

April 4, 2017

## Fish, folks, and floods

The 1930s saw many public works projects – including countless dams – in response to the Great Depression. While some dams, such as the Hoover in Nevada, were and remain vital hydroelectric and flood control projects, others, such as the three low-head dams across Willow Creek in Mason City, served recreational purposes.



Before

But 80 years of wear, tear and Iowa winters take their toll and the floods of June, 2008 caused irreparable damage to the structures. The city considered rebuilding the dams but the Department of Natural Resources had concerns. Not only are low head dams inherently dangerous because of the rolling wave that's created downstream (other locations have resulted in drownings), they act as a barrier to upstream fish migration.

Using a 50% matching grant from the DNR's Low Head Dam Hazard Mitigation program, the City moved ahead with a project to remove and replace two of the three dams in East Park.



After

To remove the danger and accommodate the fish, WHKS engineers designed a series of rock weirs to direct the flow in the channel. Using a configuration known as 'rock arch rapids,' the design places a series of natural rock barriers across the stream that step the water flow down in a more gentle, rapids-like manner. This allows fish to navigate upstream through the rocks and eliminates the dangerous rolling wave. It also has a much more natural and attractive look than the concrete dam structure.

With the success of the two dams, the DNR has agreed to fund the replacement of the third. In addition, they are conducting a study for a similar solution on the Winnebago River. Might there be a kayak park in Mason City's future?

