



SC DEPARTMENT of
**ENVIRONMENTAL
SERVICES**

July 18, 2024

VIA CERTIFIED (RETURN RECEIPT REQUESTED), FIRST-CLASS MAIL, & EMAIL

9214 8969 0099 9790 1425 4689 15

Sunnyhill Northlake Inc.

C/O Fred Oxley

220 Anns Court

Camden, SC 29020

Also via email to [REDACTED]

9214 8969 0099 9790 1425 4689 46

South Lake, Inc.

C/O Benjamin Mingo

219 Leonard Circle

Camden, SC 29020

Also via email to [REDACTED]

Subject: Inspection of UPPER SUNNY HILL POND DAM, D2523, Kershaw County, High Hazard Class

Dear Mr. Oxley and Mr. Mingo:

The South Carolina Department of Environmental Services (the Department/SCDES) inspected your dam on July 08, 2024 and the report of that inspection is enclosed. This inspection was performed as a result of a significant change in the condition of the dam on July 5, 2024, when a sinkhole formed along the crest of the dam leading to the closure of the roadway. Please review it closely. 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

- Engage a Professional Engineer to evaluate the condition and stability of the dam, especially around voids and sinkholes, and develop a permit application for repairs of voids and stabilization of the crest and slopes.
- Engage a Professional Engineer to evaluate the area of the downstream slope experiencing scarping and to develop a permit application for slope repair and stabilization.

info@des.gov | des.sc.gov | 803.898.3432

- Engage a Professional Engineer to develop a tree management plan to address the trees and stumps greater than 4 inches in diameter.
- The newly formed sinkhole may be a sign of internal erosion within the dam, engage a Professional Engineer to conduct a full investigation into the extent of voids/internal erosion pathways within the dam.

Maintenance Activities NOT Requiring a Permit

- Manage/remove brush and woody vegetation less than 4 inches in diameter.
- Develop grass coverage or other form of erosion protection following deleterious vegetation removal.

Monitoring Activities

- Monitor for worsening cracking along the pavement.

Recommendations

- Recommend engaging a Professional Engineer to conduct a camera investigation of the primary spillway to assess the condition of the spillway pipe.

Dam Hazard Class Review

- Hazard class should: stay the same.

Emergency Action Plan (EAP)

- This dam does not have an approved and current EAP on file with the Department. Under state law, all High and Significant Hazard dams must have an up-to-date EAP. Please contact response@des.sc.gov for information on how to satisfy the EAP requirement and for assistance in developing or revising an EAP for this dam.

Your dam is currently a High-hazard (i.e., a Class 1) dam and its overall condition was assessed as "Poor". This rating means "A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. This condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary."

Repair activities denote significant deficiencies with the dam and require the involvement of a Professional Engineer licensed to practice engineering in South Carolina. A list of engineers familiar with the design and permitting of dams in South Carolina is enclosed as a courtesy. 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. **The Department requests the submission of a Permit Application no later than October 17, 2024.**

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. Pay special attention to any areas of seepage, looking for changes in the volume of flow and whether the seepage water is clear or cloudy/muddy. Cloudy/muddy water is an indication that soil is being removed from inside the dam, creating potential voids through the dam that can ultimately lead to dam failure. Involvement of a Professional Engineer may be required if changes or deterioration of the situation is observed. Recommendations are provided and should be taken into consideration to voluntarily improve the condition or operation of the dam. Following these recommendations is one way to protect your investment, extend the life of your dam, and maintain the dam in a safe condition. If you choose to follow the recommendations, please contact the Department first to determine if permits will be required.

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 with the deadlines set forth in this letter 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 the S.C. Dams and Reservoir Safety Act, S.C. Code Ann. 49-11-110, et seq. (2008) and Regulation 72-1, et seq. (2012).

Should you have questions regarding the content of this letter, or wish to discuss any of the findings, requirements, schedules, and/or deadlines contained herein, please feel free to contact me at (843) 661-4825, or by email at jared.woodard@des.sc.gov.

