



US Army Corps
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Waterways Experiment
Station

Zebra Mussel Research

Technical Notes

Section 3 — Control Strategies

Technical Note ZMR-3-11

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Use of Removable Intake Screens to Reduce Maintenance Problems Associated with Zebra Mussels

Background Zebra mussels can quickly attach to screens that cover water intakes and cause reduction in flow. When permanently mounted screens become infested, cleaning usually requires divers and can be costly and dangerous. In fall 1992, the U.S. Army Engineer District, Nashville, installed eight removable intake screens at Cheatham Lock on the Cumberland River.

Purpose The purpose of this technical note is to describe the removable screens and support frames that were installed at Cheatham Lock by personnel of the Nashville District.

Additional information This technical note was written by Dr. Andrew C. Miller, U.S. Army Engineer Waterways Experiment Station (WES), and Mr. Marlin Wells, Nashville District. For more information, contact Mr. Wells at (615) 736-5971, or Mr. John Case, (615) 736-5607. Dr. Ed A. Theriot, WES, (601) 634-2678, is Manager of the Zebra Mussel Research Program.

Design of the removable screen In October 1992, Cheatham Lock on the Cumberland River was dewatered as part of normal maintenance. Eight fixed screens, which were in need of replacement, were removed. The Nashville District supervised the construction of fixed frames and removable screens to replace the original screens (Figure 1). The frames were permanently mounted in the culvert by divers. The screens were set in grooves in the frame.

The screens were designed so that they can be easily removed for cleaning or minor repairs. If the screens become infested with zebra mussels, they will be removed and cleaned manually.



Figure 1. Removable screen