with Projected Sea Level Rise The Potomac Estuary. *Natural Resource Data Series* NPS/NCRN/NRR—2015/1034. National Park Service, Fort Collins, Colorado.
- T. Lookingbill, K. A. M. Engelhardt, N. Somerville, C. Sibia, and D. Kitchen. 2016. Evaluation of Bear Rocks Preserve, Grant and Tucker Counties, West Virginia.

C. Contracts and Grants

1. Awarded

a. Active

Application of genomic analysis to restoration of submersed aquatic vegetation habitat in the tidal Hudson River. Hudson River Foundation. 2015-2018. \$202,707. (co-principal investigator, 2.0mo)

Evaluating Potential National Natural Landmarks (NNL). National Park Service through University of Richmond. 2014-2018. \$9,997. (co-PI, 0.25mo).

National Resource Condition Assessment for Harriet Tubman Underground Railroad National Monument (HATU) and Fort Monroe National Monument (FOMR). National Park Service through University of Richmond. 2015-2018. \$35,000. (co-principal investigator, 2.0mo)

Resilience of *Vallisneria americana* in the Chesapeake Bay. Maryland Sea Grant. 2016-2018. \$227,987. (Principle investigator, 2.0mo).

Identification of Low Growing, Salt Tolerant Turfgrass Species Suitable for Use Along Highway Right of Way – Experimental Field Trials Maryland State Highway Administration. 2017-2019. \$279,193. (Principle investigator, 1.5mo).

b. Terminated

Creating and restoring wetlands to enhance ecosystem performance: should wetlands be managed for overall diversity or the presence of “ecosystem engineers”? Society of Wetland Scientists. 1999-2000. \$1,000. (Principal investigator, 12mo)

Exotic species control and native plant restoration in Maryland reservoirs. National Fish and Wildlife Foundation through Maryland Department of Natural Resources. 2002-2003. \$5,978. (Subcontract, 0mo)

Developing a research program: The effects of SAV diversity on restoration success. Maryland Sea Grant. 2002-2003. \$9,988. (Principle investigator, 0.5mo)

Effects of preexisting submerged aquatic vegetation on the invasion success of *Hydrilla verticillata*: Is native plant restoration an effective biological management technique? National Estuarine Research Reserve. 2003-2004. \$17,500. (Faculty advisor, 0mo).

Developing a handbook to restore submersed aquatic vegetation at military installations around the Chesapeake Bay. Chesapeake Research Consortium. 2003-2004. \$7,500. (Subcontract, 1mo).

Controlling non-native submersed aquatic macrophyte species in Maryland reservoirs: Plant competition mediated by selective control. Aquatic Ecosystem Restoration Foundation. 2002-2005. \$40,000. (Principal investigator, 0.5mo)

A vascular plant inventory plan for three parks of the National Capital Network. National Park Service. 2003-2005. \$94,254. (Principle investigator, 1.25mo).

Developing a submersed aquatic vegetation (SAV) monitoring program at Otter Point Creek, Maryland. National Estuarine Research Reserve. 2004-2005. \$7,960. (Principle investigator, 0mo).

Otter Point Creek submerged aquatic vegetation grid study. National Estuarine Research Reserve. 2005-2006. \$20,000. (Principle investigator, 0.5mo).

Grassland restoration workshop: Aiding managers in the National Capital Regional Parks. National Park Service. 2005-2006. \$28,000. (Principle investigator, 0.5mo).

Evaluating Nottingham Park Serpentine Barren as a National Natural Landmark (NNL). National Park Service. 2006-2007. \$12,916, (co-principal investigator, 0.5mo).

Enhanced Wetland Inventory for Harpers Ferry National Historical Park. National Park Service. 2006-2007. \$14,975. (co-principal investigator, 0mo).

Competitive abilities of *Hydrilla verticillata* and *Vallisneria spiralis* along a nutrient gradient. National Estuarine Research Reserve. 2006-2007. \$20,000. (Faculty advisor, 0mo).

A sedge, grass and rush inventory of NCR Parks. National Park Service. 2004-2007. \$60,873. (Principle investigator, 0.5mo).

Research supporting evaluation and restoration of Dyke Marsh. National Park Service. 2005-2008. \$55,578. (Principal investigator, 0.5mo).

Connectivity monitoring proof of concept at Harpers Ferry National Historical Park. 2007-2008. \$11,731. (co-principle investigator, 0.25mo).

Should we restore Dyke Marsh? A management dilemma facing GWMP. National Park Service. 2003-2010. \$158,904. (Principal investigator, 2mo).

