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EDUCATION

Ph.D.	1992	Ecology, University of California-Davis
M.S.	1984	Environmental Science & Engineering, University of Washington
B.S.	1978	Biology, Iowa State University

ACADEMIC AND ADMINISTRATIVE EXPERIENCE

Portland State University (1994 – present)

Associate Vice President for Research (January 2011 – present).

Associate Dean, College of Liberal Arts and Sciences (September 2010 – January 2011).

Department Chair, Environmental Science and Management (May 2008 – September 2010).

Faculty member Environmental Science and Management (September 1994 to present).

- Hired as research assistant professor in Biology in 1994 and offered tenure-track position in Environmental Science and Management in 1998. Received tenure in 2004 and promoted to full professor in 2008.

Director, Center for Lakes and Reservoirs, Portland State University (2000 to present).

OTHER EMPLOYMENT

President, Applied Ecology Consulting, LLC (1994– present).

AWARDS AND HONORS

Outstanding Service Award, Oregon Chapter of The Wildlife Society. 2008.

Distinguished Service Award, Oregon Department of Agriculture. 2008.

PEER-REVIEWED PUBLICATIONS

Sheffels, T.R., M.D. Sytsma, J. D. Taylor, and J. Carter. In review. Comparing live-capture methods for nutria, *Myocastor coypus* (Rodentia): single versus multiple-capture cage traps. *Mammalia*.

Scheffels, T.R. M.D. Sytsma, J. Carter, and Jimmy D. Taylor. In press. Efficacy of plastic mesh tubes in reducing damage by the invasive nutria (*Myocastor coypus*) to woody vegetation in a Pacific Northwest riparian restoration site. *Northwest Science* 88 (3).

Zabin, C.J., G.V. Ashton, C.W. Brown, I.C. Davidson, M.D. Sytsma, and G.M. Ruiz. 2014. Small boats provide connectivity for non-native marine species between a highly invaded international port and nearby coastal waters. *Management of Biological Invasions* 5 (2): 97-112

Castillo, J. M. B.J. Grewell, A. Pickart, A. Bortolus, C. Peña, E. Figueroa, and M. Sytsma. 2014. Phenotypic plasticity of invasive *Spartina densiflora* (Poaceae) along a broad latitudinal gradient on the Pacific Coast of North America. *American Journal of Botany* 101(3):1-11

- Morgan, V.H. and M.D. Sytsma. 2013. Potential ocean dispersal of *Spartina* from three core infestations. *Invasive Plant Science and Management* 6: 250-259.
- Lycan, R., D. Banis, W. Garrick, M. Harvey, R. Miller, and M.D. Sytsma. 2012. Developing the On-Line Atlas of Oregon Lakes. *Journal of Map and Geography Libraries: Advances in Geospatial Information, Collections & Archives*. 8: 198-229. <http://dx.doi.org/10.1080/15420353.2012.699883>
- Sytsma, M.D. 2010. Case Study 7.1: Climate Change and Invasive Species. In: *The Oregon Climate Change Assessment Report*. K.D. Dello and P.W. Mote (eds). Oregon Climate Change Research Institute, College of Oceanic and Atmospheric Sciences, Oregon State University, Corvallis, OR.
- Davidson I.C., Zabin C.J., Chang A.L., Brown C.W., Sytsma M.D., and Ruiz G.M. 2010. Recreational boats as potential vectors of marine organisms at an invasion hotspot. *Aquatic Biology* 11: 179-191.
- Pennington, T. and M.D. Sytsma. 2009. Seasonal changes in carbohydrate and nitrogen content of *Egeria densa* from populations in Oregon and California. *Invasive Plant Science and Management*. 2:120-129
- Davidson, I.C., C.W. Brown, M.D. Sytsma, and G. M. Ruiz. 2009 The role of containerships as transfer mechanisms of marine biofouling species. *Biofouling* 25: 645-655.
- Simkanin, C., I. Davidson, M. Falkner, G. Ruiz, and M. Sytsma. 2009. Intra-coastal ballast water flux and the potential for secondary spread of non-native species on the U.S. West Coast. *Marine Pollution Bulletin* 58: 366-374.
- Davidson, I., L. McCann, M. Sytsma, and G. Ruiz. 2008. Interrupting the vector stage of a multi-species transfer: the efficacy of in-water cleaning for removing biofouling on obsolete vessels. *Marine Pollution Bulletin* 56: 1538-1544.
- Sytsma, M.D. 2008. Introduction: workshop on submersed aquatic plant research priorities. *Journal or Aquatic Plant Management* 46: 1-7.
- Cordell, J.R., S.M. Bollens, R. Draheim, M. Sytsma. 2008. Asian copepods on the move: recent invasions in the Columbia-Snake River system, USA. *ICES Journal of Marine Science* DOI: 10.1093/icesjms/fsm195.
- Bersine, K., V.E. Brenneis, R.C. Draheim, A.M.W. Rub, J.E. Zamon, R.K. Litton, S.A. Hinton, M.D. Sytsma, J.R. Cordell, and J.W. Chapman. 2008. Distribution of the invasive New Zealand mudsnail (*Potamopyrgus antipodarum*) in the Columbia River Estuary and its first recorded occurrence in the diet of juvenile Chinook salmon (*Oncorhynchus tshawytscha*). *Biological Invasions*, DOI 10.1007/s10530-007-9213-y.
- Davidson, I.C., L.D. McCann, P.W. Fofonoff, M.D. Sytsma, and G. Ruiz. 2008. Assessing the potential for hull-mediated species transfers by obsolete ships on their final voyage. *Diversity and Distributions* 14(3):518-525.
- Hanson, E. and M.D. Sytsma. 2008. The potential for mitten crab, *Eriocheir sinensis* H. Milne Edwards, 1853 (Crustacea: Brachyura), invasion of Pacific Northwest and Alaskan estuaries. *Biological Invasions* 10: 603-614.
- Cordell, J., R. Draheim, and M. Sytsma. 2007. First record of the harpacticoid genus Harpacticella in the Pacific Northwest, USA: another probable introduction. *Aquatic Biology* 1: 17-20.
- Carter, M.C.A. and M.D. Sytsma. 2002. Comparison of the genetic structure of North and South American populations of a clonal aquatic plant. *Biological Invasions* 3: 113-118.
- Sytsma, M.D. and S. Phillips. 2002. ANS in the West. *LakeLine* 22:25-28.

- Petersen, R. and M.D. Sytsma. 2001. Nitrogen and phosphorus limitation in Priest Lake, Idaho, USA. *Internat. Verein. Limnol.*: 27 (5): 2938-2943.
- Christy, J. A. and M.D. Sytsma. 1994. *Acorus calamus*, *Caboma caroliniana*, *Mimulus ringens*. Noteworthy Collections. *Madrono* 41: 333.
- Sytsma, M.D. and L.W.J. Anderson. 1993. Use of hollow-fiber membranes for measurement of diffusive flux of compounds in sediments. *Journal of Aquatic Plant Management* 31: 261-265.
- Sytsma, M.D. and L.W.J. Anderson. 1993. Transpiration in an emergent macrophyte: source of water and implications for nutrient supply. *Hydrobiologia* 271: 97-108.
- Sytsma, M.D. and L.W.J. Anderson. 1993. Biomass, nitrogen and phosphorus allocation in parrotfeather. *Journal of Aquatic Plant Management* 31: 244-248.
- Sytsma, M.D. and L.W.J. Anderson. 1993. Criteria for assessing nitrogen and phosphorus deficiency in *Myriophyllum aquaticum*. *Journal of Freshwater Ecology* 8: 155-163.
- Sytsma, M.D. and L.W.J. Anderson. 1993. Nutrient limitation of *Myriophyllum aquaticum*. *Journal of Freshwater Ecology* 8: 165-176.
- Granéli, W., S.E.B. Weisner, and M.D. Sytsma. 1992. Rhizome dynamics and resource storage in *Phragmites australis*. *Wetlands Ecology and Management* 1: 239-247.
- Perkins, M.A. and M.D. Sytsma. 1987. Harvesting and carbohydrate accumulation in Eurasian watermilfoil. *Journal of Aquatic Plant Management* 25:57-62.

BOOK CHAPTERS

- Sytsma, M.D. and T. Pennington. In Press. Vectors for spread of invasive freshwater vascular plants. In: *Biological Invasions in Aquatic and Terrestrial Systems: Biogeography, Ecological Impacts, and Management*. J. C. Clode (Ed.). Versita: Warsaw.

TECHNICAL REPORTS

- Miller, R. Sytsma, M. and V. Morgan. 2013. *Aquatic Invasive Species Surveys of Pacificorp's North Umpqua River Impoundments in 2012*. Prepared for Pacificorp.
- Draheim, R., S. Wells, R. Miller, and M. D. Sytsma. 2012. *Quality Assurance Project Plan: Early Detection Monitoring of New Zealand Mudsnails for the Boundary Hydroelectric Project (FERC No. 2144)*. Prepared for Seattle City Light.
- Draheim, R., S. Wells, R. Miller, and M. D. Sytsma. 2012. *Quality Assurance Project Plan: Early Detection Monitoring of Zebra/Quagga Mussels for the Boundary Hydroelectric Project (FERC No. 2144)*. Prepared for Seattle City Light.
- Wells, S. and M. Sytsma. 2012. *Light microscopy to detect and identify the bivalve larvae of Dreissena polymorpha and D. rostriformis bugensis*. Center for Lakes and Reservoirs. Portland State University.
- Sytsma, M. R. Draheim, and S. Wells. 2012. *Zebra and quagga mussel outreach and monitoring in Oregon. 2010-2012*. Prepared for the US Fish and Wildlife Service.
- Aquatic Bioinvasion Research and Policy Institute. 2011. *Biosecurity Plan for Freshwater Aquatic Plants in Micronesia*. Portland State University, Portland, OR USA.

