

## **M.L. 2013 Minnesota Aquatic Invasive Species Research Center Subproject Abstract**

For the Period Ending June 30, 2019

**SUBPROJECT TITLE:** MAISRC Subproject 17: Building scientific and management capacity to respond to invasive *Phragmites* (common reed) in Minnesota

**SUBPROJECT MANAGER:** Daniel Larkin

**AFFILIATION:** University of Minnesota

**MAILING ADDRESS:** 135 Skok Hall, 2003 Upper Buford Circle

**CITY/STATE/ZIP:** St. Paul, MN 55108

**PHONE:** 612-625-6350

**E-MAIL:** [djlarkin@umn.edu](mailto:djlarkin@umn.edu)

**WEBSITE:** <http://larkinlab.cfans.umn.edu/>

**FUNDING SOURCE:** Environment and Natural Resources Trust Fund (ENRTF)

**LEGAL CITATION:** M.L. 2013, Chp. 52, Sec. 2, Subd. 06a

**SUBPROJECT BUDGET AMOUNT:** \$283,568

**AMOUNT SPENT:** \$269,773

**AMOUNT REMAINING:** \$13,795

### **Sound bite of Subproject Outcomes and Results**

We mapped the distribution of invasive *Phragmites*, investigated its spread potential, and developed strategies for coordinated response in collaboration with agency staff and other resource managers. Published an action plan outlining how spread could be stopped and reversed; including management recommendations, cost estimates, and region-specific response guidance. Created [mnphrag.org](http://mnphrag.org).

### **Overall Subproject Outcome and Results**

MnPhrag is an early detection and response effort targeting invasive *Phragmites australis* (common reed) ([www.mnphrag.org](http://www.mnphrag.org)), with the goal of supporting landscape-scale, strategic management throughout Minnesota. We mapped the distribution of invasive *Phragmites*, investigated its spread potential, and developed strategies for coordinated response in collaboration with agency staff and other resource managers. We engaged professionals and citizen scientists in reporting suspected populations; conducted intensive search efforts in under-sampled regions; and revisited unverified reports from a web-based invasive species reporting system. Over 70 active observers helped us identify 435 invasive *Phragmites* populations statewide, and we showed that non-experts can reliably distinguish invasive from native *Phragmites* using an identification guide we developed ([www.maisrc.umn.edu/identifying-phragmites](http://www.maisrc.umn.edu/identifying-phragmites)). The value of this “crowdsourcing” approach to surveillance is reflected in most invasive stands we identified being small populations (90% are <0.25 acres), for which effective control is much more feasible. Invasive *Phragmites* is producing viable seed in Minnesota, which increases spread risk; however, the extent of seed production varies across populations, and there is still time to prevent further spread through sound, sustained control efforts. We are working closely with diverse stakeholders to support coordinated response efforts. Our work has also brought state agencies together to address crosscutting issues related to invasive *Phragmites*’ regulatory status, including its use in some wastewater treatment facilities in “reed beds” for removing water from biosolids. We recently published an action plan outlining how *Phragmites* spread could be stopped and reversed in Minnesota; this assessment includes management recommendations, cost estimates, and region-specific response guidance ([www.maisrc.umn.edu/reversing-spread](http://www.maisrc.umn.edu/reversing-spread)). Our findings reveal a window of opportunity to slow and reverse spread of invasive *Phragmites*, which would benefit Minnesotans by protecting vital natural resources. This approach to statewide surveillance, and framework for a coordinated, landscape-scale response, are strategies that could be applied to other invasive species issues in Minnesota.

### **Subproject Results Use and Dissemination**

Information from this project has been disseminated through 19 invited talks, 6 contributed presentations, 1 webinar, 1 radio interview, and reports and resources published on our website ([www.mnphrag.org](http://www.mnphrag.org)). Our *Phragmites* Identification Guide and the report “An assessment to support strategic, coordinated response to invasive *Phragmites australis* in Minnesota” are included as attachments. Project findings are being used by the Minnesota Noxious Weed Advisory Committee, the Minnesota Department of Natural Resources, the Minnesota Department of Agriculture, and the Minnesota Pollution Control Agency to assess risk of *Phragmites* invasion in Minnesota and review relevant regulations, permitting, and policy.