The role of genetic diversity in restoration success for *Vallisneria americana* in the Chesapeake Bay. Maryland Sea Grant College Program. 2007-2010. \$166,087. (Principal investigator, 1mo).

Evaluating potential Natural National Landmarks. National Park Service. 2007-2011. \$30,000. (Principle investigator, 1.5mo).

MRI-R2: Acquisition of a shared isotope ratio mass spectrometer for ecological, geological and hydrological research, education and training in the Central Appalachians. National Science Foundation. 2010-2011. \$434,273. (Senior personnel, 0mo).

Program Development Funds: Evolutionary and Ecological potential of *V. americana* in the Chesapeake Bay. 2010-2011. \$6,659. (Principle investigator, 0mo).

Vegetation structure at Prince William Forest Park, Catoctin Mountain Park, and Dyke Marsh Wildlife Preserve: LiDAR acquisition and analysis. National Park Service. 2009-2012. \$108,319. (Co-principle investigator, 0.25mo).

Citizens Restoring American Chestnuts (CRAC). Chesapeake Bay Trust. 2012-2013. \$14,993. (co-PI, 0.5mo.).

The dynamic feedback between sediments and vegetation in natural and restored tidal freshwater marshes. Grayce B. Kerr Fund. 2013-2014. \$66,758. (co-PI, 1.0mo).

The role of sediments in the maintenance of biodiversity in freshwater marshes: implications for global environmental change. National Science Foundation. 2009-2014. \$607,983. (Principle investigator, 3.0mo).

REU Supplement: The role of sediments in the maintenance of biodiversity in freshwater marshes: implications for global

environmental change. 2012-2014. \$7,450. (Principle investigator, Omo).

RET Supplement #1: The role of sediments in the maintenance of biodiversity in freshwater marshes: implications for global environmental change. 2010-2014. \$30,750. (Principle investigator, Omo).

RET Supplement #2: The role of sediments in the maintenance of biodiversity in freshwater marshes: implications for global environmental change. National Science Foundation. 2011-2014. \$13,125. (Principle investigator, Omo).

Development of a sustainable best management plan for algae and aquatic plants in NPS water features. 2011-2014. \$3,050. (Principal investigator, Omo).

Chesapeake Bay SAV restoration targets, climate change effects, ecosystem services and knowledge gaps: A third technical synthesis. Maryland Department of Natural Resources. 2014-2016. \$5,500. (co-PI, 0.5mo)

Modeling coastal vulnerability modeling for freshwater tidal reaches of the Potomac and Anacostia Rivers. National Park Service. 2010-2015. \$423,000. (Co-principle investigator, 2mo).

D. Invited Seminars and Presentations

Engelhardt, K. A. M. and M. A. Ritchie. 2000. Species traits, inter-specific interactions, and the effects of biodiversity on wetland ecosystem processes. University of Wyoming, Laramie, Wyoming.

Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. University of Maryland Center for Environmental Science, Appalachian Laboratory, Maryland.

Engelhardt, K. A. M. 2001. The indirect and direct effects of aquatic plant diversity on wetland ecosystem functioning and services. Smithsonian Environmental Research Center, Maryland.

Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. University of Maryland Center for Environmental Science, Horn Point Laboratory, Maryland.

- Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. Submerged Aquatic Plant Task Group Meeting, Maryland.
- Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. University of Pittsburgh, Pennsylvania.
- Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. University of Virginia, Virginia.
- Engelhardt, K. A. M. 2001. Effects of macrophyte species richness on wetland ecosystem functioning and services. DIALOG symposium, Bermuda.
- Engelhardt, K. A. M. 2002. Effects of macrophyte species richness on wetland ecosystem functioning and services. Clarion University, Pennsylvania.
- Engelhardt, K. A. M. 2002. Effects of macrophyte species richness on wetland ecosystem functioning and services. University of Maryland Center for Environmental Science, Chesapeake Bay Laboratory, Maryland.
- Engelhardt, K. A. M. 2002. The consequences of biodiversity loss on ecosystem functioning and services. Workshop presentation in Washington, DC.
- Engelhardt, K. A. M. 2002. Linking biodiversity and ecosystem functioning in wetland systems. University of Maryland, College Park, Maryland.
- Engelhardt, K. A. M. 2003. The role of biodiversity in wetland ecosystem functioning and restoration. Institute of Ecosystem Studies. Millbrook, New York.
- Engelhardt, K. A. M. 2004. Providing services to National Parks. Chesapeake Bay Cooperative Ecosystems Studies Unit National Managers Meeting. Baltimore, Maryland.
- Engelhardt, K. A. M. 2004. The role of biodiversity in restoration success of aquatic habitats. Maryland Department of Natural Resources. Annapolis, Maryland.
- Engelhardt, K. A. M. 2004. A model SAV program. SAV Workshop. Fort Story, Virginia.
- Engelhardt, K. A. M. 2004. Restoration 1: Planning. SAV Workshop. Fort Story, Virginia.

