

# Lock 20 Dewatering

Lock and Dam Maintenance  
Workshop 2016

Rock Island District  
Mississippi River Project  
Matt Thurman



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# Lock and Dam #20

- Canton, MO
- UMR 343.2
- Opened June 9th, 1936
- 600ft x 110ft Chamber
- 40 Tainter Gates
- 3 Roller Gates



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# Scope of Work

- Miter Gates
  - ▶ Replace Seals on MG
  - ▶ #3 M/G Jumping while movement
  - ▶ #3 M/G Timber Replacement
  - ▶ Bubble Piping Replacement
- Lock General
  - ▶ Chamber Bulkhead Sill Beam Installation – Lower End
  - ▶ Chamber Bulkhead Pedestals
  - ▶ Staff Gage Replacement



# Lock Closure

- 5 Jan 2015 through 6 Mar 2015.
- Floating Crane on each end of the chamber.
- Barge with equipment and supplies inside the chamber.



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# Dewatering Process

- 3 – 12in submersible pumps
- Condemned Bulkhead for walkway on top.
- Strongback is no longer used.



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# Bulkhead Sill Beam

- Weldment with sill plate on top.
- Struts that tie into the poiree saddles.



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# Bulkhead Sill Beam

- Placing Concrete around Sill Beam below Bulkhead Stack



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# Bulkhead Pedestals

- Concrete Pedestals supporting tension side of Bulkhead



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# Miter Gates

- Timber Replacement



- Typical Vertical framed M/G.
- Air Lines added for debris/ice removal.



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# Miter Gates – Cont.

- Omega Seal binding issues at the Quion.



- Thrust Plate Interference with Sill. This was causing #3 M/G to jump.



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# Bubbler Piping Replacement

- New SS Bubbler piping in M/G recesses.



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# Lock Misc Repairs

- Ladder Rung Replacement.



- New Vertical Staff Gage



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# Culverts

- Trunnion Painting & Inspection.



02/17/2015 13:43

- Replaced all Grease Lines to Valves



02/04/2015 12:23



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# Miter Gate Machinery

- Sector Gear Base Inspection & Paint.



- Parapet Wall Removal – M/ G Machinery Recess.
- Only site in MVR-Miss to have this and causes cleaning issues after floods.



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# ANY QUESTIONS



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