

LIFE ON THE OHIO  
Switzerland County Historical Society  
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As you drive along the Ohio River, have you ever marveled at it's width and depth? You read stories of the Underground Railroad and wonder how the escaping slaves ever made it across the river. Stories abound of Daniel Boone and other frontiersmen crossing the river on horseback. How did they get across? The Ohio of today is a very different river than the river that brought the first settlers to Switzerland County.

The Ohio River is formed by the junction of the Allegheny and Monongahela rivers at Pittsburgh. It winds southwesterly for 981 miles until it meets the Mississippi at Cairo, Ill. (pronounced KAY-ro like the syrup). Thirty-six of those miles comprise the eastern and southern boundary of Switzerland County. We are located roughly 528 river miles from the head of the Ohio and 453 miles from the mouth of the river. In those 981 miles the river drops 430 feet. Before the dams the river was very shallow and full of snags (trees, rocks and other obstructions). The river was low in the summer and often frozen solid in the winter. In the early 1800's the Ohio River in Cincinnati had a recorded depth of 11 inches. River travel was seasonal at best with most travel occurring in spring with the rising waters of the spring rain. It was common practice for the steamboats to be in Pittsburgh before spring to wait for the water to rise. As the water rose the now fully loaded boats would leave Pittsburgh riding on the back of the rising tide.

In 1824 Congress authorized the Corps of Engineers to initiate a project of improvements to the river. Most of these improvements consisted of removing snags and dredging sandbars. Although this effort made navigation safer during the season, it did little to provide for year-round use of the river. It wasn't until 1874 that a series of 68 locks and dams were proposed. Each dam would raise the water level about 6 feet. After repeated modifications of the design 54 dams were in the final plan of which 51 were eventually built. These dams were to be modeled after a French design for a "movable dam" consisting of a fixed section, a movable section and a lock. Each movable section was a series of large timbers called wickets, usually about 3 feet in width and between 15 and 20 feet in length, depending on the depth of the water to be raised. The wickets were hinged at the bottom of the river. During high water the wickets would rest on the bottom so as not to interfere with navigation. The steamboats would simply pass over them. When the water was low a special boat with a derrick would hook into a ring on each wicket and pull it up. When the wicket was upright a locking device would drop into place holding the wicket against the current. This procedure had to be repeated for each wicket. Because the dam extended across the river, the steamboats would lock through the dam. Lock and dam 39 located at Markland was of the wicket type with a lift of about 6 feet.

These early locks were 110 feet wide and 600 feet long and could accommodate a towboat with four to six barges. The small locks were adequate until after World War II when larger tows came into use with the diesel-powered towboats. When these tows of 15-20 barges reached the locks it was necessary to break the tow apart and lock it through

in sections. This double lockage was a slow and dangerous process often taking over two hours per lock. In the 1950's the Corps of Engineers began replacing the 51 lock and dams with 19 high-lift dams. These new lock and dams have a fixed dam with two lock chambers one 1200-foot and one 600-foot. Most of these locks have a lift of 30-35 feet and can accommodate a towboat and 15 barges. Eighteen of the high-lift lock and dams are in place. However, two of the wicket dams still exist on the Ohio, numbers 52 and 53. They are being replaced with a new lock and dam scheduled to open in 2008. (Note: although only 51 of the proposed 54 locks were built they were numbered as if all would be built.)

The original lock at lock and dam 39 was on the Indiana side of the river. In 1953, when the high-lift lock and dam was authorized at Markland, the decision was made to build the lock on the Kentucky side. Construction began on the locks in 1956 and was completed by 1959. The new locks consist of a 110' by 1200' lock and an auxiliary lock of 110' by 600'. The high-lift dam was started in 1959 and completed in 1964. The Markland locks have a lift of 35 feet and replaced lock and dams 35, 36, 37, 38, and 39.

A majority of the above information was obtained from Corps of Engineers brochures and other documents that will be on display in the new "Life on the Ohio" museum. To learn more about the opening of the rivers and to see photos of the construction and operation of the locks visit the new river history museum opening April 3<sup>rd</sup>. In coming weeks we will be publishing a schedule of events for the grand opening.