Please submit all documents/correspondence via email, or to:

SCDES – Dam Safety Program
Attn: Jared Woodard
2600 Bull Street
Columbia, SC 29201

Sincerely,



Jared Woodard
Dam Safety Regional Engineering Associate

Enclosure: UPPER SUNNY HILL POND DAM (D2523) Preliminary Inspection
 List of Engineers
 Dam Hazard Class Fact Sheet
 Inundation Map
 Tree Management Guidance Document

cc:

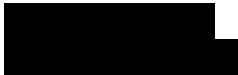
JOEL A RAY



BRANDON TRAYNHAM



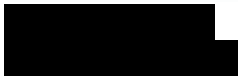
ELIZABETH S OUTLAW



DEBORAH ROUKOS BAILEY



MICHAEL Y & CAROLYN H HORTON



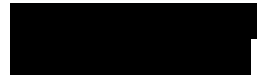
VAN A JR & ELIZABETH A JOHNSON



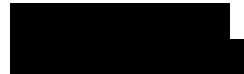
JOHN M BURNS



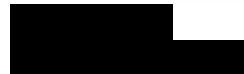
JOSEPH M FLOYD SR



SUZANNE P SLOCUM AND TRAVIS
HAROLD OGDEN



SHERIDAN S OXLEY



DIANNE C HARTIS



GEORGE T AND MARGARET S
CRACRAFT

[REDACTED]
[REDACTED]

MARY ANN HURST

[REDACTED]
[REDACTED]

EDWARD D AND PEARL W NESTER

[REDACTED]
[REDACTED]

DANA MICHELLE BAXTER

[REDACTED]
[REDACTED]

JOHN M JR AND ANNAH J DEAL

[REDACTED]
[REDACTED]

JAMES J AND C G OTTOW

[REDACTED]
[REDACTED]

BEVERLY KAYE HARRIS

[REDACTED]
[REDACTED]

LISA B BRADLEY

[REDACTED]
[REDACTED]

JACOB L AND NIKKI GARWOOD

[REDACTED]
[REDACTED]

BENNY L AND VIVIAN M RAY

[REDACTED]
[REDACTED]

GERALD A PORTER

[REDACTED]
[REDACTED]

VICKY K MARSH

[REDACTED]
[REDACTED]

WALTER F SETZER III AND KYM SETZER
WOOD

[REDACTED]
[REDACTED]

ZACHARY ALEXANDER AND SARAW W
OUZTS

[REDACTED]
[REDACTED]

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Inspection Information

1. Date of Inspection	07/08/2024		
2. Inspectors Present	Jared Woodard		
3. Other Persons Attending Inspection			
Name	Phone	Email	Owner/Engineer/Other
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:	Partly cloudy and 80 degrees
3. Recent rainfall quantity:	Less than 2"
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:	
7a. Number of Spillways Present	1
7b. Type of Spillways Present	Stop-Log/Boards, Drop-Inlet
8. Other:	
9. Additional Comments (Refer to item number if applicable)	

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



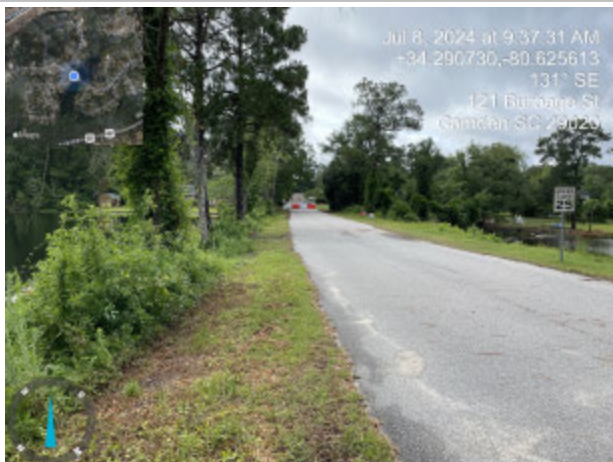
Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Crest

Is this section applicable for this dam?

