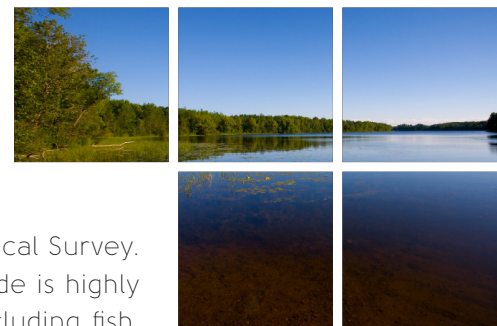


This document provides a listing of the toxicology studies that have been conducted with Zequanox® molluscicide for the purpose of ensuring its selectivity to zebra and quagga mussels (*Dreissena* species). The studies were performed by Marrone Bio Innovations, Inc., certified contracted laboratories, and a number of research organizations, including New York State Museum and the U.S. Geological Survey. To date the findings of the various studies demonstrate that Zequanox molluscicide is highly selective towards zebra and quagga mussels and is safe¹ for aquatic species, including fish, native freshwater unionids, plants, algae, crustaceans and insects, as well as, mallard ducks. The U.S. EPA has described the active ingredient in Zequanox molluscicide as follows: “*Pseudomonas fluorescens* strain CL145A (Zequanox molluscicide) has low toxicity and presents little risk to non-target organisms” [U.S. EPA Biopesticide Registration Action Document (BRAD) July 29, 2011].



FISH



Bluegill Sunfish (*Lepomis macrochirus*)³

Largemouth Bass (*Micropterus salmoides*)³

Channel Catfish (*Ictalurus punctatus*)³

Rainbow Trout (*Oncorhynchus mykiss*)^{3,5}

Chinook Salmon (*Oncorhynchus tshawytscha*)⁴

Sacramento Splittail (*Pogonichthys macrolepidotus*)⁴

Coaster Brook Trout (*Salvelinus fontinalis*)³

Smallmouth Bass (*Micropterus dolomieu*)³

Common Carp (*Cyprinus carpio*)⁵

Striped Bass (*Morone saxatilis*)⁴

Fathead Minnow (*Pimephales promelas*)^{3,4,5}

Walleye (*Sander vitreus*)³

Klamath Suckers (*Catostomus sucker spp*)⁴

Yellow Perch (*Perca flavescens*)³

Lake Sturgeon (*Acipenser fulvescens*)³

MOLLUSCS



Blue Mussel (*Mytilus edulis*)^{2,5}

Freshwater Mussel - Mucket (*Actinonaias ligamentina*)³

Freshwater Mussel - Duck Mussel (*Anadonta*)²

Freshwater Mussel - Plain Pocketbook (*Lampsilis cardium*)³

Freshwater Mussel - Black Sandshell (*Ligumia recta*)³

Freshwater Mussel - Washboard (*Megalonaias nervosa*)^{3,6}

Freshwater Mussel - Fatmucket (*Lampsilis siliquoidea*)^{3,6}

Freshwater Mussel - Western Pearlshell (*Margaritifera falcata*)⁶

Freshwater Mussel - Pink mucket (*Lampsilis abrupta*)^{5,6}

Freshwater Snail (*Lymnaea peregra*)²

Freshwater Mussel - Hickorynut (*Obovaria olivaria*)³

Freshwater Mussel - Higgins Eye (*Lampsilis higginsii*)³

¹ At application rates that produced high zebra mussel mortality (76%–100%), no bacteria-induced mortality was recorded among any of the nontargets.

² Study performed by Institute of Technology, Sligo, Ireland.

³ Study performed by NYSM and USGS

⁴ Study performed by U.S. Bureau of Reclamation.

⁵ Study performed by a Certified Good Laboratory Practices (GLP) Lab.

⁶ Study performed by Missouri State University.



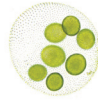
PLANTS AND ALGAE

Algae ²

Bindweed (*Convolvulaceae*) ³

Common Water Plantain (*Alisma subcordatum*) ³

Curly Dock (*Rumex crispus*) ³



Mallow (*Malvaceae*) ³

Nightshade (*Solanaceae*) ³

Smallflower Umbrella Sedge (*Cyperus difformis*) ³

OTHER

Mallard Duck ²

Midge (*Chironomidae*) ¹

Mayfly (*Baetis*) ¹

Amphipod (*Hyaella azteca*) ²



European Freshwater Crayfish (*Austropotamobius pallipes*) ¹

Freshwater Crustacean (*Asellus aquaticus*) ¹

Freshwater Water Flea (*Daphnia magna*) ²

¹ Study performed by Institute of Technology, Sligo, Ireland.

² Study performed by Certified Good Laboratory Practices (GLP) Lab.

³ Study performed by MBI.

