

Delaware State Park Reservoir

Delaware State Park

Location: Delaware, OH

Hardman Construction recently completed the marina upgrades at Delaware State Park located five miles north of the city of Delaware, Ohio. The marina is located on the Olentangy River, which is a 97 mile long tributary of the Scioto River in Ohio.

The Delaware State Park Reservoir, also known as Delaware Lake, was constructed along the Olentangy River in 1951. The reservoir was built by the U.S. Army Corps of Engineers for flood control purposes. The dam was built to control extensive flooding that damaged major cities like Columbus in previous years.

The lake normally sits at 905 feet above sea level, and the top of the dam is at elevation 946, 41 foot above normal pool elevation. Due to the extreme fluctuations in river water elevations which can vary up to 41', the marinas located throughout the river system typically use floating docks.

The marina upgrades at Delaware State Park included the removal of the existing docks and installation of new pipe piles and floating docks. All work was performed by barge-mounted equipment. The equipment and barges were mobilized and set up at the site by building a temporary dock for access.

The existing docks utilized H-piles as the anchoring for the floating docks. The H-piles were removed from a barge using a crane and vibratory hammer.

The new floating docks required the installation of 24" pipe piles that are 90' long. The pipe piles had to be driven to an extremely difficult tolerance of only 1/2" out of plumb over the entire pile length. This requirement had to be met to allow the floating dock to rise to the maximum pool elevation without causing damage to the dock system.

The pipe piles were driven using a template system to assure that the tight tolerances could be met. The piles were driven using a vibratory hammer for initial set and then finish driven using a diesel Delmag D30-32 pile hammer. The piles were driven to a capacity that exceeded 300 tons or 600 KIPS.

All piles were cut off to grade, filled with concrete and capped with a specially fabricated 60-degree pile cap. After the piles were driven, the floating docks were installed and the final marina upgrades were completed.

The owner of the project was the Ohio Department of Natural Resources.

www.hardmanconstruction.com