☒ Yes ☐ No



GPS Latitude: 34.2907305555556
GPS Longitude: -80.6256111111111
GPS Altitude: 83.7949600660975 meters
GPS Azimuth: 131.351211631664 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.29015
GPS Longitude: -80.6247638888889
GPS Altitude: 83.2206802721088 meters
GPS Azimuth: 320.377197388247 degrees
Photo Uploaded: 7/11/2024

1. Grass Cover

Monitor

Paved Sunnyhill Drive on the crest of the dam. Shoulders of the crest are mostly grassed, some bare areas or areas with pinestraw coverage observed.

2. Deleterious Vegetation

No Deficiency

3. Trees

No Deficiency

4. Animal Activity

No Deficiency

5. Surface Cracking

Monitor

Longitudinal cracking of the pavement observed near the sinkhole.

6. Horizontal Alignment

No Deficiency

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Crest

7. Settlement

No Deficiency

8. Sinkhole

Investigate

Sinkhole formed alongside the pavement nearly in-line with the primary spillway structure. Sinkhole is approximately 3.5 feet deep and 3 feet in width.



GPS Latitude: 34.2905611111111
GPS Longitude: -80.6252805555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 193.245681876772 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905611111111
GPS Longitude: -80.6252805555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 199.435272045028 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024

Completed Date: 07/17/2024

Embankment: Crest



GPS Latitude: 34.29056111111111
GPS Longitude: -80.62528055555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 193.139678963672 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.29056111111111
GPS Longitude: -80.62528055555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 19.8137874770549 degrees
Photo Uploaded: 7/11/2024

9. Erosion

No Deficiency

10a. Are Alterations/Repairs Present?

☐ Yes ☒ No

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

11. Other:

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Crest

12. Embankment: Crest Condition

Needs Permitted
Repair(s)

Violation Determined: 7/8/2024

DAMMAINTREP

Engage a Professional Engineer to evaluate the stability of the crest around the sinkhole and develop a permit application for repairs and stabilization of the embankment.

The newly formed sinkhole may be a sign of internal erosion within the dam, engage a Professional Engineer to conduct a full investigation into the extent of voids/internal erosion pathways within the dam.

Monitor for worsening cracking along the pavement.

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

Concrete/Masonry Dams: Crest

Is this section applicable for this dam?

☐ Yes ☒ No

1. Surface Conditions

2. Horizontal Alignment

3. Vertical Alignment

4. Condition of Joints

5. Unusual Movement

6a. Are Alterations/Repairs Present?

☐ Yes ☐ No

6b. (If Present:) Alterations/Repairs Condition

7. Other:

8. Concrete/Masonry Dam Crest Condition

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

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



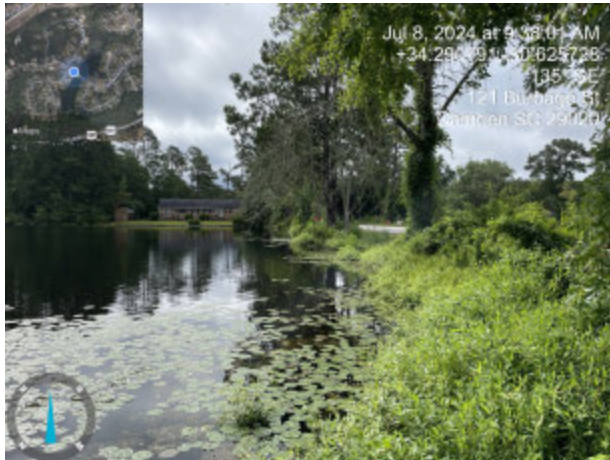
Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope

Is this section applicable for this dam?

