



August 26, 2022

VIA EMAIL, CERTIFIED & FIRST-CLASS MAIL

9214 8969 0099 9790 1422 1316 69

Michael Corley., Executive Director
Bill Bridges, Chairman of the Board of Directors
Conestee Foundation, Inc.
PO Box 9111
Greenville, SC 29604

Subject: **Inspection of LAKE CONESTEE DAM, D2876, Greenville County,
Significant Hazard Class**

Dear Mr. Corley and Mr. Bridges:

The South Carolina Department of Health and Environmental Control (the Department/DHEC) inspected your dam on August 18, 2022 and the report of that inspection is enclosed. Dam Safety Program staff are available to discuss the results of the inspection with you. A summary of the inspection report is as follows:

Inspection Summary

Overall Rating: Poor

Repair Activities Requiring a Permit and Prompt Resolution

- Engage a professional engineer to evaluate the penstock and to develop a plan for any necessary repairs pursuant to their direction

Repair Activities Requiring a Permit and Long-Term Resolution

- Due to the continued movement of fine sediments which may potentially contain hazardous constituents, a repair plan should be developed to address and control the seepage through the dam.

Monitoring and Maintenance Activities NOT Requiring a Permit

- Monitor the dam in accordance with the EAP provided by the LCF and Kleinschmidt and submit any documentation to the Department after high flow events or an inspection that is performed in response to a seismic event.
- Implement the Kleinschmidt's recommendation for periodic application of herbicides to the water retaining structures to control vegetative growth on the structures that otherwise would accelerate the deterioration of masonry and concrete. Consult with a professional for

[S.C. Department of Health and Environmental Control](http://www.scdhec.gov)

2600 Bull Street, Columbia, SC 29201

(803) 898-3432

www.scdhec.gov

a herbicide that is labeled safe for aquatic use. It is noted that herbicide has recently been applied to the dam.

- Routinely monitor for the accumulation of debris on the crest of the spillway and buildup on the upstream side of the dam and safely remove as necessary.
- Visually monitor and document seepage and leakage through the dam. Please provide this documentation periodically to the Department and at the next routine preliminary inspection. If there is an increase in the amount of flow due to seepage, notify the Department immediately.
- Perform weekly visual monitoring, and photographically document, the leakage around the wood bulkhead over the penstock opening. Please provide a weekly report to me of the findings via email.

Your dam is currently a Significant Hazard dam and its overall condition was assessed as "Poor". This rating, as established by the U.S. Army Corps of Engineers for the National Inventory of Dams, means "*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.*"

The Department requests the submission of a plan of action regarding the penstock flows no later than COB September 16, 2022.

Repair activities denote significant deficiencies with the dam and require the involvement of a Professional Engineer licensed to practice engineering in South Carolina. Your engineer should prepare and submit a permit application to the Department for the proposed repair work. No action can be taken to repair the dam until you have received a Department-issued permit; however, in case of an emergency, where the owner finds repairs are necessary to safeguard life or property, repairs may begin immediately but you shall immediately notify the department of the proposed repair and work being undertaken. **The Department requests the submission of a Permit Application no later than December 30, 2022 to address the repair activities requiring prompt resolution. This submission should also address and provide for a timeline regarding the repair activities identified for long term resolution.**

Should you fail to fulfill the actions detailed within the Preliminary Inspection report, and since the condition of your dam has been determined to be unsafe and a danger to life or property, this letter serves as courtesy notification that the Department is prepared to issue an Inspection and Repair Order pursuant to S.C. Dams and Reservoirs Safety Act, S.C. Code Ann. § 49-11-110, et seq. and Dams and Reservoirs Safety Act Regulations, 9 S.C. Code Ann. Regs 72-1 et seq.

Maintenance activities should be initiated immediately, if you have not already done so, and should be completed as soon as possible. The involvement of a Professional Engineer is not required for maintenance activities. Photographs can be submitted to the Department as confirmation that these maintenance items have been addressed; alternatively, the Department can be contacted to visit the dam and review the completed maintenance work.

As the owner of a regulated dam, it is your responsibility to routinely monitor the dam for any deterioration of the dam which may lead to dam failure. Monitoring activities should be initiated

immediately if you have not already done so and should continue until the Department determines that conditions at the dam no longer pose a threat to life or property. Please notify the Department if you notice any change in the area(s) being monitored.

