

Little Goose Lock & Dam

FY17 Downstream Miter Gate Repair

Jason Williams

Senior Project Manager

Walla Walla District

May 27, 2015

Columbia-Snake River Navigation System

Spring Stakeholder Meeting



US Army Corps of Engineers
BUILDING STRONG



Background

Little Goose Lock & Dam is located on the lower snake river near Starbuck, WA. The navigation lock provides critical river transportation and shipping capability along the snake river

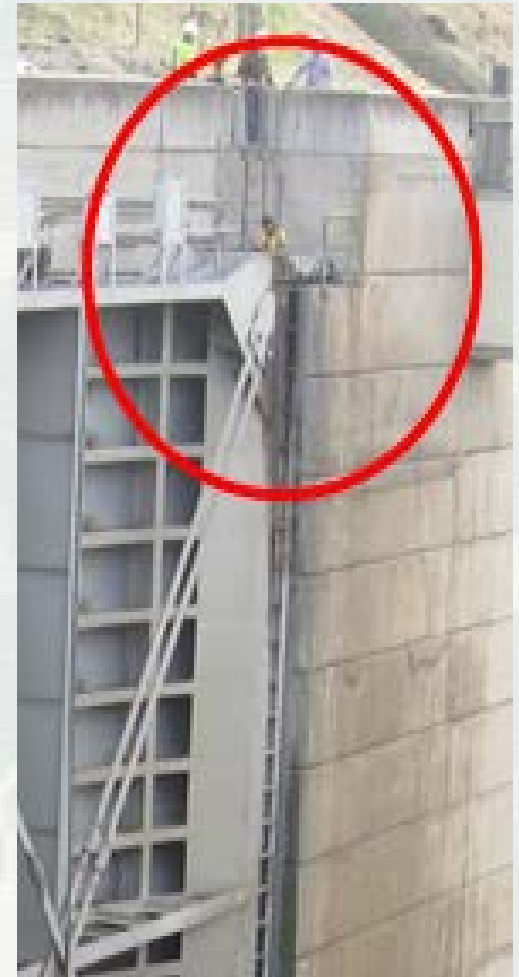
- Little Goose downstream gate is a two-leaf miter gate
- Placed in service in 1971
- Each leaf is approximately 106 feet tall by 53 feet wide and over 800,000 lbs



BUILDING STRONG®

2014 Outage Repair

- During the 2014 lock outage, it was discovered that one of the gudgeon linkage eyebars had a significant crack and failure was imminent
- Navlock taken out of service due to concerns of possible catastrophic failure.
- At the time, new gudgeon linkages had already been planned for and were in the process of fabrication
- An emergency repair contract was performed to replace the failed linkage



2017 Extended Outage

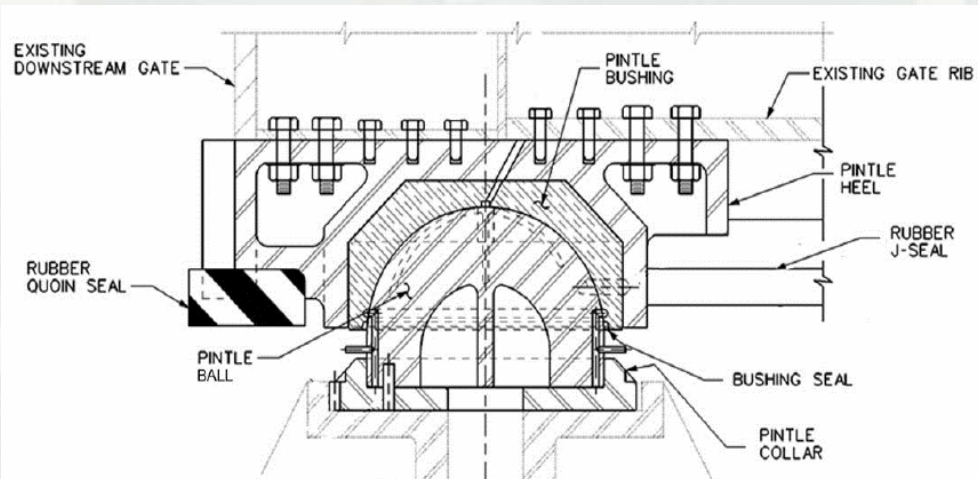
Work to be performed during the FY17 extended outage:

- Pintle repair
- Replace gudgeon linkages and pins
- Structural repairs to quoin and miter blocks
- Adjustment of the north and south leaf gudgeon arms to ensure balanced loading
- Crack repairs to structural members of the gate
- Cleaning and painting corrosive areas on the gate
- Install new fender materials
- Install new safety railing & cover plates
- Minor concrete repair to damaged area