- Wells, S., T Counihan, A. Puls, M. Sytsma, and B. Adair. 2010. *Prioritizing zebra and quagga mussel monitoring in the Columbia River Basin*. Prepared for the Bonneville Power Administration and the Pacific States Marine Fisheries Commission. 83 pp.
- Wells, S. and M. Sytsma. 2010. *Online zebra and quagga mussel monitoring map*. Prepared fro California Department of Food and Agriculture. <http://mussels.geos.pdx.edu/>
- Sytsma, M. and R. Miller. 2010. *Diamond Lake water quality in 2009: fish stocking index parameters*. Prepared for U.S. Forest Service. 16 pp.
- Center for Lakes and Reservoirs. 2009. *Introduction to Common Native and Potential Invasive Freshwater Plants in Alaska*. Prepared for Alaska Department of Fish and Game and US Fish and Wildlife Service. 195 pp.
- Sytsma, M. and 9 others. 2009. *West Coast Governors' Agreement on Ocean Health Spartina Eradication Action Coordination Team Work Plan*. Prepared for West Coast Governors. 71 pp.
- M. Sytsma and V. Howard. 2008. *Teton County aquatic invasive species survey*. Prepared for Teton County, WY. 11 pp.
- M. Sytsma and R. Miller. 2008. *Diamond Lake water quality during 2007 and long-term trends of Fish Stocking Index parameters*. Prepared for Willamette National Forest. 16 pp + appendices.
- Shrestha, R. and M.D. Sytsma. 2008. *Fairview Lake Project Final Report*. Prepared for Fairview Lake Homeowners Association. 17 pp.
- Annear, R., C. Berger, S. Wells, M. Sytsma, and R. Miller. 2008. *Barney Reservoir Monitoring Plan: Plan Development*. Technical Report EWR-03-08 prepared by the Water Quality Research Group, Department of Civil and Environmental Engineering, Maseeh College of Engineering and Computer Science and the Center for Lakes and Reservoirs, Department of Environmental Sciences and Resources, Portland State University for the Barney Reservoir Joint Water Commission, Water Department, City of Hillsboro. 70pp.
- Wells, S., M. Sytsma, and R. Draheim. 2008. *Prioritizing zebra and quagga mussel monitoring in Columbia River Basin*. Prepared for Pacific States Marine Fisheries Commission. 11 pp.
- Sytsma, M. and R. Miller. 2008. *Inventory and Mapping of Aquatic Plants at Lake Roosevelt National Recreation Area*. Natural Resource Technical Report NPS/UCBN/NRTR-2008/076. National Park Service, Fort Collins, Colorado.
- Vanessa Howard, Mary Pfauth, Mark Sytsma, and Dennis Isaacson. 2007. *Oregon Spartina Response Plan*. Prepared for Oregon Department of Agriculture. Center for Lakes and Reservoirs, Portland State University. 70 pp.
- Draheim, R. M. Sytsma, R. Miller, and J. Cordell. 2007. *Middle Columbia River Aquatic Nonindigenous Species Survey*. Prepared for the US Fish and Wildlife Service. 56 pp.
- Rouhe, A. and M.D. Sytsma. 2007. *Feral Swine Management Plan for Oregon*. Prepared for the Oregon Invasive Species Council. 28 pp.
- Simkanin, C. and M. Sytsma. 2006. *Report on Ballast Water Management in Oregon*. Prepared for the Oregon State Legislature. 43 pp.
- Larsson, I. and M. Sytsma. 2006. *Ballast Water Management on the Columbia River*. Prepared for the Puget Sound Action Team, Office of the Governnor or Washington. 34 pp.
- Davidson, I, G. Ruiz, and M. Sytsma. 2006. *The Implications of Maritime Vessel Traffic, Wetted Surface Area, and Port Connectivity for Hull-mediated Marine Bioinvasions on the US West Coast*. Prepared for California State Lands Commission. 43 pp.

- Davidson I, G. Ruiz, and M. Sytsma. 2006. Obsolete Vessel Biofouling and the Influence of In-water Cleaning: A Case Study of the Vessel ORION at the James River Reserve Fleet, Virginia. U. S. Maritime Administration, Washington D.C. 21 pp.
- Davidson I, G. Ruiz, and M. Sytsma. 2006. Protocol for Sampling Commercial Vessel Biofouling Using a Remotely Operated Vehicle (ROV). California State Lands Commission, Sacramento, California.
- Davidson I, G. Ruiz, M. Sytsma, P. Fofonoff, B. Mohammad, L. McCann, C. Zabin, and S. Altman. 2006. *A Post-voyage Analysis of Hull Biofouling on the Vessels POINT LOMA and FLORENCE After Transit from California to Texas*. U. S. Maritime Administration, Washington D.C. 58 pp.
- Davidson I, G. Ruiz, M. Sytsma, and P. Fofonoff. 2006. *Hull Biofouling on the Vessels POINT LOMA and FLORENCE in the Reserve Fleet at Suisun Bay, CA: A Pilot Study with Respect to Potential Transfer of Non-native Species*. U. S. Maritime Administration, Washington D.C. 85 pp.
- Davidson I, B. Mohammad, G. Ruiz, M. Sytsma. 2006. *Examining Biofouling on the Vessel NEMASKET During Dismantling and Planning for Future Sampling Events in Brownsville, Texas*. U. S. Maritime Administration, Washington D.C. 9 pp.
- Davidson I, M. Sytsma, and G. Ruiz. 2006. *Preliminary Investigations of Biofouling of Ships' Hulls: ANS Investigations in the Columbia River*. United States Coast Guard Research and Development Center, Groton, CT. 65 pp.
- Noble, M., M. Sytsma, G. Ruiz, and C. Simkanin. 2006. *Biological Characterization of Ballast Water Arriving in the Columbia River*. Prepared for the US Coast Guard Research and Development Center. 37 pp.
- Murphy, K., G. Ruiz, and M. Sytsma. 2006. *Chemical Parameters in Ships' Ballast Water: ANS Investigations in the Columbia River*. Prepared for the US Coast Guard Research and Development Center. 62 pp.
- Phillips, S, T. Darland, and M. Sytsma. 2005. Potential Economic Impacts of Zebra Mussels on the Hydropower Facilities in the Columbia River Basin. Prepared for the Bonneville Power Administration. 22 pp.
- Pfauth, M. and M.D. Sytsma. 2005. *Alaska Aquatic Plant Survey Report - 2005*. Prepared for US Fish and Wildlife Service. 20 pp.
- Sytsma, M. and M. Pfauth. 2005. *Submersed Aquatic Vegetation in Diamond Lake*. Prepared for US Forest Service. 9 pp.
- Hanson, E. and M. Sytsma. 2005. *The Potential for Mitten Crab Colonization of Estuaries on the West Coast of North America*. Prepared for the Pacific States Marine Fisheries Commission and Alaska Department of Fish and Game.
- Hanson, E. and M. Sytsma. 2005. *Mitten crab (Eriocheir spp.) recruitment: Factors that influence larval supply and return to settlement sites*. Prepared for the Pacific States Marine Fisheries Commission and the US Fish and Wildlife Service. 35 pp.
- Sytsma, M.D., J. Cordell, J. Chapman, and R. Draheim. 2004. *Lower Columbia River Aquatic Nonindigenous Species Survey. 2001-2004. Final Technical Report*. Prepared for US Coast Guard and US Fish and Wildlife Service. 69 pp.+ Appendices.
- Murphy, K., G. Ruiz, and M. Sytsma. 2003. *Standardized Protocol for Verifying Mid-ocean Ballast Water Exchange*. Prepared for US Coast Guard. 36 pp.
- Flynn, K and M. D. Sytsma. 2004. *Report on the Oregon Ballast Water Management Program*. Prepared for the Oregon legislature per Oregon Laws 2003, Chapter 722. 92 pp.

- Harwood, E. and M.D. Sytsma. 2003. *Risk Assessment for Chinese Water Spinach*. Prepared for Oregon Department of Agriculture. 9 pp.
- Hanson, E., and M.D. Sytsma. 2001. *Oregon Aquatic Nuisance Species Management Plan*. Produced at the request of the Governor's Natural Resources Cabinet with funding from Oregon Watershed Enhancement Board.
- Shesthra, R. and M.D. Sytsma. 2001. *Lake Lytle Milfoil Control Project Report*. Report to Oregon Department of Agriculture.
- Sytsma, M.D. and K. Walker. 2000. *Survey of Aquatic Plants in Corps of Engineers Reservoirs*. Report to US Army Corps of Engineers.
- Petersen, R. and MD Sytsma. 2000. *Lake Sampling for Nutrient Criteria Development in EPA Region 10*. Report to US EPA.
- Sytsma, M.D. and R. Edwards. 2000. *Survey of Boater Awareness of Invasive Species in Oregon, Idaho, Montana, and Wyoming*. Report to Pacific States Marine Fisheries Commission.
- Sytsma, M.D. 1999. *Aquatic Vegetation in Irrigation Canals: A Guide to Integrated Management*. Report to Oregon Department of Agriculture and US EPA.
- Sytsma, M.D. 1999. Aquatic Nuisance Species Management in Oregon. *Aquatic Nonindigenous Species Management in the West Conference Summary*. Boise, ID. 15-16 December 1998.
- Sytsma, M.D. Editor. 1999. *Aquatic Nonindigenous Species Management in the West: Conference Summary*. Boise, ID. 15-16 December 1998.
- Sytsma, M.D. 1999. *Talent Canal Grass Carp Management Plan*. Report to Talent Irrigation District.
- Parker, M. and M.D. Sytsma. 1998. *Aquatic Vegetation Management in Southern Oregon Irrigation Canals. Phase II: Evaluation of Techniques to Prevent and Reduce Plant Growth*. Report to Oregon Department of Agriculture and Talent Irrigation District.
- Sytsma, M.D. and M. Parker. 1997. *Aquatic Vegetation Management in Southern Oregon Irrigation Canals*. Report to Talent Irrigation District and US Bureau of Reclamation.
- Honea, J. and M.D. Sytsma. 1997. *Evaluation of the importance of temperature as a potential limiting factor for growth of water hyacinth (*Eichhornia crassipes*) in Oregon*. Report to Oregon Department of Agriculture.
- Sytsma, M.D. 1997 *Fern Ridge Lake Volunteer Water Quality Monitoring Report*. Report to U.S. Army Corps of Engineers, Fern Ridge Lake Project.
- Heaton, A, S. Mrazik, M.D. Sytsma, and J.R. Pratt. 1996. *Survey of aquatic plants in selected lakes of Mt. Hood National Forest*, Report 96-4, Lakes and Reservoirs Program, ESR, Portland State University (Report to Mt. Hood National Forest, US Department of Agriculture)
- Sytsma, M.D. (Editor). Proceedings, Symposium on Aquatic Non-indigenous Species in Western Aquatic ecosystems. 27-29 March 1996. Portland State University.
- Breiling, S. and Mark D. Sytsma. 1997. 1996 *Citizen Lake Watch Annual Report*. Report to Oregon Department of Environmental Quality.
- Pfauth, Mary and Mark Sytsma. 1996. *Key to West Coast *Spartina* Species*. Report to Oregon Department of Agriculture.
- Sytsma, Mark D. 1996. *Devils Lake Revegetation and Water Quality Study Final Report*. Report to Devils Lake Water Improvement District.

