

YORKVILLE'S WHITEWATER RECREATION FACILITY

AT BICENTENNIAL RIVERFRONT PARK

The Glen D. Palmer Dam was originally a low head run-of-river dam with a modified ogee crest, a spillway length of 530-feet, and a height of 5 feet. Due to the hydraulic conditions of the modified ogee spillway at Yorkville, a submerged hydraulic jump, or roller, resulted just below the dam. This roller had a tendency to trap and hold objects within the turbulence.



Construction of a denil fish ladder adjacent to the dam's north abutment allows to pass fish and to provide water supply to the north shore of the river during low flow conditions.



Left: View of the new 4-step dam looking south across the River towards the chute.

Below: In early October, 2010, kayakers tested the chute for IDNR and made recommendations to improve the experience.

The dam spillway was the first phase of IDNR's project. It was modified from an ogee shape to a 4-step configuration to eliminate the "roller" immediately downstream of the dam.



The Illinois Department of Natural Resources dam modification project is to improve public safety at the dam and provide additional environmental and recreational benefits.

Left: November 2010, with normal water levels.

Below: March 2011, with high water levels.



Partial dam removal allowed the construction of an 1100 foot long fish/canoe bypass channel and divider island along the south shore of the river. An access bridge to the divider island is scheduled to be constructed in 2011, and a new stream gage has been installed.

Designed with dual channels above and below the existing dam, the bypass system is intended to provide whitewater recreation for both novice paddlers (left channels looking downstream) and experienced paddlers (right channels looking downstream). No Whitewater classification has been assigned to these channels.

For more information on the Whitewater Facility and the adjacent Bicentennial Riverfront Park, visit the United City of Yorkville's Website at www.yorkville.il.us.



BYPASS CHANNEL DESIGN CRITERIA:

- Maximum chute drop = 15"
- Minimum chute water depth = 15'
- Minimum chute bottom width = 15'
- Minimum pool length = 40'
- Minimum pool depth = 4'
- Minimum pool bottom width = 30'

