



Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

November 20, 2013

Colby Hollifield – Managing Director  
Middleton Place LLC  
4300 Ashley River Road  
Charleston, SC 29407

Re: Re-inspection of Dam D-2554, Middleton Lake Dam  
Dorchester County

Dear Mr. Hollifield:

A routine inspection of the above referenced dam was completed on Thursday of last week (November 14). I coordinated and met with Josh Hair as he helped to inspect the dam.

Middleton Place, along with Josh's efforts in maintaining the dam, has made it very easy to routinely inspect the dam for leaks, slumps, animal or any other damage. There was in fact one animal burrow on the downstream slope that was discovered while preparing for the inspection. The hole was filled and compacted. Some vegetation was tall but most was mowed close and burned recently making it easy to see both the upstream and downstream slopes. Virtually all of the small trees have been removed over the past several years and there are no large trees to worry about. The emergency spillway is in great condition with the Pyramat layer still in place and covered with soil. Regular, heavy rain events we experienced during the early part of the year did not raise the water levels much at all according to Josh. The normal water level is low enough that it would take something extraordinary to cause water to flow over the emergency spillway, much less the crest of the dam.

We went over the Emergency Surveillance and Notification Plan that was updated prior to the October 2011 inspection. This form was revised shortly after that to provide more detail of what to do in case of emergency. I will need for you to complete this plan (blank copy enclosed), retain copies for any staff that that may need it, and forward a copy back to my attention when complete. Please complete this and return within a reasonable time. As stated on previous inspections for this dam, the roadway downstream is the major concern or hazard and it should be blocked for travel if the dam appears in imminent danger of failing. Other properties that may be inundated should a failure occur would be limited but please identify on the emergency plan if warranted.

Enclosed along with the blank emergency plan mentioned above is a copy of a Notification of Ownership Change should ownership of the dam change, and a copy of a completed Preliminary Inspection report for your records.

I really do not have much to comment on other than to say how good it has been to work with Josh and to thank him for his efforts in maintaining the dam, and for his responsiveness in scheduling and conducting the inspection.

If you should have any questions or comments, or if I can be of any assistance, please do not hesitate to call me.

Sincerely,

  
Gregory S. Sams  
SC DHEC Lowcountry EQC Region  
1362 McMillan Ave., Suite 300  
Charleston, SC 29405

Cc: Josh Hair, Middleton Place  
John Poole, P.E., Bureau of Water – Dams Permitting Section



Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9

Section I (Owner's Information)

A. Dam Number: D 2554 & Hazard Class 1
B. Name of Dam: Middleton Lake
C. Inspection Date (11/14/2013) & Time: 9:00
D. Date of Last Inspection: (10/26/2011)
E. Location-County/City: Dorchester / Charleston
F. EQC Regional Office: Lowcountry
G. Inspector's Name: Greg Sams
H. Owner's Name: Charles Duell
I. Contact Person (if different from above): Josh Hair
J. Dam Owner's or Contact Person's Phone Numbers: Home ( ) - Office ( ) - Other (843) 277 - 7784
K. Dam Owner's or Contact Person's mailing address: Address 1 4300 Ashley River Rd Address 2 (optional) City Charleston State SC Zip Code 29407 -

Section II (Dam Condition)

General Condition Assessment (Select one of the following):

- a) Satisfactory [checked] b) Fair [ ] c) Poor [ ] d) Unsatisfactory [ ] e) Not Rated [ ]

Section III (Dam Inspection Checklist)

A. Dam Crest

- i. Vegetation (grass, trees weeds)? Recently cut and burned, all tress have been removed, easy to visually inspect
ii. Animal activity observed? No
iii. Any obvious alteration or repairs made? No
iv. Erosion noticed on crest? None
v. Any visible settlement, misalignment or cracks? No

**Section III (Dam Inspection Checklist) continued**

**B. Upstream Slope**

- i. Vegetation (grass, trees weeds)? Recently cut and burned, all tress have been removed, easy to visually inspect
- ii. Animal activity observed? No
- iii. Any obvious alterations or repairs made? no
- iv. Erosion observed on upstream slope? no
- v. Settlement or cracks visible in slope? no

**C. Down Stream Slope**

- i. Vegetation (grass, trees weeds)? Recently cut and burned, all tress have been removed, easy to visually inspect
- ii. Animal activity observed? Animal burrow discovered after burn. Hole filled in. Will monitor.
- iii. Any obvious alterations or repairs made? No
- iv. Erosion observed on down stream slope? No
- v. Settlement or cracks visible in slope? No
- vi. Toe drains flowing? N/A
- vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: No

