

Symposium W64 Kettenring, Karin; Cranney, Chad; Hazelton, Eric; Long, A. Lexine; Mock, Karen; Rohal, Christine
Utah State University, Logan, UT, USA
karin.kettenring@usu.edu

Reciprocal Relationships Between Science and Restoration: Phragmites Australis Invasion Mechanisms, Control, and Post-Control Revegetation

Reciprocal relationships exist between science and restoration. Science can be improved by (1) integrating local knowledge and insights from practitioners into the design of research questions and (2) taking advantage of restorations to address fundamental questions that require large spatial extents and long time scales. Restoration practice can be improved by ensuring that research is conducted in a relevant way and by incorporating the latest research findings. We use large-scale experimental restorations of *Phragmites australis*-dominated wetlands on the Great Salt Lake (GSL) to address these reciprocal relationships. First, we illustrate how we have collaborated with diverse managers on the GSL to evaluate questions related to *P. australis* control on the GSL. Thus, by involving practitioners in restoration experiments, we are able to improve the relevance of research to practice. Second, we demonstrate how an interactive mapping website has been used to bring research results to practitioners to improve management of *P. australis*. Third, we show how recent research findings regarding mode of spread of *P. australis* are being used to reassess current *P. australis* control efforts. Finally, we demonstrate how restorations can be used to address fundamental questions in ecology regarding the relationships between genetic diversity and ecosystem functions. Here we propose to address the importance of native plant genetic diversity to invasion resistance following *P. australis* control. By formalizing these relationships between researchers and practitioners, we can simultaneously make meaningful impacts on both science and practice.