- Engelhardt, K. A. M. 2004. Restoration 2: Experimental designs and approaches. SAV Workshop. Fort Story, Virginia.
- Engelhardt, K. A. M. 2004. Habitat evaluation II: Water quality assessment. SAV Workshop. Fort Story, Virginia.
- Engelhardt, K. A. M. 2006. Grassland restoration in the mid-Atlantic States. Western Maryland Native Plant Society, Frostburg, Maryland.
- Engelhardt, K. A. M. 2006. Linkages between biodiversity and ecosystem functioning: implications for ecosystem management and restoration. Horn Point Laboratory, Chesapeake Biological Laboratory and Appalachian Laboratory, Maryland.
- Neel, M, K. Engelhardt, M. Lloyd, J. Granberg, and R. Burnett. 2007. The role of genetic diversity in restoration success of *Vallisneria americana*. USDA Plant Materials Center, Beltsville, Maryland.
- Engelhardt, K. A. M. 2008. Linkages between wetland biodiversity and ecosystem functioning: implications for wetland ecosystem management. Michigan State University, Lansing, Michigan.
- Engelhardt, K. A. M. 2008. Physical and biological drivers of tidal freshwater marshes: Dyke Marsh Preserve. Friends of Dyke Marsh. Alexandria, Virginia.
- Engelhardt, K. A. M. 2008. The restoration of Dyke Marsh Preserve in a dynamic and changing world. Chesapeake Bay Watershed Cooperative Ecosystems Studies Unit meeting at Appalachian Laboratory, Frostburg, Maryland.
- Engelhardt, K. A. M. 2008. Wetland biodiversity and ecosystem functioning. University of Maryland College Park, Maryland.
- Engelhardt, K. A. M., M. Neel, and M. Lloyd. 2008. The role of genetic diversity in the restoration success of *Vallisneria americana*. Submersed Aquatic Vegetation Task Group meeting at Horn Point Laboratory, Cambridge, Maryland.
- Lloyd, M., K. A. M. Engelhardt, and M. Neel. 2009. A preliminary analysis of the role of genetic diversity in restoration success of *Vallisneria americana*. Submersed Aquatic Vegetation Task Group meeting in Annapolis, Maryland.
- Engelhardt, K. A. M., M. Lloyd, R. Burnett, and M. Neel. 2010. The role of genetic diversity in the restoration success of *Vallisneria americana*. Mount St. Mary's University.

- Neel, M. C., and K. A. M. Engelhardt. 2012. The role of genetic diversity in restoration success for *Vallisneria americana*. Freshwater Submerged Aquatic Vegetation Partnership Science and Technical Advisory Committee, Annapolis, MD, Nov. 8.
- Engelhardt, K. A. M. 2014. Hydrilla invasion and interactions with *Vallisneria*. Hudson River Forum, Hudson River National Estuarine Research Reserve, Staatsburg, NY, Oct. 8.
- Neel, M. C., B. W. Marsden, and K. A. M. Engelhardt. 2014. Integrating genetics and ecology to inform seagrass restoration practice. Hudson River Forum, Hudson River National Estuarine Research Reserve, Staatsburg, NY, Oct. 8.
- Engelhardt, K. A. M., C. Stylinski, and S. Keller. 2014. Citizens Restoring American Chestnuts. UMCES Board of Visitors. Frostburg, MD, Oct. 20.
- Engelhardt, K. A. M., C. Stylinski, and S. Keller. 2014. Citizens Restoring American Chestnuts. Maryland Chapter of The American Chestnut Foundation. Gaithersburg, MD, Oct. 26.
- Engelhardt, K. A. M., C. Stylinski, and S. Keller. 2014. Citizens Restoring American Chestnuts. Pennsylvania Chapter of The American Chestnut Foundation. Fairhope, PA, Nov. 1.
- Engelhardt, K. A. M., C. Stylinski, and S. Keller. 2014. Citizens Restoring American Chestnuts. Mountain Laurel Garden Club. Oakland, MD, Oct. 18.
- Engelhardt, K. A. M., and C. Palinkas. 2014. Ecogeomorphic feedbacks in tidal freshwater marshes: implications for marsh persistence and restoration at Dyke Marsh Preserve. George Washington Memorial Parkway, National Park Service, Alexandria, VA, Dec. 4.
- Engelhardt, K. 2015. The maintenance of diversity in tidal freshwater marshes. University of Maryland College Park. College Park, MD. 6 May.
- Engelhardt, K. 2015. The maintenance of biodiversity in tidal freshwater marshes. Smithsonian Environmental Research Center. Edgewater, MD. 7 May.
- Engelhardt, K. A. M., and C. Palinkas. 2015. Ecogeomorphic feedbacks in tidal freshwater marshes: implications for marsh persistence and restoration at Dyke Marsh Preserve. Center for Urban Ecology, National Park Service, Georgetown, DC, 3 Feb.

