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## **Supplemental Control Support**

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*September 2021*

### **ABSTRACT:**

Invasive sea lamprey (*Petromyzon marinus*) populations in the Laurentian Great Lakes Basin have been suppressed for over 60 years primarily by migration barriers and lamprey-specific pesticides. Improving control outcomes by supplementing barriers and pesticides with additional control strategies has been a long-standing objective of managers and stakeholders, but progress towards this objective has been limited. In 2019, a workgroup composed of sea lamprey control agent staff, with support from the Great Lakes Fishery Commission Secretariate and scientists from U.S. Geological Survey Scientists and Michigan State University, developed an adaptive management implementation framework and began applying it to this objective (SupCon). The project described herein used seed money to (1) begin monitoring the biological characteristics of study streams and (2) continue application of supplemental controls on the Black Mallard River, Michigan. Products from this work in 2019 and the larger effort in 2020 and 2021 include three manuscripts in the Third Sea Lamprey International Symposium (SLIS III; [A renewed philosophy about supplemental sea lamprey controls - ScienceDirect](#); [An adaptive management implementation framework for evaluating supplemental sea lamprey controls in the Laurentian Great Lakes](#); [A seasonal electric barrier blocks invasive adult sea lamprey \(\*Petromyzon marinus\*\) and reduces production of larvae](#)), deferred lampricide treatment on the Black Mallard River, and a computer application that illustrates data from supplemental control research streams ([SupCon dashboard \(shinyapps.io\)](#)). Moving forward, these written and visual

deliverables will facilitate participatory processes among sea lamprey control agents, researchers, and representatives from cooperating natural resource management institutions to reduce uncertainties surrounding the use of supplemental controls.