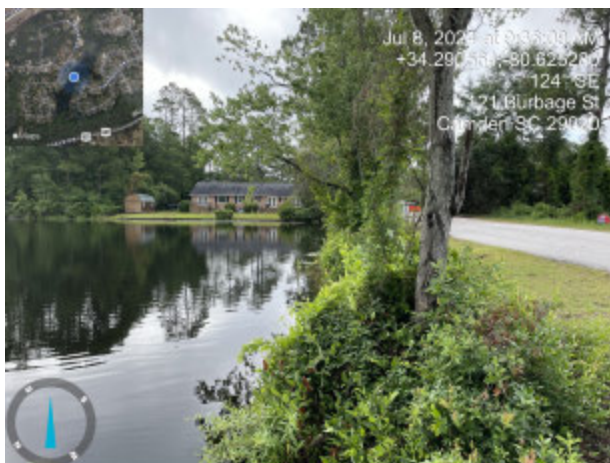
☒ Yes ☐ No



GPS Latitude: 34.2907888888889
GPS Longitude: -80.625725
GPS Altitude: 84.0595703125 meters
GPS Azimuth: 134.778167641326 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905611111111
GPS Longitude: -80.6252805555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 118.107574536664 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905611111111
GPS Longitude: -80.6252805555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 124.44222268996 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope

1. Grass Cover

Monitor

Grass coverage limited by brush and woody vegetation.

2. Deleterious Vegetation

Dense brush and woody vegetation less than 4 inches in diameter observed along the upstream slope, mainly along the water line.



GPS Latitude: 34.29033611111111
GPS Longitude: -80.62485555555556
GPS Altitude: 86.3358764066374 meters
GPS Azimuth: 312.740417457306 degrees
Photo Uploaded: 7/11/2024

3. Trees

Monitor

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form

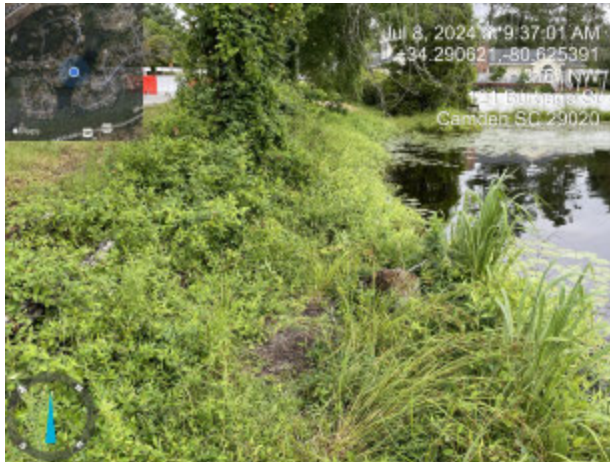


Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope

Numerous trees greater than 4 inches in diameter observed, including dead trees and decaying stumps.



GPS Latitude: 34.290622222222
GPS Longitude: -80.625388888889
GPS Altitude: 82.3918762088975 meters
GPS Azimuth: 316.05673223903 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905916666667
GPS Longitude: -80.6253972222222
GPS Altitude: 85.4845275752991 meters
GPS Azimuth: 353.9085995086 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2902805555556
GPS Longitude: -80.6248111111111
GPS Altitude: 85.426651081239 meters
GPS Azimuth: 68.619972260749 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope

4. Animal Activity	Monitor
5. Surface Cracking	No Deficiency
6. Subsidence, Sinkhole	Investigate

Numerous voids/subsided areas observed within the upstream slope. Depths vary, but all are greater than 12 inches in depth. Standing water was observed within one of the voids. Some of the voids appear to have formed around tree roots.



GPS Latitude: 34.2903388888889
GPS Longitude: -80.6248694444444
GPS Altitude: 82.600624024961 meters
GPS Azimuth: 158.526626571897 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905055555556
GPS Longitude: -80.625175
GPS Altitude: 81.3799438632304 meters
GPS Azimuth: 301.902282453638 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope



GPS Latitude: 34.2905055555556
GPS Longitude: -80.625175
GPS Altitude: 81.3799438632304 meters
GPS Azimuth: 103.91149909693 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2904527777778
GPS Longitude: -80.6250777777778
GPS Altitude: 82.664543101732 meters
GPS Azimuth: 232.457473578259 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form

Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024



Embankment: Upstream Slope

7. Slide, Slough, Scarp

Monitor

Minor scarping observed on the upstream slope near the right side of the dam. Less than 12 inches.



GPS Latitude: 34.290622222222
GPS Longitude: -80.625388888889
GPS Altitude: 82.3918762088975 meters
GPS Azimuth: 212.739563054294 degrees
Photo Uploaded: 7/11/2024

8. Groins

Monitor

9. Erosion

Monitor

Potential for wave-action erosion due to lack of slope armoring or grass coverage protection.