Engelhardt, K. A. M. 2015. Recent National Natural Landmark Designations in PA, WV, and NY. Native Plant Society. Frostburg, MD, 21 April.

Engelhardt, K. 2015. Forecasting climate change impacts on tidal freshwater marsh restoration. Mid-Atlantic EPA Working Group, 20 October. Martinsburg, WV

E. Symposia Organized/Chaired for Professional Meetings

Oral session chaired at Annual Meeting of the Ecological Society of America, August 1998, Baltimore, MD.

Oral session chaired at Annual Meeting of the Society for Wetland Scientists, May 2008, Washington, DC.

Oral and poster session co-chaired at the American Geophysical Union's annual conference, December 2010, San Francisco, CA.

F. Active Memberships in Professional Societies

Society of Wetland Scientists
Ecological Society of America
Aquatic Plant Management Society

G. Other Professional Recognition

1. Editorships

Associate Editor for the journal "Wetlands"; 24 manuscripts handled from 2006-2008.

2. Awards

Stokes-Leopold Memorial Scholar, 1999-2000
College of Natural Resources Research Assistant of the Year, 1999-2000
Best student paper (3rd place) at Annual Meeting of the Aquatic Plant Management Society, 2000
Douglas Wilcox Award for Outstanding Associate Editor for Wetlands, 2008.

3. Peer Review Activities

a. Proposals reviewed

National Science Foundation (2 external reviews in 2005, 1 review panel in 2006, 1 external review in 2006, 1 review panel in 2009, 1 review panel in 2010, 1 review panel in 2011, 1 review panel in 2012, 1 review panel in 2013, 2 review panels in 2014)
The Nature Conservancy, Maryland/DC Chapter (1 in 2004)
Society for Wetland Scientists student proposals (21 in 2005, 16 in 2006, 22 in 2007, 21 in 2008)
Maryland Ag Experiment Station (1 in 2012)

b. Articles reviewed

Annals of Botany (1 in 2011)
Aquatic Biology (1 in 2011)
Aquatic Botany (1 in 2005)
Aquatic Ecology (1 in 2008)
Biogeochemistry (1 in 2001)
Biological Conservation (1 in 2005, 1 in 2006, 1 in 2012)
Biological Invasions (1 in 2012)
Ecology Letters (1 in 2002, 1 in 2003)
Ecology (1 in 2003, 1 in 2004, 1 in 2006, 1 in 2008, 2 in 2009)
Ecological Applications (1 in 2005)
Ecological Engineering (1 in 2011)
Ecological Monographs (1 in 2007)
Ecological Restoration (1 in 2012)
Ecosystems (1 in 2005, 1 in 2006, 1 in 2007)
Environmental and Experimental Biology (1 in 2005)
Environmental Research Letters (1 in 2013)
Estuaries and Coasts (1 in 2013)
Geophysical Research Letters (1 in 2010)
Global Change Biology (1 in 2011)
Journal of Aquatic Plant Management (1 in 2000, 1 in 2004)
Journal of Ecology (1 in 2003, 1 in 2009)
Journal of Experimental Marine Biology and Ecology (1 in 2014)
Journal of Freshwater Ecology (1 in 2011, 1 in 2013)
Journal of Plant Ecology (1 in 2007)
Journal of Wetland Management (1 in 2003)
Limnology and Oceanography (1 in 2006)
Oikos (1 in 2005, 1 in 2006, 1 in 2007, 1 in 2008)
Plant Biology (1 in 2006)
Plant Ecology (1 in 2007)
Restoration Ecology (1 in 2012)
Water Research (1 in 2001)
Wetlands (1 in 2003, 1 in 2004, 2 in 2005, 1 in 2006)

Wilson Bulletin (1 in 2000)

H. Consulting Activities

None

IV. Teaching and Training

A. University System of Maryland Courses Taught

MEES608W/BIOL694: Issue Study Group: Classic Readings in Ecology (2 credits). Enrollment = 12 in 2015, 9 in 2017

MEES 698R / BIOL 622: Community Ecology: Integrating Composition, Scale and Process (3 credits)

BIOL 694: Seminar: Species Diversity in Space and Time (1 credit)

MEES608W/BIOL694: Seminar: Classic Readings in Ecology (1 credit).