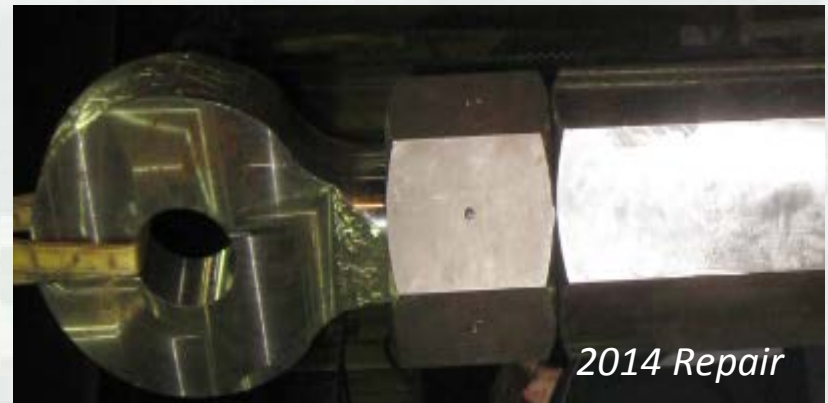
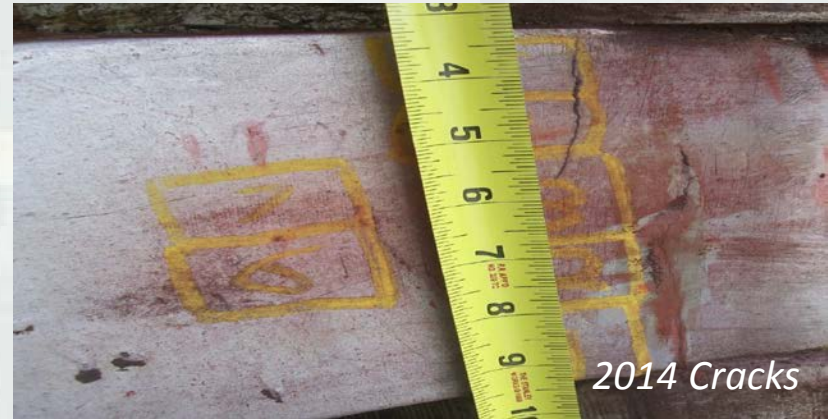
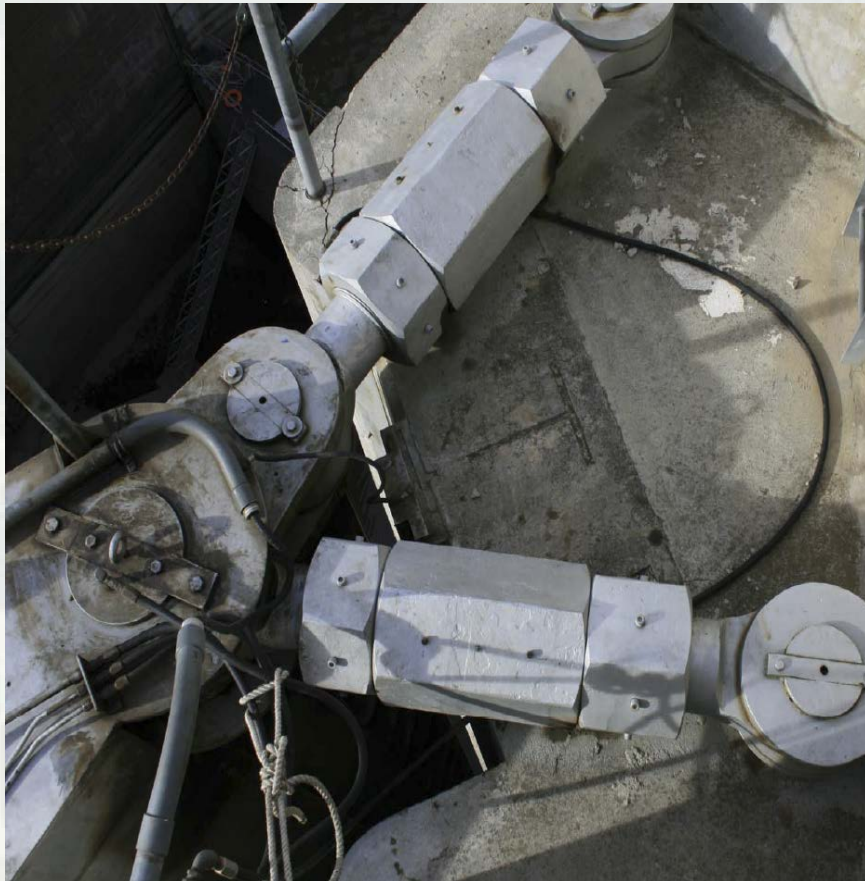
Pintle Repairs

- Replacing the cast steel pintle heels and new pintle balls
- Repair of structural steel members that support the pintle heel and gate



Replace Gudgeon Linkage And Pins

- Replace the gudgeon linkage assemblies



BUILDING STRONG®

Structural Repairs to Quoin And Miter Blocks

- Replacement of quoin and miter bearing blocks
- Bottom 22 feet (approx.) of the gate



Crack And Paint Repair

- Structural Crack Repairs
 - ▶ Repair to the cracks at lower ribs
 - ▶ Quoin and miter areas of both gate leaves
 - ▶ Remove failed paint on the lower portions of the gates



Install New Fenders and Safety Rails

- New safety railing around the top perimeter of each gate leaf
- Replacement of the timber fender systems



Milestones

Schedule:

- Advertise Contract Package: November 2015
- Receive & Evaluate Proposals: December 2015 – January 2016
- Contract Award: January 2016
- Navigation Lock Outage Work Window: December 2016 – March 2017



BUILDING STRONG®

Questions



BUILDING STRONG®