

## EDUCATION

Ph.D., Environmental and Natural Resource Sciences, Limnology, Washington State University, 2015

M.S., Natural Resource Science, Limnology, Washington State University, 2010

B.S., Environmental and Natural Resource Economics, University of New Hampshire, 2002

## CURRENT EXPERIENCE

Dr. Ellen Preece has served as a Project Scientist at Robertson-Bryan, Inc., since 2015. Dr. Preece focuses on investigating cyanotoxins in western states and using this research to determine risks to human health. She is currently collaborating with leading cyanobacterial harmful algal blooms (CyanoHABs) researchers to develop methods to communicate risks associated with CyanoHABs to local communities and to better understand the environmental drivers that trigger formation of CyanoHABs such as *Microcystis*. Dr. Preece is currently serving as the Region 9 Director of the North American Lake Management Society and Northern Director for the California Lakes Management Society.

## PREVIOUS EXPERIENCE

Dr. Preece has over eight years of experience researching CyanoHABs such as *Microcystis* and has given over 20 presentations at professional meetings on the topic. In 2016, the U.S. Environmental Protection Agency (EPA) invited Dr. Preece to give a presentation on transfer of freshwater cyanotoxins to marine environments at the EPA Region 10 Harmful Algal Blooms (HAB) Workshop.

## SELECTED RELATED EXPERIENCE

*Bay Delta Conservation Plan/California WaterFix, California Department of Water Resources*—Assisted in preparation of the *Microcystis* analysis in Chapter 8, Water Quality, of the EIR/EIS. Extensively researched CyanoHABs such as *Microcystis* in the Sacramento-San Joaquin Delta and upstream rivers and assessed how project alternatives could affect future CyanoHABs.

*Transfer of Microcystins from Fresh to Coastal Waters*—Worked in collaboration with Washington Department of Public Health, King County Environmental Laboratory, Washington Department of Ecology and Washington tribes to identify the potential pathway of the cyanotoxin, microcystin, via seafood to human consumers. Designed and performed monitoring studies to analyze microcystin accumulation in marine mussels.

*Newman Lake, WA Restoration Project* - Lead field researcher in assessing effects of hypolimnetic oxygenation on CyanoHABs.

## PEER REVIEWED PUBLICATIONS

- Preece, E.P., Hardy, F.J., Moore, B.C., Bryan, M. 2017. A review of microcystin detections in estuarine and marine waters: environmental implication and human health risk. *Harmful Algae*. 61:31-45.
- Hardy, F.J., Bouchard, D., Burghdoff, M., Hanowell, R., Preece, E.P., Tuttle, L., Williams, G. 2016. Outreach and education approaches for harmful algae blooms (HABs), Washington State, USA. *Harmful Algae*. 60:70-80.
- Hardy F.J., Johnson, A., Hamel, K. Preece, E.P. 2015. Cyanotoxin bioaccumulation in freshwater fish, Washington State, USA. *Environmental Monitoring and Assessment*. 187(11):667.
- Preece E.P., Moore, B.C., Hardy, F.J. 2015. Transfer of microcystin from freshwater lakes to Puget Sound, WA and toxin accumulation in marine mussels (*Mytilus trossulus*). *Ecotoxicology and Environmental Safety*. 122:98-105
- Preece, E.P., Moore, B.C., Deobold, L., Hardy, F.J. 2015. First detection of microcystin in Puget Sound mussels. *Lake and Reservoir Management*. 31(1):50-54.
- Preece, E.P., Moore, B.C., Swanson, M., Hardy, F.J. 2015. A comparison of extraction and analytical methods for the isolation of microcystins in fish tissue. *Environmental Monitoring and Assessment*. 187(12): DOI 10.1007/s10661-014-4255-y.

- Moore BC, BK Cross, E Clegg, B Lanouette, M Skinner, **EP Preece**, A Child, P Gantzer, E Shallenberger, D Christensen, B Nine. 2013. Distribution and movement of trout following hypolimnetic oxygenation in North Twin Lake, Washington. Lake Reservoir Management. 30(3): 226-239.
- Moore BC, BK Cross, M Beutel, S Dent, **EP Preece**, M Swanson. 2012. Newman Lake Restoration: A Case Study Part III. Hypolimnetic Oxygenation. Lake Reservoir Management. 28(4):311-327.