MEES608X: Seminar: Aquatic Plant Physiology (1 credit; co-instructor with Kristy Hopfensperger)

MEES698Q: Applied Environmental Chemistry (4 credits, team-taught course)

B. Courses Taught Outside the University System of Maryland

FW4900/6900: Wetland Ecology (2 credits; Utah State University)

Wetlands – Certificate Program for Master Gardeners

C. Graduate Students Supervised as Major Advisor

1. Degrees Conferred

Adams, Sherry; M.S.; Applied Ecology and Conservation Biology; Frostburg State University. 2007

Beser, Todd; M.S.; Estuarine and Environmental Science, Biological Oceanography AOS; University of Maryland. 2007

Chadwell, Todd, B.; M.S.; Marine, Estuarine and Environmental Science, Ecology AOS; University of Maryland. 2004

Eichelberger, Bradley, A.; M.S.; Applied Ecology and Conservation Biology; Frostburg State University. 2009

Elmore, Annette; M.S.; Estuarine and Environmental Science, Environmental Science AOS; University of Maryland. 2008

Hopfensperger, Kristy; Ph.D. Estuarine and Environmental Science, Environmental Science AOS; University of Maryland. 2007

McChesney, Lauren; M.S.; Estuarine and Environmental Science, Ecology AOS; University of Maryland. 2010

Tessel, Samantha; M.S., Applied Ecology and Conservation Biology; Frostburg State University. 2008

2. Students Currently Supervised

Annie Carew; M. S., Marine, Estuarine and Environmental Science.

2. Current Graduate Student Committee Memberships

Shanie Gal-Edd	M.S.	BEES
Carrie Perkins	PhD	Plant Biology

V. Service

A. Popular Articles

Engelhardt, K. A. M. and T. M. Beser. 2008. Temperature and submersed aquatic plants. *LakeLine Summer 2008*: 34-36. UMCES Contribution #SS-105-09

Strain, D. 2013. The Diversity Within. *Chesapeake Quarterly*, July 2013 Issue

Zane, A. *in press*. Tidal freshwater marsh response to sea level rise. *Chesapeake Quarterly*.

B. Public Service

1. State/Regional Service

Member, SAV Task Group. 2001 to present.

Member, Freshwater SAV Partnership. 2002 to present.
Advisor for interpretive dance team at Frostburg State University. 2003.
Presentation of the AL Forum “A scientific exploration of peatlands”. 2003.
Mentor for teacher interns. 2003 to 2008.
Advisor for homeowners in Rohrersville, Maryland. 2003.
Presentation to Garden Club. 2003.
Presentation to Western Maryland Native Plant Society. 2006.
Presentation to local school. 2003.
Judge of Science Fair at Northern Highschool. 2004, 2005.
Board member, The American Chestnut Foundation. 2008 to present.
Scientific advisor for National Park Service EIS. 2008.
National Heritage Program Technical Committee – RTE species. 2011.
American chestnut presentations to local highschool and groups. 2012-2014.
Mentor to teachers. Lesson plan published at
<http://www.mdsg.umd.edu/lesson-plans/effect-tides-and-elevation-wetland-plant-communities>

2. Service Outside Region

Community Outreach Event: “An Oasis of Salt” sponsored by the Ecological Society of America. Taught wetland ecology portion of event. Antelope Island, Utah. 2000.

Scientific Advisor for Aquatic Ecosystem Restoration Foundation. 2003 to present.

Student Grants Panel of the Society for Wetland Scientists. 2003 to 2008.

Panel member for the National Science Foundation. February 2006, November 2009, October 2010, October 2011, November 2012, November 2013, April & November 2014.

C. University System of Maryland

University of Maryland MEES Ecology AOS committee (6/2004 to 2006)
Chair of 2006 MEES Colloquium held at the Appalachian Laboratory

D. Laboratory and Center

Laboratory Committees:

Library (11/2000 to 2008)
Graduate education (12/2001 to 2/2004)
Faculty development (11/2000 to 5/2001)
Space improvement (12/2002 to 5/2004)

FSU watershed track (5/2003 to 12/2003)
Search committee chair Forest Ecologist (2005)
Seminar coordinator (2006, 2013)
AL Environmental Sustainability Council (3/2008 to present)
Search committee chair Evolutionary Ecologist (11/2014 to 5/2015)

Center Committees:

IAN advisory committee (5/2004 to present)
Convocation committee (making connections across labs; 2005)
Chair of UMCES Convocation (leadership; 2013)
UMCES Senator (9/2011 to 12/2014)