In closing, failure to maintain the dam in a safe condition is a violation of the SC Dams and Reservoirs Safety Act, S.C. Code Ann. 49-11-110, et seq., (2008). Your voluntary cooperation is requested; however, failure to comply may result in the Department issuing an "Inspection and Repair Order" and/or a "Maintenance Order." The consequences of non-compliance with a department-issued order may include the assessment of civil penalties pursuant to, S.C. Code Ann. 49-11-110, et seq. (2008) and Regulation 72-1, et seq. (2012). Additionally, at any time should the risk of dam failure be deemed imminent, the Department has authority under section 49-11-190 of the S.C. Dams and Reservoir Safety Act to issue an Emergency Order demanding remedial measures be undertaken by the dam owner to protect life and property. If the owner fails to do so, the Department may exercise its authority to implement remedial measures when the owner is unable or unwilling to do so.

Please submit all documents/correspondence via email or to:

Bureau of Water – Dam Safety Program
Attn: Chuck Owens
2600 Bull Street
Columbia, SC 29201

Please let us know if you have any questions and feel free to contact me anytime at (864) 561-1395 or by email at Owensc2@dhec.sc.gov.

Sincerely,



Chuck Owens
Dam Safety Regional Engineering Associate

cc (via email): Jill Stewart, PE, Dam Safety Program, BOW
John McCain, PE, Dam Safety Program, BOW

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Inspection Information

1. Date of Inspection

08/18/2022

Note: All directions are given looking downstream



Photo Taken: 8/18/2022 10:09:02 AM
GPS Latitude: 34.7709777777778
GPS Longitude: -82.3484333055555
GPS Altitude: 238.285628019324 meters
GPS Azimuth: 350.068817204301 degrees

2. Inspectors Present

Chuck Owens

3. Other Persons Attending Inspection

Name	Phone	Owner/Engineer/Other
Michael Corley	864-923-3262	Lake Conestee Foundation
Angela Gorman	803-898-0929	SCDHEC

4. Is this a follow-up inspection?

Yes No NA

Observation/Instrumentation

1. Estimate the current level of the water in the reservoir:

Normal Pool

2. Describe the current weather & conditions:

80 degrees, Partly Cloudy

3. Recent rainfall quantity:

None

4a. Are Piezometers or Observation Wells present?

Yes No

4b. (If Present:) Condition of Piezometers/Observation Wells

5a. Is a Staff Gauge or Recorder present?

Yes No

5b. (If Present:) Condition of Staff Gauge or Recorder

6a. Are Measurement Weirs Present?

Yes No

6b. (If Present:) Condition of Weirs:

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Observation/Instrumentation

7a. Number of Spillways Present

1

Photo Taken: 8/19/2022 8:10:53 AM

**FIGURE 4
LAKE CONESTEE DAM
FEASIBILITY STUDY
LONG-TERM ALTERNATIVES
Spillway Conditions**

HRI
HEALTHY RIVER INITIATIVE

NOTE: DEPICTION OF AUGUST 2018 AND 2019 CONDITIONS IN Spillway Sections B, C, and D. RIGHT SIDE NOT TO SCALE. DAM TO BE DEMOLISHED FOR ACTUAL DIMENSIONS.

Spillway Section: A B C D E F G H

DAM SECTION	A	B	C	D	E	F	G	H
ELEVATION (FT MSL)	800.30	803.40	796.66	800.37	798.01	800.14	798.68	801.39
WIDTH (FT)	202.7	8.0	130.6	15.7	62.5	95.8	16.9	10.5

Profile Survey & Elevations by Precision Land Surveying, Greenville, SC, Jan 08

7b. Type of Spillways Present

Weir (Ogee, Labyrinth, etc)

8. Other:

9. Additional Comments (Refer to item number if applicable)

Embankment: Crest

Is this section applicable for this dam?

Yes No

1. Grass Cover

2. Deleterious Vegetation

3. Trees

4. Animal Activity

5. Surface Cracking

6. Horizontal Alignment

7. Settlement

8. Sinkhole

9. Erosion

10a. Are Alterations/Repairs Present?