10a. Slope Protection/Armoring Present?

☐ Yes ☒ No

10b. (If Present:) Slope Protection/Armoring

11a. Alterations/Repairs Present?

☐ Yes ☒ No

11b. (If Present:) Alterations/Repairs Condition

12. Other:

13. Embankment: Upstream Slope Condition

Regular Monitoring
Necessary, Needs
Maintenance, Needs
Permitted Repair(s)

Violation Determined: 7/11/2024

DAMMAINTREP

Engage a Professional Engineer to evaluate the condition and stability of the upstream slope, especially around areas with voids. Engineer should develop a permit application for repairs and stabilization of the upstream slope.

Engage a Professional Engineer to develop a tree management plan to address the trees greater than 4 inches in diameter.

Manage/remove brush and woody vegetation less than 4 inches in diameter.

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Upstream Slope

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

Concrete/Masonry Dams: Upstream Face

Is this section applicable for this dam?

☐ Yes ☒ No

1. Surface Conditions

2. Condition of Joints

3. Unusual Movement

4. Abutments

5a. Alterations/Repairs Present?

☐ Yes ☐ No

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

6. Other:

7. Concrete/Masonry Dams: Upstream Face Condition

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

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

Is this section applicable for this dam?

☒ Yes ☐ No



GPS Latitude: 34.290672222222
GPS Longitude: -80.625541666667
GPS Altitude: 83.0790481400438 meters
GPS Azimuth: 140.023223855985 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.290416666667
GPS Longitude: -80.625472222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 101.406768837803 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.290416666667
GPS Longitude: -80.625472222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 142.562728937729 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

1. Grass Cover

Investigate

Dense brush and woody vegetation limiting grass growth.

2. Deleterious Vegetation

Investigate

Dense brush and woody vegetation less than 4 inches in diameter prevented full inspection of the downstream slope.



GPS Latitude: 34.2905166666667
GPS Longitude: -80.62545
GPS Altitude: 82.3314438146049 meters
GPS Azimuth: 108.704086214639 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905166666667
GPS Longitude: -80.62545
GPS Altitude: 82.3314438146049 meters
GPS Azimuth: 125.270011947431 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

3. Trees

Investigate

Decaying tree stumps observed.



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 52.8770255944268 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 137.766616691654 degrees
Photo Uploaded: 7/11/2024

4. Animal Activity

Monitor

Condition prevented full inspection of the downstream slope.

5. Surface Cracking

Monitor

Condition prevented full inspection of the downstream slope.

6. Subsidence, Sinkhole

Monitor

Condition prevented full inspection of the downstream slope.

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

7. Slide, Slough, Scarp

Investigate

Scarp along the shoulder of the crest and downstream slope. Nearly vertical slope along this section of the downstream slope.



GPS Latitude: 34.2905166666667
GPS Longitude: -80.62545
GPS Altitude: 82.3314438146049 meters
GPS Azimuth: 54.692832948008 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905166666667
GPS Longitude: -80.62545
GPS Altitude: 82.3314438146049 meters
GPS Azimuth: 55.2827262892175 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

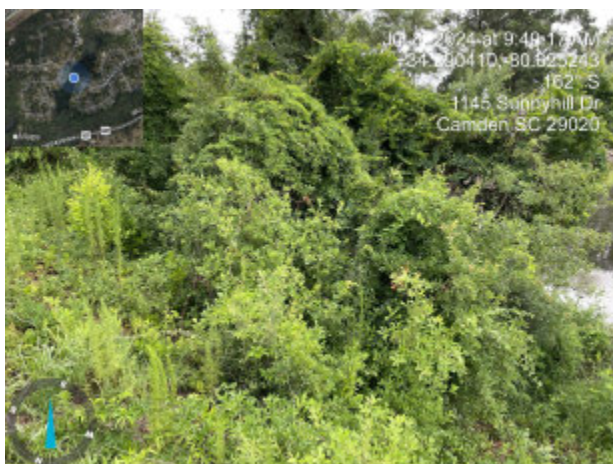
8. Groins

Investigate

Dense brush and woody vegetation observed in the groins of the downstream slope.