Sytsma, Mark D. 1996. 1995 *Citizen Lake Watch Annual Report*. Report to Oregon Department of Environmental Quality.

Sytsma, Mark D. 1995. Hydrilla management in Oregon: options, obstacles, and recommended action. *Proceedings, Oregon Society of Weed Science Annual Meeting*. 17-18 October 1995. Clackamas, OR.

Sytsma, Mark D., Richard Petersen, Susanna Berglund, and Keith Perkins. 1995. *1994 Lake Water Quality Assessment Annual Report*. Report to Oregon Department of Environmental Quality.

CONFERENCE PRESENTATIONS AND INVITED LECTURES

Castillo, J.M., B.J. Grewell, A. Pickart, E. Figueroa, and M. D. Sytsma. Changes in tussock architecture of invasive *Spartina densiflora* (Poaceae) Along the Pacific Coast of North America. 4th International Conference on Invasive Spartina. Rennes, France. 7-10 July 2014.

Sytsma, M.D. Arundo treatment options. Bioinvasion and Invasion Risk Panel. 32nd Annual Public Interest Environmental Law Conference. Eugene, OR. February 27 - March 2, 2014.

Sytsma, M.D. The effects of dissolved calcium and temperature on growth and survival of invasive quagga mussels (*Dreissena rostriformis bugensis*). 2013 American Water Resources Association Conference. Portland, OR. 4-7 November 2013.

Carter, J., T.R. Sheffels, S. Merino, and M.D. Sytsma. Comparison of tail and collar attachment methods for nutria (*Myocastor coypus*). The Wildlife Society Annual Meeting. Milwaukee, WI. 9 October 2013.

Sytsma, M.D. Freshwater Invasive Plants. Western Regional Panel on Aquatic Invasive Species Meeting. Portland, OR. 13-15 August 2013.

Sytsma, M.D. and V. Morgan. Spartina Eradication and Control. Western Regional Panel on Aquatic Invasive Species Meeting. Portland, OR. 13-15 August 2013.

Fileto-Pérez, H.A., Sytsma, M.D., Rutiaga-Quiñones, J.G., Paez-Lerma, J.B., López-Miranda, J., Rutiaga-Quiñones, O.M. Characterization, and evaluation of biotechnological potential of water hyacinth (*Eichhornia crassipes*). Annual Meeting of the Aquatic Plant Management Society. San Antonio, TX. 14-17 July 2013.

Phillips, S. and M. D. Sytsma. Preventing an invasion: Building a regional defense against quagga and zebra mussels. 3rd Annual PNWER Invasive Species Conference. Anchorage, AK. 17 July 2013.

Sytsma, M.D. Quagga/zebra mussels in the Pacific Northwest. PNWER Water Policy Working Group. Anchorage, AK. 16 July 2013.

Sytsma, M.D. Growth rate of quagga mussels in Northwest waters. Northwest Hydro Operators Forum. Bellevue, WA. 7 May 2013.

Sytsma, M.D., S. Wells, and B. Adair. Overview of mussel research. Pacific Northwest Power and Conservation Planning Council. Portland, OR. 13 February 2013.

Sytsma, M.D. Aquatic invasive species in Oregon. 2012 Annual Gypsy Moth Review. Portland, OR. October 31-November 1, 2012.

Sytsma, M.D. Getting to know the mussels. Zebra/Quagga Mussel Workshop. Invasive Species Council of British Columbia. Kelowna, BC. October 19, 2012.

Miller, R. and M. Sytsma. Waldo Lake limnology. Oregon Lakes Association Annual Conference. Crater Lake, OR. September 15, 2012.

- Carter, J. T. Sheffles, M. Sytsma and S. Merino. A review of Nutria (*Myocastor coypus*) Habitat Use in Urban Ecosystems. 9th INTECOL International Wetlands Conference. Orlando FL. USA. June 3-8, 2012.
- Sytsma, M.D. Aquatic invasive species in the Pacific Northwest: Impact, Management and Identification. Strategic Management of Invasive Species in the Northwest US Workshop. Portland, OR. 21-25 May 2012.
- Sytsma, M.D. Are invasive species control strategies working? PSU Executive Seminar Program: Controlling Aquatic Invasive Species: Mission Impossible? Las Vega, NV. 30 April-4 May 2012
- Wells, S. and M.D. Sytsma. Early detection monitoring for zebra and quagga mussels in the western contiguous USA. 31st Annual Western Aquatic Plant Management Society Annual Conference. San Diego, CA. 2-4 April 2012.
- Sytsma, M.D. Center for Lakes and Reservoirs: A Decade of Achievement. Oregon Lakes Association Annual Meeting. Portland, OR. 21 October 2011.
- Carter, J. T. Sheffles, C. Jarnevich, and M. Sytsma. Using habitat and climate models to predict coypu (*Myocastor coypus*) invasions Neobiota. Copenhagen, Denmark. September 14-17, 2010.
- Carter, J., T. Sheffles, M. Sytsma, and S. Merino. Review of nutria in urban ecosystems. Neobiota. Copenhagen, Denmark. September 14-17, 2010.
- Sytsma, M.D. AIS in Oregon. Annual National Forest Service Invasive Species Program Coordinators Meeting. Portland, OR. 15 December 2010.
- Sytsma, M.D. Aquatic weed work at the CLR. Oregon Interagency Noxious Weed Symposium. Corvallis, OR. 7-8 December 2010.
- Miller, R. and M. Sytsma. Models of macrophyte species distribution and canopy height in a shallow mesotrophic lakes. Annual Meeting of the North American Lake Management Society. Oklahoma City, OK. 3 November 2010.
- Sytsma, M.D. Aquatic Weeds of Oregon. Oregon Vegetation Management Association. Sunriver, OR. 15-17 November 2010.
- Sytsma, M.D. and V. Morgan. Aquatic Weed Update. Oregon Society of Weed Science Annual Meeting. Hood River, OR. 20 October 2010.
- Sytsma, M.D. Oregon spartina management program. Symposium on the Control of Invasive *Spartina densiflora* and Restoration of Native Salt Marshes. Arcata, CA. 29-30 June 2010.
- Sytsma, M.D. West Coast Governor's Agreement on Ocean Health Spartina Action Plan. Invasive Species Advisory Committee. San Francisco. 24 June 2010.
- Sytsma, M.D. Restoration following Spartina eradication. Restoration Institute. University of Victoria, British Columbia. 26-30 May 2010.
- Chestnut, T. and M.D. Sytsma. What we really know about the presence of Bd in the North: an Alaska case study. Society for Northwest Vertebrate Biologists Annual Meeting. Medford, OR. 23-26 February 2010.
- Sytsma, M.D. Update on aquatic invasive species in Oregon. Western Aquatic Plant Management Society Annual Meeting. Seattle, WA. 28-31 March 2010.
- Sytsma, M.D. Eradication of invasive Spartina on the West Coast. Western Aquatic Plant Management Society Annual Meeting. Seattle, WA. 28-31 March 2010.