Yes No

10b. (If Present:) Alterations/Repairs Condition

11. Other:

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Embankment: Crest

12. Embankment: Crest Condition

13. Additional Comments (Refer to item number if applicable)

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Crest

Is this section applicable for this dam?

Yes No



Photo Taken: 8/18/2022 10:26:33 AM
GPS Latitude: 34.7708138611111
GPS Longitude: -82.3486721944444
GPS Altitude: 240.49446394815 meters
GPS Azimuth: 17.5567016601563 degrees



Photo Taken: 8/18/2022 10:43:46 AM
GPS Latitude: 34.7719388611111
GPS Longitude: -82.34825
GPS Altitude: 242.9516765286 meters
GPS Azimuth: 203.727264401502 degrees



Photo Taken: 8/18/2022 10:44:53 AM
GPS Latitude: 34.7718194444444
GPS Longitude: -82.34825
GPS Altitude: 242.028859060403 meters
GPS Azimuth: 193.910415542364 degrees

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Crest	
1. Surface Conditions	Monitor
2. Horizontal Alignment	Monitor
3. Vertical Alignment	No Deficiency, Monitor
4. Condition of Joints	Monitor
5. Unusual Movement	No Deficiency
6a. Are Alterations/Repairs Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. (If Present:) Alterations/Repairs Condition	
7. Other:	
8. Concrete/Masonry Dam Crest Condition	Regular Monitoring Necessary
9. Additional Comments (Refer to item number if applicable)	
Embankment: Upstream Slope	
Is this section applicable for this dam?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1. Grass Cover	
2. Deleterious Vegetation	
3. Trees	
4. Animal Activity	
5. Surface Cracking	
6. Subsidence, Sinkhole	
7. Slide, Slough, Scarp	
8. Groins	
9. Erosion	
10a. Slope Protection/Armoring Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10b. (If Present:) Slope Protection/Armoring	
11a. Alterations/Repairs Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
11b. (If Present:) Alterations/Repairs Condition	
12. Other:	
13. Embankment: Upstream Slope Condition	

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Embankment: Upstream Slope

14. Additional Comments (Refer to item number if applicable)

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Upstream Face

Is this section applicable for this dam?

Yes No



Photo Taken: 8/18/2022 10:26:33 AM
GPS Latitude: 34.7708138611111
GPS Longitude: -82.3486721944444
GPS Altitude: 240.49446394815 meters
GPS Azimuth: 17.5567016601563 degrees



Photo Taken: 8/18/2022 10:28:34 AM
GPS Latitude: 34.7710583055556
GPS Longitude: -82.3485721944444
GPS Altitude: 238.370600688013 meters
GPS Azimuth: 213.381729200653 degrees

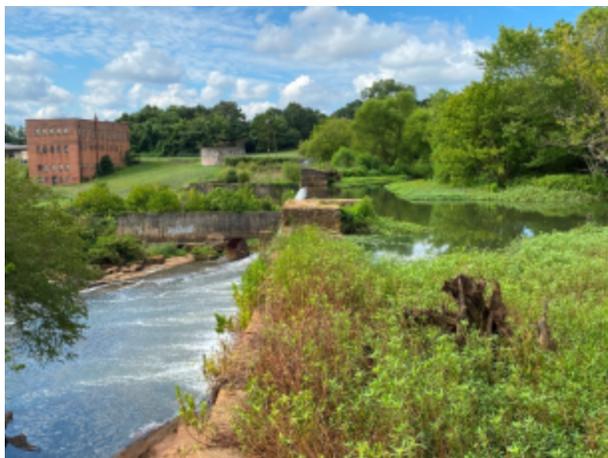


Photo Taken: 8/18/2022 10:45:47 AM
GPS Latitude: 34.7716333333333
GPS Longitude: -82.3483416666667
GPS Altitude: 240.278078484438 meters
GPS Azimuth: 195.150413582934 degrees

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Upstream Face

1. Surface Conditions

Could not be inspected due to the build up of sediment behind the dam and the primary spillway section was submerged.

2. Condition of Joints

Could not be inspected due to the build up of sediment behind the dam and the primary spillway section was submerged.

3. Unusual Movement

Could not be inspected due to the build up of sediment behind the dam and the primary spillway section was submerged.

4. Abutments

Could not be inspected due to the build up of sediment behind the dam and the primary spillway section was submerged.

