



Marge Cline Whitewater Course



AT BICENTENNIAL RIVERFRONT PARK, YORKVILLE, ILLINOIS

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.



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.

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.



Above: Pedestrian bridge for elevated viewing and island access.

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 allows pedestrians to view the chute from an elevated position and from the north bank of the chute.

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.

Left: The new dam's stepped spillway is a safer design.



Above: Looking towards the entrance to the course (east).

Above right: Paddlers enjoy trying out the course.



Below: Looking towards Yorkville's Bicentennial Riverfront Park and the course terminus.



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'

