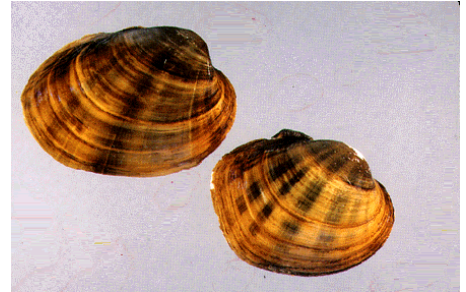




Upper Mississippi River 9-Foot Channel Project - Operation and Maintenance - Section 7 Consultation -

Higgins' Eye Pearlymussel



Species Information:

- The Higgins' eye pearlymussel is found only in the Upper Mississippi River and a few large tributaries from Minnesota and Wisconsin south to Iowa and Illinois.
- Never a common species, the Higgins' eye pearlymussel was heavily harvested around the turn of the century for use of its shell in mother-of-pearl buttons and pins.
- More recent threats, including pollution from agricultural and industrial runoff, and sedimentation, prompted its listing as an endangered species in 1976 under the Endangered Species Act.

Effects of Project:

- Commercial barge navigation has brought an even more pressing threat to the Higgins' eye and other native mussels - the exotic zebra mussel. This European species originally came to the Great Lakes in the ballast tanks of ocean-going cargo vessels, and it has found its way into the Upper Mississippi River through the navigation connection between Lake Michigan and the Illinois River.
- Zebra mussels are prolific and can spread quickly, smothering native mussels, changing water chemistry and competing for food. They attach themselves to barges and other vessels and are transported to uninfested waters.
- Zebra mussels have infested most areas where Higgins' eye pearly mussels are found.
- Based on monitoring results from existing mussel beds, zebra mussels are considered a mortal threat to Higgins' eye and other native freshwater mussels of the Upper Mississippi River.
- The Higgins' eye pearlymussel is jeopardized by the 9-Foot Channel Project because it facilitates continued commercial barge transportation on the Upper Mississippi River with vessels and equipment infested with zebra mussels.

Reasonable and Prudent Alternative:

- To save the species we need to establish populations of Higgins' eye in areas that will not be infested with zebra mussels in the future.
- The Fish and Wildlife Service and Corps of Engineers have worked closely to develop a reasonable and prudent alternative (RPA) that avoids jeopardy to Higgins' eye.
- The RPA for Higgins' eye includes development of a Higgins' Eye Pearlymussel Relocation Action Plan (i.e. relocate Higgins' eye to suitable zebra mussel-free, historically-occupied habitats) and conducting a reconnaissance study to study measures of controlling zebra mussels in the Upper Mississippi River.
- Candidate areas for relocation appear to be in the upper navigation pools upstream of Lake Pepin and Upper Mississippi River tributaries, including the St. Croix River.