- Sytsma, M.D. Aquatic nonindigenous species in the Columbia River: potential consequences for ecosystem restoration. River Restoration Northwest Annual Symposium. Skamania, WA. 1-4 February 2010.
- Sytsma, M.D. A regional approach to aquatic weed management in the Pacific Northwest. Invasive Plant Council of British Columbia. Vancouver, BC .18-20 January 2010. (Keynote address)
- Sytsma, M.D. Aquatic weed management. Annual meeting of the Oregon Vegetation Management Association, Seaside, OR. 21 October 2009
- Sytsma, M.D. Invasive species: implications for habitat restoration and effects on salmonids. Northwest Power and Conservation Council Columbia River Estuary Science-Policy Exchange. Astoria, OR. 10-11 September 2009.
- Sytsma, M.D. A plan for eradication of non-native spartina for the west coast of the USA by 2018. 6th International Conference on Marine Bioinvasions. Portland, OR. 24-27 August 2009.
- Davidson, I., M. Sytsma, and G. Ruiz. A review of ship fouling as a vector of marine organisms and an investigation of voyage impacts on the invasion potential of ship fouling communities. 6th International Conference on Marine Bioinvasions. Portland, OR. 24-27 August 2009.
- Larson, A.A., C. E. de Rivera, G. M. Ruiz, E.D. Grosholz, and M.D. Sytsma. Assessment of success: can we attribute a rebound of native species to the removal of the European green crab, *Carcinus maenas*? 6th International Conference on Marine Bioinvasions. Portland, OR. 24-27 August 2009.
- Zaben, C. I. Davidson, C. Brown, A. Chang, M. Sytsma, G. Ruiz. Hull fouling and movement patterns of recreational vessels in San Francisco Bay: a pilot study. 6th International Conference on Marine Bioinvasions. Portland, OR. 24-27 August 2009.
- Pennington, T. and M.D. Sytsma. Seasonal changes in carbohydrate and nitrogen concentrations in Oregon and California populations of Brazilian elodea (*Egeria densa*). Honolulu, HI. 28th Annual Meeting of the Western Aquatic Plant Management Society. 29 March – 1 April 2009.
- Sytsma, M.D. and V. Morgan. Aquatic plants in the USGS Nonindigenous Aquatic Species database. Honolulu, HI. 28th Annual Meeting of the Western Aquatic Plant Management Society. 29 March – 1 April 2009.
- Sytsma, M.D. Update on aquatic weeds management in Oregon. Oregon Interagency Weed Symposium. Corvallis, OR. 2-3 December 2008.
- Sytsma, M.D. Aquatic weed management. Klamath County Weed Board. Klamath Falls, OR. 20 November 2008.
- Larson, A.A., C.E. deRivera, E.D. Grosholz, G.M. Ruiz, and M.D. Sytsma. Can we attribute the rebound of native species to the removal of an invasive crab, *Carcinus maenas*? 89th Annual Meeting, Western Society of Naturalists. Vancouver, BC. 6-9 November 2008
- Howard, V. and M.D. Sytsma. Developing the Alaskan Spartina Response Plan. 3rd Annual Alaska Invasive Species Conference. Anchorage, AK. 21-23 October 2008.
- Sytsma, M.D. Aquatic invasive species. Western Horticulture Inspection Society. Portland, OR. 6-9 October 2008.
- Sytsma, M.D. and S. Wells. Current efforts on detection of quagga and zebra mussels in the West. Western Division of the American Fisheries Society Annual Meeting. Portland, OR. 4-8 May 2008.
- Rasmussen, B., V. Howard, and M. Sytsma. Invasive Spartina: EDRR in Oregon. Cooperative Weed Management Area National Conference, Reno, NV. 16 April 2008

- Sytsma, M.D. and V. Howard. The threat of Humboldt County's spartina population to other West Coast estuaries. Humboldt County Spartina Summit. Eureka, CA. 13 February 2008.
- Sytsma, M.D. and D. Travis. *Phragmites australis*: The other wetland invader. Workshop on Purple Loosestrife in the Pacific Northwest. Oregon Chapter of The Wildlife Society Annual Meeting. Glendon Beach, OR. 12 February 2008.
- Anderson, L.W. and M.D. Sytsma. Early detection and rapid response planning for *Lagarosiphon major* and *Trapa natans* introductions in the western United States. Weed Science Society of America Annual Meeting. Chicago, IL. 4-7 February 2008.
- Sytsma, M.D. Aquatic nuisance species prevention: Oregon priorities, strategies, and tools. US Forest Service R6 Aquatic/Watershed Program Managers Meeting, Welches, OR, 26-28 November 2007
- Sytsma, M.D. Management of aquatic weeds. Skipanon Watershed Council. Cullaby Lake, Oregon, 20 November 2007.
- Howard, V. and M.D. Sytsma. Spartina early detection and rapid response: the Oregon experience. Alaska Invasive Species Conference. Fairbanks, AK, 13 November 2007.
- Storer, B. A. Straub, M. Sytsma, and G. Cashdollar. West Nile Virus phase I: biological characterization of stormwater detention basins. Water in the Pacific Northwest: Moving Science into Policy and Action Conference. Skamania, WA. 7-9 November 2007.
- Phillips, S., T. Darland, and M. Sytsma. Potential economic impacts of zebra mussels on the hydropower facilities in the Columbia River basin. International Conference on Aquatic Invasive Species. Nijmegen, The Netherlands. 23-27 September 2007.
- Sytsma, M.D. Aquatic invasive species and transportation. ODOT Environmental Division conference. Hood River, OR. 4 November 2007.
- Sytsma, M.D. and R. Draheim. Aquatic invasive species threats to Oregon lakes. Oregon Lakes Association Meeting. Diamond Lake Oregon. 21-22 September 2007.
- Miller, R. and M.D. Sytsma. Water quality trends in Waldo Lake. Oregon Lakes Association Meeting. Diamond Lake Oregon. 21-22 September 2007.
- Cordell, J., S.M. Bollens, R. Draheim, and M. Sytsma. Recent invasions of asian copepods in the Columbia-Snake river system. 5th International Conference on Marine Bioinvasions. Boston, MA. 21-24 May 2007
- Simkanin, C. and M. Sytsma. Coordinating ballast water reporting between federal and state programs: a pilot project on the lower Columbia River. 5th International Conference on Marine Bioinvasions. Boston, MA. 21-24 May 2007
- Davidson, I., G. Ruiz, and M. Sytsma. High-density vector events and bioinvasion risk reduction: assessing the influence of transit and in-water cleaning on the biofouling of obsolete vessels. 5th International Conference on Marine Bioinvasions. Boston, MA. 21-24 May 2007
- Howard, V., M. Sytsma, and P. Fuller. Expanding and updating the USGS Nonindigenous Aquatic Species database. Western Aquatic Plant Management Society meeting. Coeur d'Alene, ID. 26-27 March 2007.
- Howard, V. and M. Sytsma. Get the drift? Potential ocean dispersal of invasive *Spartina* propagules. American Society of Limnology and Oceanography, Victoria, BC. 9 June 2006.
- Howard, V. and M. Sytsma. Results from the regional *Spartina* dispersal study. Pacific Estuarine Research Society, Friday Harbor, WA. 17 February 2006.

- Sytsma, M.D. Invasive species impacts and mitigation. Invasive Species Town Hall. Hosted by Commissioner Sam Adams, City of Portland. 7 November 2005.
- Howard, V., M. Sytsma, M. Pfauth, and D. Isaacson. An estuarine invader - how Oregon's *Spartina* Response Plan is reaching beyond borders. Puget Sound Georgia Basin Research Conference, Seattle, WA. 31 March 2005.
- Howard, V. and M. Sytsma. *Spartina* Management in Oregon. Humboldt Bay Restoration Symposium (Arcata, CA) March 14, 2005.
- Howard, V. and M. Sytsma. Fragment propagules of *Spartina alterniflora* and potential Eastern Pacific dispersal. Third International Conference on Invasive *Spartina*, San Francisco, CA November 2004.
- Pennington, T. and M. Sytsma. Seasonal carbohydrate and nutrient allocation in *Egeria densa* from the Pacific Northwest, USA. Ecological Society of America, Portland, OR. 6 August 2004.
- Howard, V., M. Sytsma, D. Isaacson & M. Pfauth. Prospects for *Spartina* exclusion from Oregon. Ecological Society of America, Portland, OR. 6 August 2004.
- Pennington, T. and M. Sytsma. Carbohydrate and nutrient content of *Egeria densa* in Oregon and California. 44th Annual Meeting, Aquatic Plant Management Society, Tampa, FL. 11-14 July 2004
- Sytsma, M., Vanessa Howard, and Dennis Isaacson. The Oregon *Spartina* Response Plan. Western Aquatic Plant Management Society, Bellvue, WA. 2004.
- Sytsma, M., S. Phillips, and W. Zook. The Lewis and Clark Bicentennial and aquatic invasive species education and information. North American Lake Management Society International Symposium. Mashantucket, MA. November 4-8, 2003.
- Sytsma, M, R. Miller, and R. Petersen. The Oregon Lake Inventory Pilot Project. North American Lake Management Society International Symposium. Mashantucket, MA. November 4-8, 2003.
- Sytsma, M. Ecological Impacts of Aquatic Weeds. Annual Alaska Noxious and Invasive Plants Management, Anchorage, AK Workshop October 28-19, 2003.
- Sytsma, M and T. Pennington. Aquatic weed control principles, practices, and laws. Oregon Society of Weed Science. Hood River, OR. October 21-22, 2003
- Draheim, R., M. Sytsma, J. Cordell, and J. Chapman. ANS in the Columbia River Estuary. 17th Biennial Conference of the Estuarine Research Federation. Seattle, WA. September 14-18, 2003.
- Draheim, R., M. Sytsma, J. Cordell, and J. Chapman. Proliferation of the New Zealand mud snail *Potamopyrgus antipodarum* in a low salinity estuary: Results from the Lower Columbia River Aquatic Nonindigenous Species Survey. Poster Presentation. Third New Zealand Mud Snail in the Western USA Conference, Bozeman, MT. August 26-27, 2003.
- Sytsma, M. and M. Rosenkranz. Integrated Aquatic Vegetation management in Oregon following the Talent Decision. Aquatic Plant Management Society Annual Meeting. July 20-23, 2003. Portland, ME.
- Sytsma, M.D. Aquatic Weeds and Their Impact. Northwest Invasive Species Forum. March 27, 2003. Seattle, WA.
- Draheim, R., J. Chapman, J. Cordell and M. Sytsma. Aquatic nonindigenous species in the changing lower Columbia River Estuary, USA. Third International Marine Bioinvasions Conference, La Jolla, CA. March 17-19, 2003.
- Sytsma, M. M. Pfauth, and D. Isaacson. Oregon *Spartina* Response Plan. Western Aquatic Plant Management Society Meeting. March 4-5, 2003. Sacramento, Ca.