**D. Primary Spillway**

- i. Any visible deterioration of structure? No
- ii. Is there an obvious need to repair or replace trash rack? No
- iii. Any noticeable problems with debris? No
- iv. Is valve or gate present? Yes

**E. Outlet Pipe**

- i. Any water visibly flowing or leaking outside of the discharge pipe? No
- ii. Describe any deflection or damage observed to the pipe: None
- iii. Visible condition of outlet channel: \_\_\_\_\_

**F. Auxiliary (Emergency) Spillway**

- i. Noticeable obstructions to flow? No
- ii. Animal activity observed? No
- iii. Any noticeable deterioration in the approach or discharge channel? No
- iv. Any visible deterioration of structure's crest? No

**F. Auxiliary (Emergency) Spillway continued**

v. If applicable, any observed exposure of rebar reinforcement? Pyramat in place, well covered.

vi. If applicable, any visible leakage below concrete spillway? N/A

**H. Downstream/Hazard Class Issues**

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? No

**I. Emergency Action Plan (EAP)**

i. Emergency Action Plan provided by owner? Yes

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated? Yes. Updated in 2011, no changes.

iii. Does EAP contain specific actions to take if the dam has failed or is near failure? No

**Section IV (Conclusions)**

**General comments and recommendations:**

Efforts to increase public use of the area has resulted in increased attention to maintaining the dam both visually and structurally. Upstream/downstream slopes, crest and emergency spillway are all very well maintained.

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**Preliminary Dam Inspection Disclaimer:**

The information contained in the preliminary inspection report is intended as an aid to identify those dams that require maintenance and/or repair actions to reduce their danger to human life or property only. It is not intended as professional engineering or consulting advice for conditions or situations present at individual dams. It is not a substitute for a detailed inspection, nor does it replace the need for services provided by registered professional engineers. If your dam is experiencing an unusual situation consult with engineering professionals to find an appropriate remedy. Preliminary inspections conducted by South Carolina Department of Health and Environmental Control (the Department) are provided "AS IS" and "as available", without warranties of any kind, either express or implied. Preliminary inspections consist only of a visual but technical examination of the dam and its appurtenant works. All findings are based solely on visual observations of the inspector at the time of the inspection. Common law holds that the storage of water is a hazardous activity and the Department does not assume any responsibility or risk for your actions or inactions. Dam owners are responsible for the safe operations and maintenance of their impoundment structures.

Preliminary Inspection Report for South Carolina Regulated Dams and  
Impoundment Structures Regulations – DHEC 2604  
R.72-1 through R.72-9

INSTRUCTIONS

**Purpose:** To satisfy the inspection requirements for high and significant hazard dams regulated by South Carolina Department of Health and Environmental Control. See R.72-1 through R. 72-9.

**Who will complete the form:** Regional engineers and inspectors engaged in the dams and reservoir safety program performing dam inspections.

Section I (Owner's Information):

- A) Dam Number; Enter the Dam's inventory number.
- B) Name of Dam; Enter the common name of dam found within EFIS.
- C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.
- D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.
- E) Location-County/City; Enter the county and city, if applicable, where the dam is located.
- F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.
- G) Inspector's Name; Enter the name of the person performing the inspection.
- H) Owner's Name; Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.
- I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.
- J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.
- K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

Section II (Dam Condition):

Once the inspection is completed indicate the general condition of the dam. The assessment can be one of the following four categories:

- a) SATISFACTORY- No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions in accordance with state engineer's rules and regulations for dams or tolerable risk guidelines.

- b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.
- c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.
- d) UNSATISFACTORY- A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.
- e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

Section III (Dam Inspection Checklist):

This section is self-explanatory and guides the inspector through the inspection process. Follow the dam inspection checklist to complete the inspection. Mark any deficiencies observed during the inspection. If there were the deficiencies reported during the last inspection cycle check to see if they were corrected. If items are not applicable to the inspection of the dam, mark not applicable. If the dams has issues that are not covered in this section of the form make note of them in section IV.

Section IV(Conclusions):

Use the space to list additional responsible parties (dam owners) and issues found during the inspection that are not addressed in section III, as well as any general comments and recommendations generated during the inspection.

**Office Mechanisms and filing:** The form must be sent to the Dam's owner(s) and filed with the Bureau of Water, Dams and Reservoir Safety Program, before the end of the following month after which the inspections were performed. The report will be filed in the Bureau of Water's file room and will be retained for at least three years after the Department certifies the removal of the inspected dam.