



City of Grand Forks
Staff Report
Committee of the Whole – August 12, 2019

Agenda Item: Project Update for City Project No. 7982 – 2019 Riverside Dam Inspection

Submitted by: Engineering Department, David J. Kuharenko, PE (Principal Civil Engineer)

For Information Only

BACKGROUND:

This staff report is intended to provide some background information regarding the annual inspection of the Riverside Dam.

The original Riverside Dam was a rock-filled timber crib dam constructed in 1925 to provide storage for the water supply. Due to numerous partial failures and costs to maintain the structure, the dam was replaced in 1988-1989 with the current Riverside Dam. According to the 1988-1989 Riverside Dam Construction Report, the dam is a 320 foot long reinforced concrete, baffled-step structure. The structure is 13 feet high with a 278 foot long weir set at an elevation of 793.3 mean sea level. Rock rapids were placed over the structure and downstream of the structure by the Corps' during the flood protection project to make the dam safer and to allow fish to swim upstream of the dam. This structure is typically submerged and water spills over the dam.

This dam is currently classified as a medium hazard dam. In 2009 the North Dakota State Water Commission inspected the dam and provided their report to the City. These inspections are typically conducted once every ten years, with 2019 being the next anticipated inspection. Staff had email correspondence with staff from the North Dakota State Water Commission who has indicated that they are working on updating their dam classifications to try to make them more consistent. Riverside Dam is most likely being changed to low hazard since a failure of the dam would not be expected to cause damage downstream. The original classification was due to the water intake upstream of the dam, but the benefits of a reservoir aren't normally factored into the hazard classification of a dam, only the potential downstream impacts of a dam failure. As a low hazard dam, the North Dakota State Water Commission would no longer do routine formal inspections of the dam. So at this time, no inspection is scheduled.

These annual inspections include a physical visit to the dam, observations of the water flow over the dam, checking for secondary damming due to debris, and comparing photographs taken from previous years to the current year. The comparison of past photographs helps determine if riprap has been displaced or if erosion of the banks has occurred. If there are noticeable changes, then corrective steps can be taken to address the causes.

ANALYSIS AND FINDINGS OF FACT:

- The annual inspection by city staff occurred in August of 2019.
- No significant erosion was noted on either bank.
- No significant displacement of riprap was noted.
- No significant secondary damming was noted.
- The dam appears to be in good condition and functioning as intended.

SUPPORT MATERIALS:

- Project Location Map (1 page)

PROJECT LOCATION MAP

GRAND FORKS, NORTH DAKOTA

ANNUAL RIVERSIDE DAM INSPECTION



PROJECT #

7982

PROJECT AREA