- Draheim, R., M. Sytsma, J. Chapman and J. Cordell. What's In Our River? – The Lower Columbia River Aquatic Nonindigenous Species Survey. Urban Ecology and Conservation Symposium. Portland, OR. January 24, 2003.
- Miller, R., R. Petersen, A. Herlihy, and M. Sytsma. Nutrient Criteria Development for EPA Region 10: Classification of Lakes and Reservoirs. North American Lake Management Society International Symposium. Anchorage, AK. October 29 - November 1,
- Pennington, T. and M. Sytsma. Mitten crabs, zebra mussels, and New Zealand mudsnails: Preventing their spread into Western waters. North American Lake Management Society International Symposium. Anchorage, AK. October 29 - November 1,
- Pennington, T. and M. Sytsma. Phenology and impacts of *Egeria densa* in a drinking water reservoir. North American Lake Management Society International Symposium. Anchorage, AK. October 29 - November 1, 2002.
- Pennington, T. and M. Sytsma. *Egeria densa* phenology in a coastal Oregon lake. Aquatic Plant Management Society Annual Meeting. Keystone, CO. July 21-25, 2002.
- Sytsma, M.D. Aquatic Weeds and ANS Planning. Inaugural meeting of the Idaho Invasive Species Council. March 2002.
- Sytsma, M. Aquatic nuisance species management in the West. North American Lake Management Society International Symposium Madison, WI. November 6-9, 2001.
- Sytsma, M. D. Aquatic Invasive Species Management Planning. California AIS Plan Development, Stakeholders Meeting. November 18, 2002.
- Sytsma, M. Noxious aquatic weeds in Oregon. Oregon Vegetation Management Association. Newport, OR. 7-19 October 2001.
- Sytsma, M.D. Invasive Species and Social Awareness. Atkinson Memorial Church. Oregon City, Or. 7 October 2001.
- Sytsma, M.D. Aquatic Invasive Species. Pacific Legislative Fisheries Task Force. Astoria, OR. 6 October 2001.
- Sytsma, M.D. Update on ANS in the Columbia River. Lower Columbia River Estuary Program Science Work Group. Portland, OR 9 May 2001
- Sytsma, M.D. Aquatic Nuisance Species Management Plan Enforcement. Oregon State Police Training. Monmouth, OR. 20 March 2001
- Phillips, S. and M. Sytsma. Interjurisdictional response to aquatic nuisance species in the Pacific Northwest. 2nd International Conference on Marine Bioinvasions. New Orleans, LA. 9-11 April 2001.
- Shrestha, R. and M. Sytsma. Lake Lytle Milfoil Control Project. Western Aquatic Plant Management Society Annual Meeting, Las Vegas, NV, 29-30 March 2001.
- Pennington, T. and M. Sytsma. *Egeria densa* Biology and Management. Western Aquatic Plant Management Society Annual Meeting, Las Vegas, NV, 29-30 March 2001.
- Rosenkranz, R., M. Sytsma, R. Peteresen, and R. Vaga. Establishing Nutrient Criteria for EPA Region 10 Lakes. Washington Lake Protection Association Annual Meeting, Spokane, WA, 4-6 April 2001.
- Sytsma, M and R. Edwards. Boater knowledge about invasive species: results of a survey in Oregon, Wyoming, Montana, and Idaho. Washington Lake Protection Association Annual Meeting, Spokane, WA, 4-6 April 2001.

- Hanson, E. and M. Sytsma. Update on the Oregon ANS Plan. National Aquatic Nuisance Species Task Force Meeting. 5-7 April 2001. San Francisco, CA.
- Hanson, E. and M. Sytsma. The Oregon Aquatic Nuisance Species Management Plan. Oregon Chapter Meeting of the American Fisheries Society. Portland, OR. 14-16 February 2001.
- Sytsma, M.D. and R. Wallack. Mitten Crabs and Other Aquatic Invasive Species in Oregon. Oregon Shores Conservation Coalition Conference. Newport, OR. 15 October 2000.
- Sytsma, M.D. and R. Wallack. Aquatic Invasive Species. Tsalia Watershed Festival. Reedsport, OR. 9-10 September 2000.
- Sytsma, M.D. Aquatic Plants in Natural Systems: Problems and Management. Ornamentals Northwest Horticultural Show. Portland OR. August 1999.
- Lassuy, D. and M. Sytsma. West Coast Ballast Water: Don't Dump on Us. American Fisheries Society Annual Meeting. St Louis, MO. 20-24 August 2000.
- Sytsma, M. Weed control in irrigation canals. Aquatic Plant Management Society Annual Meeting. 16-20 July, 2000, San Diego, CA.
- Rosenkranz, M. and M. Sytsma. A website for aquatic invasive species in the Western USA and Canada. Aquatic Plant Management Society Annual Meeting. 16-20 July, 2000, San Diego, CA
- Sytsma, M. Western Regional Panel for Aquatic Nuisance Species. Western Aquatic Plant Management Society Annual Meeting, March 2000, Bozeman, MT.
- Sytsma, M. Oregon ANS Issues. National Aquatic Nuisance Species Task Force Meeting. August 1999. Olympia, WA.
- Sytsma, M.D. Aquatic Invasive Species. Ecologist's Forum. May 5, 1999
- Sytsma, M. Aquatic Nuisance Species Management in Oregon. Aquatic Nonindigenous Species Management in the West Symposium, Boise, ID, 15-16 December 1998.
- Hamel, K., S. Walton, T. McNabb, and M. Sytsma. *Hydrilla* Update from Washington State. Aquatic Plant Management Society Annual Meeting, 13-16 July 1997, Fort Meyers, FL., 1997
- Carter, C. and M. Sytsma. Comparison of Genetic Structure of Oregon and South American Populations of *Egeria densa* Using RAPDs. 16th Annual Meeting, Western Aquatic Plant Management Society, 27-28 March 1997, Seattle, WA.
- Sytsma, M. Aquatic Weed in Coastal Oregon Lakes. Oregon Vegetation Management Association Annual Meeting. 1997. Newport, OR.
- Sytsma, M. Control of Coastal Aquatic Weeds. Oregon Vegetation Management Association. 23-25 October 1996. Newport, OR.
- Sytsma, M.D. Ecology of *Myriophyllum aquaticum*. Lewis County Noxious Weed Control Field Day. 10 September 1996.
- Sytsma, M.D. Lakes of Oregon. Geological Society of Oregon. 21 June 1996
- Sytsma, M. Aquatic Weed Control. Oregon. Interagency Noxious Weed Symposium. 12-13 December 1995. Oregon State University.
- Sytsma, M.D. Aquatic Weeds. Oregon Bass and Panfish Club. 21 November 1995

PUBLICATIONS IN PREPARATION

- Wells, S. and M.D. Sytsma. Phenology of *Potamogeton crispus* in the Pacific Northwest. In preparation for *Journal of Aquatic Plant Management*.
- Sytsma, M.D. and R. Miller. Historical trophic state of Puget lowland lakes determined by sediment diatoms. In preparation of *Journal of Lake and Reservoir Management*.
- Sytsma, M.D. and R. Miller. Zooplankton and phytoplankton community dynamics in Waldo Lake. In preparation for *Journal of Lake and Reservoir Management*.
- Wells, S.W. and M.D. Sytsma. Differentiation of dreissina mussels veligers using shell morphology. In preparation for *Journal of Lake and Reservoir Management*.

SIGNIFICANT PROFESSIONAL AND UNIVERSITY DEVELOPMENT ACTIVITIES

- \$1.2 million gift to establish the Stephen A. Willie Endowment for Aquatic Sciences at PSU
- Co-authored proposal for Rae Selling Berry Rare Plant Seed Bank merger with PSU - \$2 million gift
- Established the Columbia River Aquatic Nuisance Species Initiative in collaboration with the Ports of Portland and Astoria and U.S. Senator Ron Wyden's office
- Established the Center for Lakes and Reservoirs at PSU
- Established the PSU/Smithsonian Environmental Research Center Aquatic Bioinvasion Research and Policy Institute with Dr. Greg Ruiz
- Co-founded the Conservation Technology Initiative at PSU with Dr. Lisa Zurk
- Founding member of the Oregon Invasive Species Council, Western Regional Panel on Aquatic Invasive Species, and Invasive Species Work Group of the Pacific Northwest Economic Region

CURRENT GRANTS AND CONTRACTS

- Aquatic Weed Early Detection and Rapid Response. 2014-2015. Oregon Department of Agriculture. \$65,406.
- Yoncalla Pond limnological assessment and management planning. 2013-2014. North Douglas Betterment. \$40,824.
- Mussel veliger detection. 2013. National Park Service. \$7,791
- Zebra and quagga mussel monitoring in the Columbia River basin. 2013, Bonneville Power Administration and Pacific States Marine Fisheries Commission. \$49,500.
- Early detection monitoring of Boundary Reservoir for dreissena mussels and New Zealand mudsnails. 2012-2017. Seattle City Light. \$100,672.
- Interaction of temperature and calcium on growth of quagga mussels. 2010-2013. Bonneville Power Administration and the Pacific States Marine Fisheries Commission. \$183,750.
- Oregon Aquatic Invasive Species Management Plan Implementation 2012-2013. US Fish and Wildlife Service. \$25,473.
- Field evaluation of the service life of foul-release coatings for Columbia River biofouling. 2011-2015. Bonneville Power Administration and the Pacific States Marine Fisheries Commission. \$497,569.
- AIS management intern. 2012-2013. US Fish and Wildlife Service. \$49,872.

Intergovernmental Personnel Agreement for Aquatic Invasive Species Management. 2012-2013. US Fish and Wildlife Service. \$83,791.

Arundo donax early detection and rapid response plan. 2012-2013. Portland General Electric. \$10,000.

Waldo Lake Monitoring. 2009-2014. US Forest Service. \$27,825.

Diamond Lake sampling. 2013-2016. Oregon Department of Environmental Quality, US Forest Service, and Partnership for Umpqua Rivers. \$20,357.

Oregon Aquatic Plant Surveys, Outreach, and Management Planning in 2011-2013. Oregon Department of Agriculture. \$86,509.

Umpqua Lakes Aquatic Plant Surveys. Umpqua National Forest. 2008-2013. \$44,006.

Aquatic plant survey of southern Oregon lakes. 2010-2015. US Bureau of Land Management. \$57,000.

Surveys for zebra/quagga mussels and other invasive species. 2013. Bureau of Land Management/Oregon Department of Agriculture. \$20,000.

COMPLETED GRANTS AND CONTRACTS

Bathymetric and aquatic plant surveys of Oregon Dunes National Recreation Area lakes. 2013. The Nature Conservancy. \$4,239.

