



Catherine B. Templeton, Director

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

November 17, 2014

Mr. Tom Crouch, P.E.  
City of Camden  
1000 Lyttleton St.  
Camden, SC 29020

Ms. Patricia Hough  
Covidien  
90 E Hampton St.  
Camden, SC 29020

**RE: D-0018 Kendall Lake Dam Periodic Inspection**

Dear Mr. Crouch and Ms. Hough:

On November 5, 2014, Pee Dee BEHS Florence personnel conducted a routine inspection of the Kendall Lake Dam. This inspection was to determine that the above-mentioned dam is in compliance with the Dams, Reservoirs Safety Act Regulations (R.72-105 through R.72-145)

The following are areas of concern that were noted during the inspection:

- 1) The concrete of the emergency spillway is cracked and seeping in multiple locations, including at least one waterspout under pressure on the eastern end of the structure (above the outlet pipes). These cracks and seeps should be closely monitored by a qualified professional for any further deterioration and changes in flow and/or color.
- 2) The cracks and areas of seepage should be monitored for any vegetation or moss growth, which should be removed regularly.
- 3) Metal corrosion of the catwalk structure extending to the primary spillway was observed and would need be closely monitored.
- 4) Some outlet pipes were clogged and no or little discharge of water was observed. Discharge channels should be cleared of any blockages that may interrupt the water flow.
- 5) Brush and weedy vegetation on the downstream and upstream face of the dam make it difficult to monitor the area for seeps, erosion, and other signs of deterioration of the structure. Clearing the low-growing vegetation will allow inspectors to better monitor the structure.

It is our understanding that the City of Camden has an established routine maintenance program for the dam. This should include removing the brush and small trees, repairing any areas of erosion, maintaining a good cover of grass on the slopes, and keeping the spillway system free from obstructions and in good operating condition. Please include periodic inspections of the dam and inform this office of any significant changes or problems that may affect the safety of the dam.

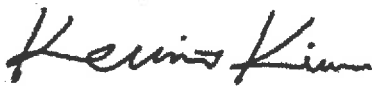
Any alteration or major repairs of the dam require a permit from this agency and must be made under the direction of a qualified engineer.

Provisions in the South Carolina Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days after transferring title or control of the dam. Notification forms (D-2605) are available from this office on request.

Please note that as of July 25, 1997, it is the responsibility of the dam owner to notify any downstream property owners in the event of a failure or near-failure of the dam. The emergency contact for your area is Kershaw County Emergency Preparedness. In an emergency, the KCEP office can be contacted by dialing 911 or 803-453-1522 during normal business hours.

Please do not hesitate to contact this office if you require further assistance or have any questions.

Sincerely,



Kevin Kim  
Regional Engineer Associate  
SCDHEC  
PEE DEE EQC Region - Florence/Sumter

[kimkj@dhec.sc.gov](mailto:kimkj@dhec.sc.gov)  
843.661.4825

Attachments

cc: John Poole, SCDHEC Bureau of Water, Dams and Reservoirs Safety Program

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

Region 4

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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 0018 & Hazard Class 1 B. Name of Dam: Kendall Lake
C. Inspection Date (11/05/2014) & Time: 10:00 AM D. Date of Last Inspection: (10/27/2014)
E. Location-County/City: Kershaw / Camden F. EQC Regional Office: Sumter
G. Inspector's Name: Kevin Kim

H. Owner's Name: Thomas H Couch of City of Camden, Patricia Hough of Covidien

I. Contact Person (if different from above):

J. Dam Owner's or Contact Person's Phone Numbers: Patricia, 803-424-2456 Home Office (803) 425-6045 Other (803) 432-2421

K. Dam Owner's or Contact Person's mailing address:

Address 1 1000 Lytleton St. Address 2 (optional) City Camden State SC Zip Code 29020

Covidien - 90 E Hampton St. Camden, SC 29020

Section II (Dam Condition)

General Condition Assessment (Select one of the following):

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

Section III (Dam Inspection Checklist)

A. Dam Crest

- i. Vegetation (grass, trees weeds)? None noted.
ii. Animal activity observed? None noted.
iii. Any obvious alteration or repairs made? None noted.
iv. Erosion noticed on crest? None noted.
v. Any visible settlement, misalignment or cracks? Cracks were observed in multiple locations.