5a. Alterations/Repairs Present?

Yes No

5b. (If Present:) Alterations/Repairs Condition

6. Other:

7. Concrete/Masonry Dams: Upstream Face Condition

Regular Monitoring
Necessary, Condition
Prevented Full
Inspection

**Violation Determined: 8/19/2022
DAMMAINTREP**

8. Additional Comments (Refer to item number if applicable)

Could not be inspected due to the build up of sediment behind the dam and the primary spillway section was submerged.

Embankment: Downstream Slope

Is this section applicable for this dam?

Yes No

1. Grass Cover

2. Deleterious Vegetation

3. Trees

4. Animal Activity

5. Surface Cracking

6. Subsidence, Sinkhole

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Embankment: Downstream Slope

7. Slide, Slough, Scarp	
8. Groins	
9. Erosion	
10a. Slope Protection/Armoring Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10b. (If Present:) Slope Protection Condition	
11. Wet Areas	
12a. Seepage	<input type="checkbox"/> Yes <input type="checkbox"/> No
12b. (If Present): Seepage Flow	
13a. Drainage System Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
13b. (If Present:) Drainage System Condition	
14a. Alterations/Repairs Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
14b. (If Present:) Alterations/Repairs Condition	
15. Other:	
16. Embankment: Downstream Slope Condition	
17. Additional Comments (Refer to item number if applicable)	

Concrete/Masonry Dams: Downstream Face

Is this section applicable for this dam? Yes No



Photo Taken: 8/18/2022 10:18:18 AM
GPS Latitude: 34.7707527777778
GPS Longitude: -82.3485638888889
GPS Altitude: 239.661163522013 meters
GPS Azimuth: 315.66487133453 degrees

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face



Photo Taken: 8/18/2022 10:49:29 AM
GPS Latitude: 34.7716972222222
GPS Longitude: -82.3482805277778
GPS Altitude: 240.917441224713 meters
GPS Azimuth: 237.590957636169 degrees



Photo Taken: 8/18/2022 10:50:53 AM
GPS Latitude: 34.7715861111111
GPS Longitude: -82.3483055555556
GPS Altitude: 240.213734254368 meters
GPS Azimuth: 210.944740346205 degrees



Photo Taken: 8/18/2022 10:54:51 AM
GPS Latitude: 34.7714944444444
GPS Longitude: -82.3483888888889
GPS Altitude: 238.411583803178 meters
GPS Azimuth: 277.610015982951 degrees

1. Surface Conditions

Monitor

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Downstream Face

2. Condition of Joints

Monitor, Action
Required

The previous SCDHEC inspections on December 18, 2014, December 1, 2016, December 11, 2019 and August 18, 2022, noted numerous active seeps and potential deterioration of the masonry joints throughout the downstream face on the both the left and right side

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face



Photo Taken: 8/18/2022 10:18:59 AM
GPS Latitude: 34.7707749722222
GPS Longitude: -82.3486111111111
GPS Altitude: 240.597183098592 meters
GPS Azimuth: 302.239883187318 degrees



Photo Taken: 8/18/2022 10:47:31 AM
GPS Latitude: 34.7718388611111
GPS Longitude: -82.3481916388889
GPS Altitude: 242.166897187644 meters
GPS Azimuth: 284.11326609775 degrees



Photo Taken: 8/18/2022 10:48:49 AM
GPS Latitude: 34.7717388611111
GPS Longitude: -82.34825
GPS Altitude: 241.082949308756 meters
GPS Azimuth: 302.721664275466 degrees

3. Unusual Movement

Monitor

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face

4. Drains

Monitor

The dam formerly had two sluice gates, one on either side of the primary spillway. The west sluice gate was closed September 2012 as a part of the present BCRLF-ARRA. A second sluice gate is located on the east side of the primary spillway. This east sluice gate has been grouted closed with concrete, but does have two steel pipes protruding from the face that leak. These 2 pipes should be sealed permanently.



