Ponds

Bruce Abraham

From: Michael Monteleone <mmonteleone@oasis-cs.com>
Sent: Monday, September 11, 2023 12:04 PM
To: Bruce Abraham
Subject: Pond and Dam inspection reports
Attachments: 0638_001.pdf; 0637_001.pdf

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Bruce

See the attached report of findings from our sub back in Feb 2023. See page 3 of each PDF for the engineers recommendations. I have worked with Walden for year and they did the dam renovation work with me back in 2015? Marchman was the first dam to be rehab, since we did drilling and found that the dam itself could fail. If I recall I think the URA under Fred spent about $600K?? for that dam breach repair. Just as FYI.

These recommendations are more maintenance in nature and I would think you folks could set a contract with someone local to address these and keep and eye on cleaning out the gate valve at some frequency. Repairing the gate valve is different as you will need drain the water level I think and access the gate valve to fix or replace. It is possible they could do a repair like we did at Marchman?? I am unsure what that cost would be.

So let me know if you need anything further to assist the URA.

Regards

Michael Monteleone, P.E.
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February 07, 2023

Oasis Consulting Services
Michael Monteleone
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Roswell, Georgia 30075

RE: FORT GILLEM WESTERN POND DAM INSPECTION
WA&A J.O. 4300100

Dear Mr. Monteleone:

We have completed our visual inspection of the Western Pond Dam at Fort Gillem in Clayton County, Georgia. The attached inspection forms and pictures present the results of our visual inspection. This letter includes a summary of our observations, our preliminary conclusions and recommendations.

The dam site was visited on November 04, 2022 and no field measurements were taken. Conditions were clear and cool. Visual observations of the dam and appurtenant structures were made from walking along the top of the dam and portions of both the upstream and downstream slopes. The primary spillway was observed from the upstream slope and crest of the dam.

Because oh heavy vegetation and brush at the time of our inspection, our ability to inspect the upstream slope and spillway was limited. The upstream slope is covered with overgrown vegetation and trees that need to be removed. No grassing was observed on the upstream slope. A detailed inspection was not possible due to the overgrown vegetation. The upstream slope was approximately 3:1. No unusual movement on the slope was observed. No slides or sloughs were observed and the abutment contacts looked good.

The horizontal and vertical alignment of the earth embankment appears to be generally good. The top of the has sparce vegetation and is overgrown. Not major cracking was observed. No sinkholes or animal burrows were observed. The abutment contacts were in good condition.

The downstream slope of the dam is armored with concrete with some vegetation growing on it. A detailed inspection of the condition of the concrete was not possible due to vegetation but appeared to be in good condition with no major cracking observed. This armoring is protection for the dam overtopping. No Hydrology or Hydraulic analysis has

been done to calculate if the dam overtops and if it does what storm event begins overtopping. The slope appears to be approximately 3 horizontal on 1 vertical (3:1). No signs of sloughing or sinkholes were observed.

There were no seepage drains observed for the dam. Seepage drains are not necessary due to no permanent pool for the pond.

The outflow of the pond is controlled by the primary spillway which consists of a concrete riser structure, low level pipe, and an impact basin. The primary spillway structure is located near the center of the dam and appeared to be generally good condition. However, there was an abundance of debris collected at the trash rack making a detailed inspection of the structure not possible. No detailed observations were possible of the primary spillway structure because of this.

The drawdown outlet works, which is intended to provide a means for stopping outflow into the impact basin, consist of a control gate on the primary spillway concrete riser structure allowing the pond to drain through a low level pipe. The low level outlet pipe terminates at the downstream toe of the dam and discharges into an impact basin. The impact basin and channel appear to be providing adequate dissipation of the energy from flows discharging through the pipe. There was overgrown brush/vegetation growing around the impact basin and outlet channel making inspection difficult. This area should be cleared of overgrown brush to allow for easier inspection.

No secondary or emergency spillway was located for this pond.

It is important to note that the condition of any dam depends on numerous and constantly changing internal and external conditions and is evolutionary in nature. It cannot be assumed that the present conditions of any dam will continue to represent its condition at some point in the future.

Based on our visual inspection, the dam needs some remedial work. We recommend that the following steps be taken:

1. Clear the crest and upstream slope of the dam of trees and heavy brush.
2. Grass the cleared upstream slope and crest.
3. Clean off downstream embankment concrete armoring and look for any cracking.
4. Heavy vegetation and/or brush around the primary spillway outlet needs to be cleared to allow for easier inspection.
5. Clear debris from trash rack on primary spillway riser structure. Clear trees/debris from upstream pond area.
6. Apply grassing to all areas cleared in the upstream pond area.
7. Provide periodic maintenance/inspection of the dam (2-4 times a year). Look for any issues, clear any debris from trash rack etc.

If you have any questions concerning our responses, please do not hesitate to call me.

Sincerely,

Jason Rapplean

Jason Rapplean, P.E., EOR
Senior Engineer

Attachments

PHOTO LOG

Date:	**11/04/22**
Project:	**Fort Gillem West Pond Dam Visual Inspection**
Project No.:	**4300100**
Project Location:	**Clayton County, Georgia**
Report By:	**Jason Rapplean, P.E., E.O.R.**

Photo No. 5
Description:

View of primary spillway riser structure.

Photo No. 6
Description:

View of primary spillway riser structure and slide gate wheel.

PHOTO LOG

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Report By:	**Jason Rapplean, P.E., E.O.R.**

Photo No. 9
Description:

View of primary spillway riser structure trash rack.
Note debris build up and blockage.

Photo No. 10
Description:

View of downstream embankment. Note concrete armoring with some vegetation growing.

PHOTO LOG

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Project:	**Fort Gillem West Pond Dam Visual Inspection**
Project No.:	**4300100**
Project Location:	**Clayton County, Georgia**
Report By:	**Jason Rapplean, P.E., E.O.R.**

Photo No. 7
Description:

View of primary spillway riser structure. Note weir and access ladder.

Photo No. 8
Description:

View of primary spillway riser structure. Note outlet pipe with slide gate.