

## CONNECTICUT RIVER MUSSEL DIVE SURVEYS AND SAMPLING: MASSACHUSETTS

**Client:** R.F. Weston, Inc. and US Environmental Protection Agency

AS PART OF AN ASSESSMENT of the Housatonic River Superfund site, Woodlot biologists conducted spring-season dive surveys in the Connecticut River in Massachusetts to collect reference samples of mussels. A study of contaminant effects on mussels in the Housatonic River required a large sample of *Elliptio complanato* to be placed into the Housatonic and monitored throughout the season.

Based on the size of the Housatonic tributaries and the substrates, and incorporating data obtained from spot checks in the water and a snorkeling survey, Woodlot biologists determined that an alternate source of mussel population would need to be located to meet the goal of deploying approximately 500-700 *Elliptio complanato* into the Housatonic in early spring.

Woodlot's research identified the Connecticut River as a likely source of population, but because there is substantial difference in the pH levels in the two rivers, a short-term pilot deployment study was implemented.

An initial dive survey was performed in the Connecticut River to identify and locate potential *Elliptio* populations. A test sample of *Elliptio* were subsequently collected by Woodlot divers from the Connecticut River and the effects of habitat change, specifically a drastic change in water quality, were meticulously monitored. The pilot deployment study proved successful and full deployment took place as scheduled.



As part of this project, Woodlot assembled a dive plan approved by the U.S. Army Corps of Engineers, and provided full logistical arrangements including boats, boat operators and safety divers. Sampling protocols were developed in consultation with USEPA and R.F. Weston scientific staff, and all mussel samples were successfully transferred from substrate to boat, then to monitoring tanks in Pittsfield, MA, 100 miles from the sample site, for the full study.

This project involved coordination of several teams of scientists and divers, and presented Woodlot biologists with physically challenging dive conditions during peak spring runoff in the Connecticut River. Woodlot later received praise, from the USEPA for pulling off the sampling exercise, and from the Corps for developing an exemplary dive plan.