Photo Taken: 8/18/2022 10:06:12 AM
GPS Latitude: 34.7709666388889
GPS Longitude: -82.3484944444444
GPS Altitude: 238.755900202293 meters
GPS Azimuth: 331.511962890625 degrees



Photo Taken: 8/18/2022 10:50:53 AM
GPS Latitude: 34.7715861111111
GPS Longitude: -82.3483055555556
GPS Altitude: 240.213734254368 meters
GPS Azimuth: 210.944740346205 degrees

5. Leakage

Monitor, Action Required

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Downstream Face

The previous SCDHEC inspections on December 18, 2014, December 1, 2016, December 11, 2019 and August 18, 2022, noted numerous active seeps and deterioration of the masonry joints throughout the downstream face on the both the left and right side. A recent engineering study was submitted on April 19, 2019 by Kleinschmidt and the report noted "Numerous active seeps were observed along the entire length of the downstream face of the dam. Most of these seeps appear to be transporting fine sediment (silt and clay) resulting in an ochre coloration to the seeps and the accumulated materials where the seeps flow across the bedrock at the base of the dam. These accumulated translocated materials have been analyzed and documented to contain high concentrations of heavy metals previously detailed in this report." Due to the movement of fine sediments containing potentially hazardous constituents, a repair plan should be developed to address and control the seepage through the dam.

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face



Photo Taken: 8/18/2022 10:19:01 AM
GPS Latitude: 34.7707777777778
GPS Longitude: -82.3486111111111
GPS Altitude: 240.472510572857 meters
GPS Azimuth: 323.00421179302 degrees



Photo Taken: 8/18/2022 10:47:34 AM
GPS Latitude: 34.7718388611111
GPS Longitude: -82.3481972222222
GPS Altitude: 242.248070562293 meters
GPS Azimuth: 250.475875743556 degrees



Photo Taken: 8/18/2022 10:48:58 AM
GPS Latitude: 34.7717555555556
GPS Longitude: -82.3482666666667
GPS Altitude: 240.995388162952 meters
GPS Azimuth: 209.95608531995 degrees

6. Abutments

Monitor

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face

7a. Alterations/Repairs Present?

Yes No

7b. (If Present:) Alterations/Repairs Condition

8. Other:

Monitor, Action
Required

A temporary replacement plate was added on the penstock orifice in 2001. The Kleinschmidt report stated: "The timber plate installed in 2001 against an existing timber frame to stop uncontrolled river flow through the penstock orifice allows flow through the orifice estimated at less than 3-5 cfs. The plate was intentionally designed to allow this discharge so as to provide a minimum flow in the river after the repair in June 2001. These existing timber frame, believed to be at least 110 years old, is in an undetermined condition. The flow of water around the temporary plate will continue to erode the timber seals. Once these wooden seals fail, there will be an increase in flow. The volume of flow could transport sediment and contaminants downstream of the dam. If the flow is great enough or if the bulkhead plate were to fail or be displaced, then there could be a repeat of the loss of the impoundment and release of sediment that occurred from June 2000 to June 2001, when the lake reservoir drained, and the river eroded a "canyon" through the lakebed." At the time of the inspection, the flows through the penstock were above normal from previous site visits. Due to the concerns associated with the previous repairs and the potential for an uncontrolled release of water and sediment, engage a professional engineer to evaluate the penstock and to develop a repair plan to permanently seal the 8 ft diameter penstock orifice.

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Concrete/Masonry Dams: Downstream Face



Photo Taken: 8/18/2022 10:06:12 AM
GPS Latitude: 34.7709666388889
GPS Longitude: -82.3484944444444
GPS Altitude: 238.755900202293 meters
GPS Azimuth: 331.511962890625 degrees

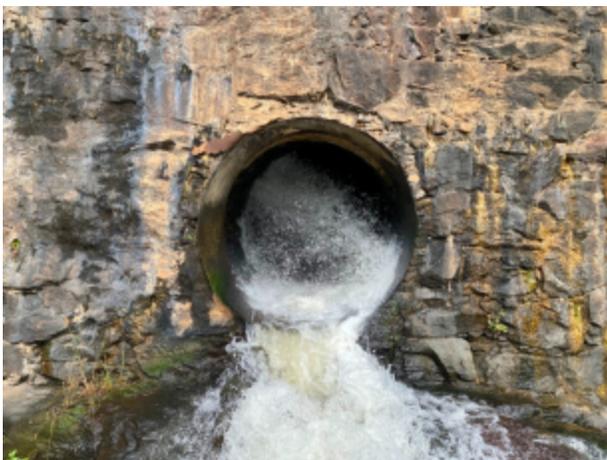


Photo Taken: 8/18/2022 10:07:21 AM
GPS Latitude: 34.7710083333333
GPS Longitude: -82.3484944444444
GPS Altitude: 238.722862632085 meters
GPS Azimuth: 287.528289891926 degrees