GPS Latitude: 34.2905888888889
GPS Longitude: -80.6255111111111
GPS Altitude: 86.4510880618263 meters
GPS Azimuth: 266.789001560062 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2904083333333
GPS Longitude: -80.6252444444444
GPS Altitude: 84.7352066115702 meters
GPS Azimuth: 162.063369854901 degrees
Photo Uploaded: 7/11/2024

9. Erosion

Investigate

Multiple voids observed within the downstream slope, potentially around tree roots and stumps. Depths greater than 2 feet observed in some areas.

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope



GPS Latitude: 34.2905777777778
GPS Longitude: -80.62555
GPS Altitude: 82.8076782449726 meters
GPS Azimuth: 174.672546359114 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 114.423583984375 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 114.486068836338 degrees
Photo Uploaded: 7/11/2024

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 11.5197305712652 degrees
Photo Uploaded: 7/11/2024

10a. Slope Protection/Armoring Present?

☐ Yes ☒ No

10b. (If Present:) Slope Protection Condition

11. Wet Areas

Monitor

Puddles observed along the downstream slope, potentially due to recent rainfall.



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 142.562728937729 degrees
Photo Uploaded: 7/11/2024

12a. Seepage

☐ Yes ☒ No

Condition prevented full inspection of the downstream slope.

12b. (If Present): Seepage Flow

13a. Drainage System Present?

☐ Yes ☒ No

13b. (If Present:) Drainage System Condition

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Embankment: Downstream Slope

14a. Alterations/Repairs Present?

☐ Yes ☒ No

14b. (If Present:) Alterations/Repairs Condition

15. Other:

16. Embankment: Downstream Slope Condition

Regular Monitoring
Necessary, Needs
Maintenance, Needs
Permitted Repair(s),
Condition Prevented
Full Inspection

Violation Determined: 7/8/2024

DAMMAINTREP

Engage a Professional Engineer to evaluate the stability and condition of the downstream slope, especially around decaying tree stumps. Engineer should develop a permit application for repairs of the voids and eroded sections of the downstream slope.

Engage a Professional Engineer to evaluate the area of the downstream slope experiencing scarping and to develop a permit application for slope repair and stabilization.

Manage/remove brush and woody vegetation less than 4 inches in diameter to allow for full inspection of the downstream slope.

Develop grass coverage or other form of erosion protection following deleterious vegetation removal.

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

Concrete/Masonry Dams: Downstream Face

Is this section applicable for this dam?

☐ Yes ☒ No

1. Surface Conditions

2. Condition of Joints

3. Unusual Movement

4. Drains

5. Leakage

6. Abutments

7a. Alterations/Repairs Present?

☐ Yes ☐ No

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

8. Other:

9. Concrete/Masonry Dam: Downstream Face Condition

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Concrete/Masonry Dams: Downstream Face

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

Downstream Area

Is this section applicable for this dam?

☒ Yes ☐ No

Downstream area is the reservoir for Lower Sunnyhill Pond Dam.



GPS Latitude: 34.2904055555556
GPS Longitude: -80.6253583333333
GPS Altitude: 81.5677108433735 meters
GPS Azimuth: 203.632644453817 degrees
Photo Uploaded: 7/11/2024



GPS Latitude: 34.2905166666667
GPS Longitude: -80.62545
GPS Altitude: 82.3314438146049 meters
GPS Azimuth: 192.778534031414 degrees
Photo Uploaded: 7/11/2024

Is Downstream Area clear?