Pacific Northwest nutria management. 2010-2013. US Geological Survey, US Fish and Wildlife Service. \$69,084.

Diamond Lake sampling. 2010-2012. Oregon Department of Environmental Quality, US Forest Service, and Partnership for Umpqua Rivers. \$28,198.

Surveys for zebra/quagga mussels and other invasive species. 2012. Bureau of Land Management/Oregon Department of Agriculture. \$20,000.

Dreissenid monitoring in 2011. Pacific States Marine Fisheries Commission, US Army Corps of Engineers, Bonneville Power Administration. \$44,452.

Zebra/Quagga mussel plan implementation. 2010. US Fish and Wildlife Service. \$31,106.

Aquatic invasive species monitoring in Oregon. 2012. Bureau of Land Management/Oregon Department of Agriculture. \$7,700.

Veliger Analysis. 2012. National Park Service. \$9,354.

Oregon Aquatic Invasive Species Management Plan Implementation 2007-2012. US Fish and Wildlife Service. \$352,182.

Aquatic Invasive Species Vector Analysis. California Ocean Science Trust. 2008-2009. \$286,961. (Co-PI with G. Ruiz, C. Zabin, and I. Davidson).

Citizen science and drinking water quality. 2010-2011. Oregon Department of Environmental Quality, South Coast Watershed Council, and Siuslaw Watershed Council. \$13,061.

Control of *Spartina* on Cox Island, Siuslaw Estuary, Oregon. 2010-2011. West Coast Governors Agreement on Ocean Health/Pacific States Marine Fisheries Commission. \$20,000.

Interaction of temperature and calcium on growth of quagga mussels. 2010-2011. Bonneville Power Administration and the Pacific States Marine Fisheries Commission. \$162,431.

Oregon Lake Water Quality Database. Oregon Department of Environmental Quality. 2009-2010. \$40,000.

Invasive aquatic plants and biosecurity plan for Micronesia. 2009-2010. Smithsonian Environmental Research Center and the Department of Defense/US Navy. \$300,710.

Oregon Aquatic Plant Surveys, Outreach, and Management Planning in 2010-11. Oregon Department of Agriculture. \$38,146.

Dreissenid monitoring in 2010. Pacific States Marine Fisheries Commission, US Army Corps of Engineers, Bonneville Power Administration. \$45,000.

Oregon Aquatic Plant Surveys, Outreach, and Management Planning in 2009-10. Oregon Department of Agriculture. \$41,854.

Greater Yellowstone Area Aquatic Invasive Species Survey and Database Development. Carabou-Targahee National Forest in 2009. \$13,000.

Aquatic Invasive Species Survey in 2009. Teton County Conservation District. \$10,000.

Oregon ANS Plan Implementation-09/10. US Fish and Wildlife Service. \$71,389.

Development of monitoring priorities and an online database and implementation of monitoring for dreissenid mussels in California and Nevada. US Fish and Wildlife Service. 2008-2009. \$73,597.

Spartina response plan for Alaska. NOAA. 2008-2009. \$19,982.

A literature review of the feasibility of mitigating dreissenid mussel fouling in raw water systems using antifouling coatings. Bonneville Power Administration and Pacific States Marine Fisheries Commission. 2008-2009. \$35,652.

Risk assessment for dreissenid mussels in the Columbia Basin. Bonneville Power Administration and Pacific States Marine Fisheries Commission. 2008-2009. \$166,162.

Aquatic Invasive Species Survey. Teton County Weed and Pest District. 2008. \$30,000.

Engaging citizen scientists in monitoring climate change. PSU Faculty Enhancement Grant. 2008-2009. \$7,480. Co-PI with C. deRivera, A. Yeakley, M. Dresner, and T. Rosenstiel.

Dreissenid monitoring in California. 2008. US Fish and Wildlife Service. 2007-2008. \$27,774.

Oregon ANS Plan and nutria management. 2008-2009. US Fish and Wildlife Service and US Geological Survey. \$97,378.

Hull fouling: characterizing magnitude and risk of species transfers by recreational and fishing vessels. Pacific States Marine Fisheries Commission. 2008-2009. \$100,000 (Co-PI with Greg Ruiz and Chela Zabin).

Panama aquatic biology survey. PSU Aquatic Bioinvasion Research and Policy Institute. 2008-2009. (Co-PI with Greg Ruiz and Mark Torchin).

Ballast water management in Saigon Port, Vietnam. 2008-2009. PSU Aquatic Bioinvasion Research and Policy Institute (Co-PI with Greg Ruiz and Tran Triet)

Siltcoos Lake water quality and macrophyte data acquisition for TMDL development, weed management, watershed assessment, and drinking water protection. Oregon Department of Environmental Quality. 2008-2009. \$150,036.

Barney Reservoir monitoring plan and technical assistance. City of Hillsboro. 2007-2008. \$54,084. (Co-PI with R. Annear, S. Wells, and C. Berger)

Conservation Technology Initiative. The Nature Conservancy and Portland State University. 2007-2012. \$512,282. (Co-PI with L. Zurk and J. McNames)

- Aquatic Plant Surveys, Outreach, and Management Planning. Oregon Department of Agriculture. 2007-2008. \$34,150.
- State ANS Plan. US Fish and Wildlife Service. 2007-2008. \$74,077
- Aquatic Plant Manual for Alaska (supplement). US Fish and Wildlife Service. 2007-2008. \$17,450.
- Aquatic Plant Manual for Alaska. Alaska Department of Fish and Game. 2007-2008. \$30,000.
- Dreissenid Veliger Monitoring in California. California Department of Fish and Game/Pacific States Marine Fisheries Commission. 2007-2009. \$80,000.
- Dreissenid Veliger Monitoring in the Columbia River. Bonneville Power Administration/ Pacific States Marine Fisheries Commission. 2007-2008. \$15,000.
- Waldo Lake Limnology. US Forest Service. 2003 – 2008. \$418,242. (Co-PI with Roy Koch, Richard Petersen, John Reuter, and Scott Wells)
- Diamond Lake Water Quality Sampling. 2007–2008. US Forest Service. \$51,367.
- Green crab control methods, Phase 2: Evaluating effectiveness and effects of *Carcinus maenas* removal in Bodega Harbor. Alaska Department of Fish and Game, NOAA, and Pacific States Marine Fisheries Commission. 2007–2008. \$150,000. (Co-PI with C. deRivera and E. Grosholtz)
- Hull Fouling Investigations. California State Lands Commission. 2007–2008. \$125,000. (with Ian Davidson and Greg Ruiz).
- Aquatic Weed Database. USGS Florida Integrated Science Center. 2006 – 2008. \$45,000.
- Road Ecology Course and Seminar Series. 2007– 2009. Oregon Transportation Initiative. \$24,011.
- New Zealand Mudsail Outreach in the Deschutes Basin. 2007. National Fish and Wildlife Foundation. \$14,979.
- Biological Characterization of Stormwater Facilities. Phase 1. Clackamas County. 2007. \$45,000. (Co-PI with Y. Pan and J. Maser)
- Green crab control methods, Phase 1: Green crab control methods. Evaluating factors important for eradication of *Carcinus maenas*. NOAA and Pacific States Marine Fisheries Commission. 2006–2007. \$250,000. (Co-PI with C. deRivera and E. Grosholtz)
- Dreissenid Veliger Monitoring and Identification. 2007. Metropolitan Water District. \$4,400.
- Inventory and Mapping of Aquatic Plants at Lake Roosevelt National Recreation Area. 2007. US Park Service. \$10,000.
- Dreissenid Monitoring in California. 2007. US Fish and Wildlife Service. \$21,983.
- Dreissenid veliger identification laboratory. USFWS/ Pacific States Marine Fisheries Commission. 2006. \$12,144.
- Hull Fouling Investigations. US Maritime Administration. Multiple contracts totaling \$112,727. (Co-PI with Ian Davidson and Greg Ruiz)
- Oregon ANS Plan Implementation. US Fish and Wildlife Service. 2006 – 2007. \$67,600.
- Hydrilla control program review and research priorities workshop. Western Regional Panel, California Dept. Fish and Game, California Depart. Food and Agriculture. \$15,000.
- Ballast Water Treatment Workshop. State of Alaska/Pacific States Marine Fisheries Commission. \$17,751. (Co-PI with G. Ruiz).

Patterns and processes of species transfers on ship's hulls: assessing the effect of ship type, operating conditions, and hull husbandry on biofouling communities. California State Lands Commission. \$100,000. (Co-PI with G. Ruiz and I. Davidson)

Spartina Response in Oregon. OR Dept. Agriculture. 2004 – 2005. \$29,924.

Aquatic Nuisance Species Database. USFWS/Pacific States Marine Fisheries Commission. 2004-2006. \$2500.

Mitten Crab Larvae Recruitment. USFWS/ Pacific States Marine Fisheries Commission. 2004 – 2005. \$31,084.

Mitten Crab and Ballast Water Sampling for Genetic Markers. US EPA. 2004 – 2005. \$31,284.

Macrophyte Survey of Diamond Lake. USFS. 2004 – 2005. \$12,983.

West coast regional ballast water reporting pilot project. Pacific States Marine Fisheries Commission. 2004 – 2007. \$251,893.

Fragment production and dispersal of cordgrass. San Francisco Estuary Institute. 2004 – 2005. \$35,024

Egeria densa Biology and Ecology in the San Francisco Bay-Delta. California Bay Delta Authority. 2003 – 2005. \$327,937.

Oregon ANS Plan implementation. Pacific States Marine Fisheries Commission. 2003 – 2005. \$117,000.

Evaluation of the morphoedaphic index to infer pre-settlement total P concentration in lakes. EPA and Pacific States Marine Fisheries Commission. 2003 – 2005. \$96,961.

Aquatic weed surveys in coastal lakes. Siuslaw National Forest. 2003 – 2005. \$21,322.

Biological invasion of the Columbia River associated with shipping activities. US Coast Guard. 2002 – 2005. \$500,000.