Photo Taken: 8/18/2022 10:07:27 AM
GPS Latitude: 34.7709916666667
GPS Longitude: -82.3484944444444
GPS Altitude: 238.543915343915 meters
GPS Azimuth: 284.140579101972 degrees

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Concrete/Masonry Dams: Downstream Face

9. Concrete/Masonry Dam: Downstream Face Condition

Regular Monitoring
Necessary, Needs
Permitted Repair(s)

Violation Determined: 8/19/2022
DAMMAINTREP

10. Additional Comments (Refer to item number if applicable)

Cut and remove the brush and woody vegetation along the right downstream face so this area can be easily accessed to monitor the seepage in this area.



Photo Taken: 8/18/2022 10:20:57 AM
GPS Latitude: 34.7707583055556
GPS Longitude: -82.3485860833333
GPS Altitude: 240.284735812133 meters
GPS Azimuth: 348.683410442829 degrees

Downstream Area

Is this section applicable for this dam?

Yes No

This is a run of the river dam on the Reedy River.



Photo Taken: 8/18/2022 10:27:57 AM
GPS Latitude: 34.7710722222222
GPS Longitude: -82.3485721944444
GPS Altitude: 238.195078299776 meters
GPS Azimuth: 112.639070442992 degrees

Is Downstream Area clear?

Yes No

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Downstream Area	
1. Trees	
2. Deleterious Vegetation	
3. Wet Areas	
4a. Seepage	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4b. (If Present): Seepage Flow	
5a. Boils	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
5b. (If Present): Boil Flow	
6a. Alterations/Repairs Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
6b. (If Present:) Alterations/Repairs Condition	
7. Other:	
8. Downstream Area Condition	
9. Additional Comments (Refer to item number if applicable)	
Spillways: Erodible Channel	
Is this section applicable for this dam?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1. Location	
2. Grass Cover	
3. Deleterious Vegetation	
4. Trees	
5. Animal Activity	
6. Subsidence, Sinkhole	
7. Slide, Slough, Scarp	
8. Erosion	
9. Debris	
10. Flowing?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
11a. Alterations/Repairs Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
11b. (If Present:) Alterations/Repairs Condition	
12. Other:	

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Spillways: Erodible Channel

13. *Spillway: Erodible Channel Condition*

14. *Additional Comments (Refer to item number if applicable)*

Spillways: Non-Erodible Channel

Is this section applicable for this dam?

Yes No

From the HRI and Caliber Engineering Report: The dam has a primary spillway 130 ft in length and with an elevation of 796.95 ft msl. The bedrock shelf at the base of the spillway is at roughly 775.64 ft (elevation of invert of penstock) such that the vertical drop to bedrock is roughly 21 feet. However, the bedrock base essentially forms a falls within a few feet of the spillway base such that spillway water cascades another roughly six feet to a pool elevation of approximately 769 ft. Hence, the spillway to pool elevation difference is approximately 27 feet. The secondary spillway is 62.5 ft in length, at an elevation of 798.01 ft msl. Six distinct structural elements of the dam exist at elevations stepping up from 798.88 to 801.39 ft msl. The various spillways are depicted in Figure 4. The primary spillway is sloped upward toward the downstream edge, and as shown in the survey. The primary spillway also has a secondary lip on the downstream side.