☐ Yes ☐ No

1. Trees

2. Deleterious Vegetation

3. Wet Areas

4a. Seepage

☐ Yes ☐ No ☐ NA

4b. (If Present): Seepage Flow

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Downstream Area

5a. Boils ☐ Yes ☐ No ☐ NA

5b. (If Present): Boil Flow

6a. Alterations/Repairs Present ☐ Yes ☐ No ☐ 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? ☐ Yes ☒ 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? ☐ Yes ☐ No ☐ NA

11a. Alterations/Repairs Present ☐ Yes ☐ No ☐ NA

11b. (If Present:) Alterations/Repairs Condition

12. Other:

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

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Spillways: Non-Erodible Channel

1. Location	
2. Approach Area	
3. Weir/Control	
4. Sidewalls	
5. Channel Floor	
6. Condition of Joints	
7. Surface Condition	
8. Unusual Movement	
9. Discharge Channel	
10. Debris	
11. Flowing?	☐ Yes ☐ No ☐ NA
12a. Boils	☐ Yes ☐ No ☐ NA
12b. (If Present): Boils	
13a. Alterations/Repairs Present	☐ Yes ☐ No ☐ NA
13b. (If Present:) Alterations/Repairs Condition	
14. Other:	
15. Spillway: Non-Erodible Channel Condition	
16. Additional Comments (Refer to item number if applicable)	

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Spillways: Inlet Structure

Is this section applicable for this dam?

☒ Yes ☐ No



GPS Latitude: 34.29056111111111
GPS Longitude: -80.62528055555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 41.7570953720276 degrees
Photo Uploaded: 7/11/2024

1. Location

2a. Intake Structure

Monitor

2b. Intake Structure Types

Drop Inlet, Stop-Log
Overflow

3. Trashrack

Trashrack is present, but is off-centered.



GPS Latitude: 34.29056111111111
GPS Longitude: -80.62528055555555
GPS Altitude: 81.7810897435897 meters
GPS Azimuth: 47.1374549819928 degrees
Photo Uploaded: 7/11/2024

4a. Low-Level Valve Present?

☐ Yes ☒ No ☐ NA

4b. (If Present:) Low-Level Valve Condition

5. Debris

No Deficiency

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Spillways: Inlet Structure

6a. Repairs/Alterations Present

☐ Yes ☒ No ☐ NA

6b. (If Present:) Alterations/Repairs Condition

7. Other:

8. Spillway: Inlet Structure Condition

Regular Monitoring
Necessary

Monitor for deterioration and rusting of the inlet structure.
Recommend engaging a Professional Engineer to conduct a camera investigation of the primary spillway to assess the condition of the spillway pipe.

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

Spillways: Outlet Works

Is this section applicable for this dam?

☒ Yes ☐ No

Approximate location of the outlet pipe. Due to water level of lower pond, outlet pipe could not be observed.



GPS Latitude: 34.2904166666667
GPS Longitude: -80.6254722222222
GPS Altitude: 79.1913451511992 meters
GPS Azimuth: 152.51683029453 degrees
Photo Uploaded: 7/11/2024

1. Location

2a. Outlet Structure

2b. Outlet Structure Type

Pipe

3. Outlet Pipe

4. Primary Closure/Control

5. Secondary Closure/Control (If Applicable)

6. Unusual Movement

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Spillways: Outlet Works

7a. Seepage ☐ Yes ☐ No ☐ NA

7b. (If Present): Seepage

8. Stilling Basin

9. Normal Flow Quantity

10. Low-Level Flow Quantity

11a. Alterations/Repairs Present ☐ Yes ☐ No ☐ NA

11b. (If Present:) Alterations/Repairs

12. Other:

13. Outlet Works Condition Condition Prevented Full Inspection

Violation Determined: 7/11/2024

DAMMAINTREP

Recommend engaging a Professional Engineer to conduct a camera investigation of the primary spillway to assess the condition of the spillway pipe.

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

Emergency Action Plan

Is this section applicable for this dam? ☒ Yes ☐ No

Old one page document on file with the Department. All High hazard dams are required to have an updated EAP on file with the Department. Contact response@des.sc.gov for assistance in developing an updated EAP.