Implementation of the Oregon Aquatic Nuisance Species Management Plan. US Fish and Wildlife Service. 2002 – 2006. \$311,654.

Columbia River Aquatic Nuisance Species Survey. US Coast Guard and US Fish and Wildlife Service. 2001 – 2006. \$307,677.

Skamania County Aquatic Vegetation Management Planning. Skamania County, WA. \$23,990.

Detection of *Spartina* spp. on the Oregon Coast. Oregon Department of Agriculture. \$21,647.

Aquatic vegetation management planning for Blue Lake. Oregon Department of Environmental Quality and METRO. \$75,398.

Seasonal variation in carbohydrate concentration in *Egeria densa*. Washington Department of Ecology. \$15,000.

Aquatic weed surveys in coastal lakes. Siuslaw National Forest. \$18,000.

Review of Oregon Ballast Water Management Program Compliance and Efficacy. PSU Faculty Development Grant and Columbia River Steamship Operators Association. \$16,700.

TMDL Development for Clatsop Plains Lakes. Oregon Department of Environmental Quality. \$164,500.

Mitten Crab Risk Assessment of West Coast Estuaries. Pacific States Marine Fisheries Commission. \$50,000.

Egeria densa Biology and Impacts. Aquatic Ecosystem Restoration Foundation. \$24,000.

Survey and Rapid Response Plan for *Spartina* in Oregon. Oregon Department of Agriculture. \$24,341.

Outreach and education on mitten crabs and zebra mussels. US Fish and Wildlife Service, Pacific States Marine Fisheries Commission, and Oregon Wildlife Heritage Foundation. 2004 – 2005. \$45,000.

Nutrient criteria for reservoirs in EPA Region 10. US EPA. \$98,000.

Aquatic Invasive Species Management in the Columbia Basin. Bonneville Power Administration/Pacific States Marine Fisheries Commission. 2000-2001. \$25,000.

Lake Inventory. US EPA. \$50,000. US EPA and Pacific States Marine Fisheries Commission. 2001. \$50,000.

Lake Nutrient Criteria Development. US EPA. 2000-2001. \$75,000.

Propagule bank in Devils Lake. Devils Lake Water Improvement District. 2000-2001. \$2,500.

Lake Nutrient Criteria Development. US EPA. 1999-2000. \$59,878.

Lake Lytle Eurasian Watermilfoil Control-Year 2. 2001. Oregon Department of Agriculture. \$41,057.

Lake Lytle Eurasian Watermilfoil Control-Year 1. Oregon Department of Agriculture. 1999-2000. \$12,822.

Mitten Crab Education and Outreach. US Fish and Wildlife Service. 2000. \$14,400.

Zebra Mussel Survey in Western USA. 2000. Fish and Wildlife Foundation. \$17,000.

Technical Assistance in Management of Invasive Aquatic Plants. Oregon Department of Agriculture. 2000-2001. \$50,000.

Phenology and Ecology of *Egeria densa* in Oregon. Bureau of Land Management. 1999-2001. \$10,000.

A WWW-based Information Matrix for Aquatic Nuisance Species in the Western USA. California Department of Food and Agriculture. 1999-2000. \$6,000.

Aquatic Vegetation in US Army Corps of Engineers Reservoirs. US Army Corps of Engineers. 1999. \$18,540.

Center for Lakes and Reservoirs. Oregon. Watershed Enhancement Board. 2000-2001. \$135,000.

Integrated Aquatic Vegetation Management in Southern Oregon Irrigation Canals. Phase 2. Talent Irrigation District and US Bureau of Reclamation. 1999-2000. \$31,130.

Citizen Lake Watch. Oregon DEQ. \$75,000. 1998. (with Richard Petersen).

Laurance Lake Limnology and Management. Mt. Hood National Forest. 1998. \$6,545.

Coordination of Aquatic Non-indigenous Species Management in Coastal Pacific and Northwestern States. Pacific States Marine Fisheries Commission, California Department of Water Resources, Oregon Department of Agriculture, Washington Department of Fish and Wildlife, US Bureau of Reclamation, and Bonneville Power Authority. 1998-2001. \$185,000.

Guide to Development of Aquatic Plant Management Plans. Governor's Watershed Enhancement Board. 1999-2001. \$42,288.

Citizen Lake Watch. Oregon DEQ. 1997-1998. \$30,000 (with Richard Petersen).

Integrated Aquatic Plant Management in Irrigation Systems. Talent Irrigation District and U.S. Bureau of Reclamation. 1998. \$43,263.

Combination Treatment of Parrotfeather with triclopyr and fluridone. Washington Commission on Pesticide Registration. 1997-1998. \$44,915.

Invasion and Genetic Structure of Nonnative Aquatic Plant Populations in Oregon Lakes. PSU Faculty Development Grant. \$6,009.

Detection and Management of Hydrilla verticillata. Oregon Department of Agriculture. 1996-1997. \$15,000.

Oregon Lake Watershed Watch. Oregon Department of Environmental Quality. 1996-1997. \$78,000.

Fern Ridge Lake Citizen Monitoring. U.S. Army Corps of Engineers. 1995-1996. \$5,650.

Bull Run Reservoir No. 2 Macrophyte Management. Portland Water Bureau. 1995-1996. \$5,039.

Revegetation Study and Water Quality Analysis of Devils Lake. Devils Lake Water Improvement District. 1995-1996. \$10,275.

Hydrilla Surveillance and Contingency Plan Development. Oregon Department of Agriculture. 1995. \$17,056.

TEACHING, MENTORING, AND CURRICULAR ACTIVITIES

PSU courses developed and taught

ESR 410/510/610. Road Ecology

ESR 478/578/678. Aquatic Plants

ESR 475/575/675. Limnology and Aquatic Ecology

ESR 477/577/677. Limnology Lab

ESR 410/510/610. Bioinvasions

ESR 410/510/610. Weed Management in Urban Areas

ESR 407/507/607. Environmental Science Seminar

Other teaching

Weed and Algae Management. OSU Extension Pond School. Sisters, OR, September 20, 2008.

Aquatic Weed Management. Portland Parks and Recreation, Pesticide Applicators Certification class. 27 November 2007

PSU Aquatic Weed School. Organized and lectured. 2004, 2013

UC Davis Aquatic Weed School. 2000, 2002, 2004, 2006, 2010, 2012, 2014

Aquatic Weeds. Farm Pond Management Workshop. OSU Extension. April 10, 1999.

Aquatic Weed Management. Non-Crop Vegetation Management Course. March 1996. Oregon State University Integrated Plant Protection Center, Corvallis, OR.

Aquatic Vegetation Management. 14th Annual Waterworks and Wastewater Short School. 9-11 March 1998. Gleneden Beach, OR.

Aquatic Weed Management. Non-Crop Vegetation Management Course. March 1995. Oregon State University Integrated Plant Protection Center, Corvallis, OR.

Aquatic Macrophyte Workshop. 13th International Symposium of the North American Lake Management Society, 4 December 1993, Seattle, WA.

Student mentoring

Undergraduate students

Paul Ramirez – Bridges to Baccalaureate Program to give students from under-represented groups in the sciences research experience.

Leonard Caldwell
Renee Renn

Current graduate students

Melinda Lamb (MEM)
Mark Rosenkranz (PhD)
Rich Miller (MS)

Former graduate students

Sheffels, Trevor. PhD. 2013. Status of Nutria (*Myocastor coypus*) Populations in the Pacific Northwest and Development of Associated Control and Management Strategies, with an Emphasis on Urban Habitats. (US Fish and Wildlife Service, Tualatin Refuge)

Warren, Kelly, MEM. 2010. Climate Change and its Effect on Migration Patterns of the Cackling Goose and White-fronted Goose in the Willamette Valley and Implications for Goose Management. (Willamette Basin Wildlife Mitigation Coordinator, Confederated Tribes of the Warm Springs)

Moore, Lynda, MS. 2009. Biological Control of Purple Loosestrife (*Lythrum salicaria*): Factors Affecting *Galerucella pusilla* and *Galerucella californiensis* Establishment in Tidal Areas. (Research Technician, US Forest Service)

Temple, Whitney, MEM. 2009. Effects of Organic Matter Additions to Sediment on the Growth of *Stuckenia pectinata*: An Alternative to Pesticides for Aquatic Weed Control. (Research Technician, US Geological Survey).

Wells, Steven, MS. 2009. Phenology of *Potamogeton crispus* (curlyleaf pondweed) in Blue Lake, Oregon: Formation and Sprouting of in the Pacific Northwest of North America. (Research Assistant, PSU)

Sheffles, Trevor, MEM. 2007. Report on Nutria Management and Research in the Pacific Northwest. (US Fish and Wildlife Service, Tualatin Refuge)

Toni Pennington, PhD. 2007. Seasonal Changes in Allocation, Growth, and Photosynthetic Responses of the Submersed Macrophyte *Egeria densa* Planch. (Hydrocharitaceae) from Oregon and California (Consultant, Tetra Tech, Portland, OR)

Monaca Noble, MS. 2007. Evaluating the Risk of Invasions Associated with Low Salinity Ballast Water Arriving to the Columbia River (Research Assistant, Smithsonian Environmental Research Center, Edgewater, MD)

Ingrid Larsson, MEM. 2007. Ballast Water Management Alternatives in the Columbia River (Consultant, Portland, OR)

Laura Johnson, MS, 2005. Diurnal vertical migration of phytoplankton in Waldo Lake, Oregon (Bureau of Environmental Services, Portland, OR)

Kiirsten Flynn, MEM. 2004. Ballast Water Management in Oregon – 2004 (Instructor, Nova School, Olympia, WA)

Erin Harwood, MEM. 2003. Aquatic Vegetation Management Plans for Clatsop Plains Lakes (Extension Agent, Clark County, Vancouver, WA)

Diane Kightlinger, MEM. 2002. Reaching out to Oregonians on Aquatic Invasive Species: A strategy and implementation plan for the Oregon Invasive Species Council (Consultant, Portland, OR)

Jordan Vinograd, MEM, 2002. Ballast Water Management in Oregon - 2002 (Assist. Manager, Hood River Soil and Water Conservation District, Hood River, OR)

Rupa Shrestha, MEM. 2001. Lake Lytle Milfoil Control Project

Erik Hanson, MEM. 2001. Oregon Aquatic Nuisance Species Management Plan (Montana Department of Agriculture Invasive Species Coordinator)

Carrie Haag, MEM. 2001. Oregon Lake Condition Index (Consultant, CH2M Hill, Portland, OR)

Melissa Waggy, MEM. 2001. Devils Lake Revegetation (Rural Landscape Scientist, Missoula County, MT)

Mark Rosenkranz, MEM. 2001, Bathymetry of Oregon Lakes (Water Resources Manager, Lake Oswego Corp, Lake Oswego, OR)

Zasha Bassett, MS. 2000. The impacts of the introduced European green crab, *Carcinus maenas*, on selected bivalves and meiofaunal communities. (Biology teacher, Woodward Park Academy, College Park, GA)

Service on Graduate Committees

Arik Rouhe. PhD. 2014. Environmental Science. Buoyancy in cyanobacteria. Dissertation Committee.