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Spillways: Non-Erodible Channel

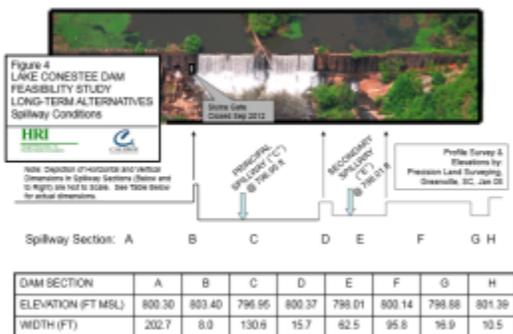


Photo Taken: 8/18/2022 10:27:48 AM
 GPS Latitude: 34.7710638888889
 GPS Longitude: -82.3485721944444
 GPS Altitude: 238.635610079576 meters
 GPS Azimuth: 31.9342041015625 degrees



Photo Taken: 8/18/2022 10:27:49 AM
 GPS Latitude: 34.7710611111111
 GPS Longitude: -82.3485721944444
 GPS Altitude: 238.537584240539 meters
 GPS Azimuth: 35.1238098144531 degrees

Photo Taken: 8/19/2022 8:10:53 AM



1. Location

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Spillways: Non-Erodible Channel

2. Approach Area

No Deficiency, Monitor

Approach area was free of debris and trash at the time of the inspection. Continue to monitor this area for any future accumulation of debris and remove as necessary.



Photo Taken: 8/18/2022 10:26:57 AM
GPS Latitude: 34.7709666388889
GPS Longitude: -82.3486333333333
GPS Altitude: 239.647868260771 meters
GPS Azimuth: 276.673416067929 degrees

3. Weir/Control

Monitor

4. Sidewalls

Monitor

5. Channel Floor

Could not be fully inspected due to flows over the primary spillway

6. Condition of Joints

Could not be fully inspected due to flows over the primary spillway

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Spillways: Non-Erodible Channel

7. *Surface Condition*

Monitor

Monitor the crest of the weir where the concrete intersects with the masonry on the primary spillway on the 12 inch lip on the downstream side.



Photo Taken: 8/18/2022 10:28:20 AM
 GPS Latitude: 34.77109444444444
 GPS Longitude: -82.3485638888889
 GPS Altitude: 237.889498102067 meters
 GPS Azimuth: 29.4580688272636 degrees



Photo Taken: 8/18/2022 10:28:23 AM
 GPS Latitude: 34.7710638888889
 GPS Longitude: -82.3485554722222
 GPS Altitude: 238.450120192308 meters
 GPS Azimuth: 25.2041549515776 degrees

8. *Unusual Movement*

Monitor

9. *Discharge Channel*

No Deficiency

Discharge channel is bedrock in the Reedy River

10. *Debris*

Monitor

11. *Flowing?*

Yes No NA

12a. *Boils*

Yes No NA

12b. *(If Present): Boils*

13a. *Alterations/Repairs Present*

Yes No NA

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Spillways: Non-Erodible Channel	
<i>13b. (If Present:) Alterations/Repairs Condition</i>	
<i>14. Other:</i>	
<i>15. Spillway: Non-Erodible Channel Condition</i>	Regular Monitoring Necessary
<i>16. Additional Comments (Refer to item number if applicable)</i>	
Spillways: Inlet Structure	
<i>Is this section applicable for this dam?</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>1. Location</i>	
<i>2a. Intake Structure</i>	
<i>2b. Intake Structure Types</i>	
<i>3. Trashrack</i>	
<i>4a. Low-Level Valve Present?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<i>4b. (If Present:) Low-Level Valve Condition</i>	
<i>5. Debris</i>	
<i>6a. Repairs/Alterations Present</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<i>6b. (If Present:) Alterations/Repairs Condition</i>	
<i>7. Other:</i>	
<i>8. Spillway: Inlet Structure Condition</i>	
<i>9. Additional Comments (Refer to item number if applicable)</i>	
Spillways: Outlet Works	
<i>Is this section applicable for this dam?</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>1. Location</i>	
<i>2a. Outlet Structure</i>	
<i>2b. Outlet Structure Type</i>	
<i>3. Outlet Pipe</i>	
<i>4. Primary Closure/Control</i>	
<i>5. Secondary Closure/Control (If Applicable)</i>	
<i>6. Unusual Movement</i>	

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Spillways: Outlet Works	
7a. Seepage	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
7b. (If Present): Seepage	
8. Stilling Basin	
9. Normal Flow Quantity	
10. Low-Level Flow Quantity	
11a. Alterations/Repairs Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
11b. (If Present:) Alterations/Repairs	
12. Other:	
13. Outlet Works Condition	
14. Additional Comments (Refer to item number if applicable)	
Emergency Action Plan	
Is this section applicable for this dam?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1. Date of last update of emergency plan:	03/29/2021
2a. EAP provided by owner?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2b. (If EAP was not provided, was a copy of the EAP form left with the owner?)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
3. Does EAP contain emergency alert plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4. Does EAP contain specific actions to take if the dam has failed or is failing?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
5. Additional Comments (Refer to item number if applicable)	
The emergency contact sheet was updated on 7/28/2021 and additional revisions are required. If you have any questions about the current plan and the additional revisions that are needed, please contact response@dhec.sc.gov for assistance.	