1. Date of last update of emergency plan: 02/17/2005

2a. EAP provided by owner? ☐ Yes ☒ No ☐ NA

2b. (If EAP was not provided, was a copy of the EAP form left with the owner?) ☐ Yes ☐ No ☐ NA

3. Does EAP contain emergency alert plan? ☐ Yes ☒ No ☐ NA

4. Does EAP contain specific actions to take if the dam has failed or is failing? ☐ Yes ☒ No ☐ NA

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

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Downstream Hazard Check

1. Satellite Imagery

☒ Yes ☐ No ☐ NA

Photo Uploaded: 7/11/2024



2. Inundation Map

☒ Yes ☐ No ☐ NA

3. Structures/Developments

☒ Yes ☐ No ☐ NA

Potential impacts to multiple habitable structures and regulated Class 2 dam, Lower Sunnyhill Pond Dam.

4. Roads/Railways

☒ Yes ☐ No ☐ NA

Potential impacts to Sunnyhill Drive and Knights Hill Road. As of 2021 SCDOT traffic counts, Knights Hill Road has a count greater than 400 vehicles per day.

5. Utilities

☐ Yes ☒ No ☐ NA

6. Consider For Reclass?

☐ Yes ☒ No ☐ NA

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

Inspection Summary

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

Poor

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

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.

UPPER SUNNY HILL POND DAM : D2523

Dams Preliminary Inspection Form



Inspector: Jared Woodard

Start Date: 07/08/2024 Completed Date: 07/17/2024

Inspection Summary

3. Final Comments

Engage a Professional Engineer to evaluate the stability of the crest around the sinkhole and develop a permit application for repairs and stabilization of the embankment.

Engage a Professional Engineer to evaluate the condition and stability of the upstream slope, especially around areas with voids, and develop a permit application for repairs of the voids and stabilization of the upstream slope.

Engage a Professional Engineer to evaluate the condition and stability of the downstream slope, especially around decaying tree stumps, and develop a permit application for repairs of the voids and eroded sections of the downstream slope.

Engage a Professional Engineer to evaluate the area of the downstream slope experiencing scarping and to develop a permit application for slope repair and stabilization.

Engage a Professional Engineer to develop a tree management plan to address the trees and stumps greater than 4 inches in diameter.

Manage/remove brush and woody vegetation less than 4 inches in diameter.

Develop grass coverage or other form of erosion protection following deleterious vegetation removal.

Monitor for worsening cracking along the pavement.

Recommend engaging a Professional Engineer to conduct a camera investigation of the primary spillway to assess the condition of the spillway pipe.

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 Environmental Services (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.

UPPER SUNNY HILL POND DAM (D2523)

Violation List



Form	Determined	Description	Sec. #
Dams Preliminary Inspection Form	7/8/2024	Reference: DAMMAINTREP Engage a Professional Engineer to evaluate the stability of the crest around the sinkhole and develop a permit application for repairs and stabilization of the embankment. The newly formed sinkhole may be a sign of internal erosion within the dam, engage a Professional Engineer to conduct a full investigation into the extent of voids/internal erosion pathways within the dam. Monitor for worsening cracking along the pavement.	
Dams Preliminary Inspection Form	7/11/2024	Reference: DAMMAINTREP Engage a Professional Engineer to evaluate the condition and stability of the upstream slope, especially around areas with voids. Engineer should develop a permit application for repairs and stabilization of the upstream slope. Engage a Professional Engineer to develop a tree management plan to address the trees greater than 4 inches in diameter. Manage/remove brush and woody vegetation less than 4 inches in diameter.	
Dams Preliminary Inspection Form	7/8/2024	Reference: DAMMAINTREP Engage a Professional Engineer to evaluate the stability and condition of the downstream slope, especially around decaying tree stumps. Engineer should develop a permit application for repairs of the voids and eroded sections of the downstream slope. Engage a Professional Engineer to evaluate the area of the downstream slope experiencing scarping and to develop a permit application for slope repair and stabilization. Manage/remove brush and woody vegetation less than 4 inches in diameter to allow for full inspection of the downstream slope. Develop grass coverage or other form of erosion protection following deleterious vegetation removal.	
Dams Preliminary Inspection Form	7/11/2024	Reference: DAMMAINTREP Recommend engaging a Professional Engineer to conduct a camera investigation of the primary spillway to assess the condition of the spillway pipe.	