Summary of Attempted Control Measures for Zebra/Quagga Mussels in Open Waters

Millbrook Quarry, Virginia

Size: 12 surface acres; 93 ft max depth (180 Million gallons)
Zebra Mussel Discovery: August 2002
Zebra Mussel Control: January 31, 2006 – February 17, 2006.
Authority: Virginia Department of Game and Inland Fisheries
Method: 174,000 gallons of potassium chloride solution
Target Dose: 100 mg/l (100 ppm)
Duration: 3 weeks
Collateral Damage: Minimal to non-mollusks
Cost: $365,000
Eradication: Yes
Notes: Only known successful open-water eradication attempt for zebra mussels in North America

Edinboro Lake, Pennsylvania

Size: 252 surface acres
Zebra Mussel Discovery: 2000
Zebra Mussel Control: December 2000 and November 2001
Authority: Borough of Edinboro
Method: Winter Drawdown
Target Drawdown: 5 feet
Duration: unknown
Collateral Damage: Minimal
Cost: unknown
Eradication: No; mussels quickly repopulated

Lake Ossawinnamakee

Size: 644 surface acres
Zebra Mussel Discovery: 2003
Zebra Mussel Control: 2004, 2005
Authority: MN Department of Natural Resources
Method: Copper Sulfate used kill the veligers in the bay leading to an outlet stream (Pelican Brook) that exits the lake, flows for about 5 miles and enters the Pine River, which then flows for about 11 miles and enters the Mississippi River. MNDNR wanted to prevent short-term movement through this connection. A 26-acre bay leading to the outlet stream was treated weekly with a chelated copper sulfate product.
Duration: Weekly during summer months (June-September)

Collateral Damage: Molluscan fauna eliminated, as well as amphipods, mayflies and stoneflies, with some species of caddisflies also showing impacts.
Cost:
Eradication: No: In fall 2005, zebra mussels were reported in a backwater lake on the mainstem of the Mississippi River downstream of the Ossawinnamakee connection. While these may not have moved from the lake, it stopped further efforts at treatment and containment for Lake Ossawinnamakee.

Lake Zumbro, Minnesota

Size: 1600 surface acres
Zebra Mussel Discovery: 2000
Zebra Mussel Control: November 2001
Authority: Borough of Edinboro
Method: Winter Drawdown
Target Drawdown: 5 feet
Duration: More than one week
Collateral Damage: Minimal
Cost: unknown
Eradication: No; mussels quickly repopulated

El Dorado Reservoir, Kansas

Size: 8000 surface acres
Zebra Mussel Discovery: 2003
Zebra Mussel Control: December, 2003
Authority: KS Department of Wildlife & Parks / U.S. Army Corps of Engineers
Method: Drawdown
Target Drawdown: 3.5 feet
Duration: Unknown
Collateral Damage: Minimal
Cost: Unknown
Eradication: No, mussel population quickly recovered

Lake George, New York

Size: 28,000 surface acres
Zebra Mussel Discovery: 1999
Zebra Mussel Control: 2000 - present
Authority: Lake George Association / Darrin Freshwater Institute
Method: Hand harvesting
Duration: Unknown
Collateral Damage: Minimal
Cost: Unknown
Eradication: No. Hand harvesting may keep local populations down temporarily, but these populations quickly recover once harvesting has stopped.