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form



Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022

Downstream Hazard Check

1. *Satellite Imagery*

Yes No NA



Photo Taken: 8/19/2022 9:21:26 AM

2. *Inundation Map*

Yes No NA

3. *Structures/Developments*

Yes No NA

The former Conestee Mill has the potential to be impacted in the event of a dam failure, however no habitable structures are currently located in the inundation area.

4. *Roads/Railways*

Yes No NA

The structural integrity of the Reedy River Bridge on Conestee road has the potential to be impacted in the event of a dam failure.

5. *Utilities*

Yes No NA

6. *Consider For Reclass?*

Yes No NA

Dam is currently classified as a Significant Hazard, Class 2 dam.

7. *Additional Comments (Refer to item number if applicable)*

Inspection Summary

1. *Overall Condition (*Per National Inventory of Dams Definition)*

Poor

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Inspection Summary

-----NID Definitions-----

(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.

(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.

(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.

(UNSATISFACTORY) A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

(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.

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Inspection Summary

3. Final Comments

-A temporary replacement plate was added on the penstock orifice in 2001. The Kleinschmidt report stated: "The timber plate installed in 2001 against an existing timber frame to stop uncontrolled river flow through the penstock orifice allows flow through the orifice estimated at less than 3-5 cfs. The plate was intentionally designed to allow this discharge so as to provide a minimum flow in the river after the repair in June 2001. These existing timber frame, believed to be at least 110 years old, is in an undetermined condition. The flow of water around the temporary plate will continue to erode the timber seals. Once these wooden seals fail, there will be an increase in flow. The volume of flow could transport sediment and contaminants downstream of the dam. If the flow is great enough or if the bulkhead plate were to fail or be displaced, then there could be a repeat of the loss of the impoundment and release of sediment that occurred from June 2000 to June 2001, when the lake reservoir drained, and the river eroded a "canyon" through the lakebed." At the time of the inspection, the flows through the penstock were above normal from previous site visits. Due to the concerns associated with the previous repairs and the potential for an uncontrolled release of water and sediment, engage a professional engineer to evaluate the penstock and develop a repair plan to permanently seal the 8 ft diameter penstock orifice.

-The previous SCDHEC inspections on December 18, 2014, December 1, 2016, December 11, 2019 and August 18, 2022, noted numerous active seeps and deterioration of the masonry joints throughout the downstream face on the both the left and right side. A recent engineering study was submitted on April 19, 2019 by Kleinschmidt and the report noted "Numerous active seeps were observed along the entire length of the downstream face of the dam. Most of these seeps appear to be transporting fine sediment (silt and clay) resulting in an ochre coloration to the seeps and the accumulated materials where the seeps flow across the bedrock at the base of the dam. These accumulated translocated materials have been analyzed and documented to contain high concentrations of heavy metals previously detailed in this report." Due to the movement of fine sediments containing potentially hazardous constituents and the concern for the deterioration of the masonry joints, a repair plan should be developed to address and control the seepage through the dam in these locations.

-Continue to monitor the seepage on the downstream face of the dam for any changes in flow and for any new areas of seepage/leaks through the dam.

-Cut and remove the tall brush and woody vegetation behind the right section of the dam so the area can easily viewed and observed for any changes.

-Continue to monitor for any debris/trash build up behind the dam and remove as needed.

CONESTEE LAKE DAM : D2876

Dams Preliminary Inspection Form

Inspector: Charles Owens

Start Date: 08/18/2022 Completed Date: 08/24/2022



Inspection Summary

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.

CONESTEE LAKE DAM (D2876)
Violation List



Form	Determined	Description	Sec. #
Dams Preliminary Inspection Form	8/19/2022	Reference: DAMMAINTREP	
Dams Preliminary Inspection Form	8/19/2022	Reference: DAMMAINTREP	