John Gebbie. PhD. 2013. Electrical and Computer Engineering. Advances in Target Localization with Passive Sonar. Graduate Office Representative on Dissertation Committee.

Pasang Sherpa. M.S. 2012. Electrical and Computer Engineering. Passive Acoustic Vessel Localization. Thesis Committee.

Jorge Quinjan. Ph.D. 2010. Electrical and Computer Engineering. Radiative transfer theory applied to ocean bottom modeling. Graduate Office Representative on Dissertation Committee.

George Ogden. MS in Electrical and Computer Engineering. 2010. Extraction of small boat harmonic signatures from passive sonar. Thesis Committee.

Andrew McCulloch. MS in Civil and Environmental Engineering. Hydrodynamic modeling of Banks Lake linked to fish bioenergetics. Thesis Committee.

Kiara Smith, PhD in Civil Engineering. 2010. In Environmental Science and Resources. Remediation of PAH-contaminated sediments. Comprehensive Exam and Dissertation Committee.

Alec Sithole, PhD in Environmental Science/Physics. 2009. Experimental methods for measuring the Q10 of methane and nitrous oxide emissions from rice agriculture. Graduate Office Representative on Dissertation Committee.

Laura Taylor, MS in Biology. Dynamics of species invasiveness and ecosystem invasibility: interactive effects of genetic diversity and soil disturbance on the spread of an invasive grass, *Brachypodium sylvaticum*. Thesis Committee.

Josh Caplan. PhD in Environmental Science. 2008. Water relations and invasiveness of blackberry. Dissertation Committee.

Arick Rouhe, MS in Environmental Science. 2008. The influence of aquatic humic substances upon primary production and biovolume of *Aphanizomenon flos-aquae* in Upper Klamath Lake and Agency Lake, Oregon. Thesis Committee.

Roxanne Clifton, MEM in Environmental Science. 2007. A vegetation study in an urban wetland. Thesis Committee.

Joe Lotz, MS in Electrical and Computer Engineering. 2007. Coral reef fish detection using a single-beam sonar. Graduate Office Representative

Marshall Johnson. MEM in Environmental Science. 2005. Investigating alternatives for control of *Phalaris arundinacea* (reed canarygrass) in urban wetlands. Thesis Committee.

Peter Levasseur, MS in Biology. 2002. Genetic diversity and clone size in a population of *Hedera helix* (Araliaceae) using RAPDs. Thesis Committee.

Chris Berger, PhD in Civil and Environmental Engineering. 2000. Modeling Macrophytes of the Columbia Slough. Graduate Office Representative

Miguel Estrada, MS in Biology. 2000. Dynamics of Plankton Communities in Two Oregon Reservoirs. Thesis Committee.

Daria Mochan, MS. 1996. Evaluation of a rapid-screening toxicity test using the ciliate, *Colpoda inflata* (Stokes): Sensitivity and bioavailability to model compounds. Thesis Committee.

Cynthia Baker. MS in Biology. 1995. Phytoplankton in Mt. St. Helens Lakes, Washington. Thesis Committee.

PROFESSIONALLY RELATED SERVICE AND ENGAGEMENT

President, Western Aquatic Plant Management Society. 1995-1996 and 2012-2013.

Interviewed by Oregon Public Broadcasting. (<http://www.opb.org/news/article/boat-inspections-begin-in-effort-to-stop-invasive-species/>). 11 February 2013.

Vice President and Program Chair. 31st Annual Western Aquatic Plant Management Society Annual Conference. San Diego, CA. 2-4 April 2012.

Peer reviewer for *Journal of Aquatic Plant Management*, *Wetlands*, *The Prairie Naturalist*, *Biological Invasions*, *Journal of Lake and Reservoir Management*, *Invasive Plant Science and Management*, *Risk Assessment*, *Environmental Science and Technology*, *Biological Conservation*, *Marine Ecology Progress Series*, *Hydrobiologia*, *Environmental and Experimental Botany*, *Environmental Monitoring and Assessment*, *PLOS One*, *Fundamental and Applied Limnology*

Panel Moderator. The Plant Nursery Industry in Oregon: Current Status and Future Prospects. Portland City Club. Portland, OR. 13 May 2011.

Promotion and Tenure Review for Dr. Rusty Feagin, Texas A&M University. 2011.

Panel Moderator. Ballast Water Management. Northwest Water Law Symposium. Portland, OR. 9 October 2010.

Co-chair. West Coast Governor's Agreement on Ocean Health, Spartina Eradication Action Team. 2008-2011.

Featured Guest. Interview on Oregon invasive species summit. KATU News. 22 July 2008.

Guest speaker. Garrison Lake Restoration Committee. Port Orford, OR. 18 June 2008.

Oregon Department of Fish and Wildlife Invasive Species Coordinator Selection Committee. 2008.

USDA/APHIS Cooperative Agricultural Pest Survey Committee, 2008.

Oregon Wildlife Integrity Rules Panel. 2000-2014.

Featured Guest. Sustainable Today Program on Invasive Species. The Oregon Channel, Comcast Channel 11 and OPB Channel 10.4. 8 PM, 14 June 2008.

Member, Work Group 21 - Invasive Species. North Pacific Marine Science Organization. 2006-2014.

Guest Lecturer. AP Environmental Science. West Linn High School. West Linn, OR. 9 May 2008.

Chair, Oregon Shipping-related Transport of Invasive Species Task Force. 2008-2014.

Invited Testimony. Portland City Council Hearing on Gray to Green Initiative. 16 April 2008.

Featured Scientist. Oregon Field Guide. Episode 1901. Quagga Mussels. 3 April 2008

Featured Scientist. Silent Invasion. Oregon Public Broadcasting special on invasive species. 22 April 2008.

Technical reviewer. 2007 Canadian Aquatic Invasive Species Network proposals.

Expert testimony on lakes and invasive species at multiple hearings of the Oregon legislature 2001- 2011

Scientific Steering Committee. 6th International Conference on Marine Bioinvasions. 2007-2010

Ballast Water Program Manager Interview Panel, Oregon Department of Environmental Quality 2007.

Invasive Species Priority Advisory Committee, West Coast Governors' Agreement on Ocean Health. 2007.

Promotion and Tenure Review for Dr. Marnie Chapman, Australian Maritime University. 2007.

Guest Editor, Journal of Aquatic Plant Management special issue on aquatic plant research priority workshop. 2006-2007.

Featured Scientist. Oregon Field Guide. Episode 1412. Ballast Water. 2003.

Member, Henry Hagg Lake Resource Management Planning Committee. US Bureau of Reclamation. 2002-2003.

Member. West Coast Ballast Water Outreach Project Advisory Committee

Member. Idaho Aquatic Invasive Species Management Plan Technical Advisory Committee

Technical Reviewer. EPA STAR Grant Proposals

Member. ANS Task Force Monitoring and Detection Committee

Oregon Ballast Water Legislation (HB 2170) Committee

Founding member and Chair. Oregon Invasive Species Council. 2001-2011 (Chair 2003-2005, 2007-2008, 2014-2015)

Member. National New Zealand Mudsail Management Plan Committee

Co-chair. Pacific Northwest Economic Region Invasive Species Work Group

Oregon Noxious Weed Management Funding Working Group

Board of Directors and Associate Editor. Aquatic Plant Management Society

Chair, Oregon Ballast Water Task Force. 2002-2006

Executive Committee of the Western Regional Panel on Aquatic Nuisance Species (Vice Chair 1998-2000)

Program Chair. Aquatic Nonindigenous Species Management in the West. Boise, ID. 15-16 December 1998.

Program Chair. Symposium on Nonindigenous Species in Western Aquatic Ecosystems / North American Lake Management Society Regional Meeting / Western Aquatic Plant Management Society Annual Meeting. Portland State University. 27 - 29 March 1996.

President. Oregon Lakes Association. 1994-1995.

Departmental Service

Environmental Science and Management Department Chair, 2008-2010

Promotion and Tenure Committee Chair, 2006-2007

Graduate Admissions Committee Chair, 2003-2004, 2007-2008

University Service

Collaborative Life Sciences Building Coordinating Committee, 2013-2014

University Policy Committee, 2011-2014

Diversity Leadership Team (prepared Research and Strategic Partnerships Diversity Action Plan), 2011-2014

Workforce Planning Committee, 2011

Information Technology Advisory Committee, 2011, 2014

Center for Academic Excellence Advisory Committee, 2011-2012

Faculty Senate, 2010 - 2011

Research Advisory Committee, 2002-2004, 2009-2011

Invited presentation. Citizen Science: Exploring Community Engaged Research in the Natural Sciences. Center for Academic Excellence, Portland State University. 8 November 2007.

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Oregon Lakes Association

Aquatic Plant Management Society

Western Aquatic Plant Management Society

North American Lake Management Society

Weed Science Society of America

Ecological Society of America