### Section III (Dam Inspection Checklist) continued

#### B. Upstream Slope

- i. Vegetation (grass, trees weeds)? None noted.
- ii. Animal activity observed? None noted.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on upstream slope? None noted.
- v. Settlement or cracks visible in slope? None noted.

#### C. Down Stream Slope

- i. Vegetation (grass, trees weeds)? Heavy vegetation growing at the end of the slope. This could interrupt the water flowing into downstream.
- ii. Animal activity observed? None noted.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on down stream slope? None noted.
- v. Settlement or cracks visible in slope? Small cracks were observed in multiple locations on the wall.
- vi. Toe drains flowing? Yes
- vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: One flowing seepage was observed on the wall where outlet pipes are located. Turbidity and color didn't seem to be different from those of water coming out of outlet pipes. This must be fixed before it becomes a major problem.

#### D. Primary Spillway

- i. Any visible deterioration of structure? None noted.
- ii. Is there an obvious need to repair or replace trash rack? Metal corrosion was observed on the bottom side of the steel structure where it touches the water surface.
- iii. Any noticeable problems with debris? None noted.
- iv. Is valve or gate present? Yes

#### E. Outlet Pipe

- i. Any water visibly flowing or leaking outside of the discharge pipe? None noted.
- ii. Describe any deflection or damage observed to the pipe: None noted.
- iii. Visible condition of outlet channel: Several outlet pipes were clogged. No or relatively little discharge of water in these channels.

#### F. Auxiliary (Emergency) Spillway

- i. Noticeable obstructions to flow? None noted.
- ii. Animal activity observed? None noted.
- iii. Any noticeable deterioration in the approach or discharge channel? None noted.
- iv. Any visible deterioration of structure's crest? None noted.

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

v. If applicable, any observed exposure of rebar reinforcement? None noted.

vi. If applicable, any visible leakage below concrete spillway? Cracks and seepage present. As mentioned in section C (vii), flowing seepage was observed. Should be closely monitored for changes.

**H. Downstream/Hazard Class Issues**

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? None noted.

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

i. Emergency Action Plan provided by owner? Yes. During the inspection.

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated? Yes. Updated in November, 2014.

iii. Does EAP contain specific actions to take if the dam has failed or is near failure? Yes.

**Section IV (Conclusions)**

**General comments and recommendations:**

A portion of the dam, where right abutment is located, belongs to Covidien and was inspected. The point of contact for this portion of the dam is Patricia. Brush and weedy vegetation growing along the fence (starting from left and right abutments) would need to be cleared.

Multiple locations on the stairway from the gate to the spillway are wet due to cracks and seepages. More seepages seem to be present on both sides of the downstream but hard to be inspected due to low-lying vegetations.

Cracks, seepage, and erosion were observed on multiple locations of the dam structure including the spillway. These would need to be closely and periodically monitored for any changes. Patch-up work on the surface of erosion (emergency spillway) may be needed.

Metal corrosion and clogs in the outlet pipes would also need to be fixed.

**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.



Catherine B. Templeton, Director

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

November 19, 2014

MacDonald Willet  
1755 Springdale Dr.  
Camden, SC 29020

**RE: D-1145 "MacDonald Willets Dam" PERIODIC RE-INSPECTION FOLLOWUP**

Dear Mr. Willet:

The Department has the responsibility and authority to routinely inspect State regulated dams. On November 6, 2014, Pee Dee EQC Sumter personnel conducted routine inspection of the MacDonald Willet Dam. This inspection was to determine that the above-mentioned dam is in compliance with the Dams, Reservoirs Safety Act Regulations (R.72-105 through R.72-145)

The following are areas of concern that were noted during the inspection:

- 1) Trees located on the emergency spillway and the downstream slope of the dam will need to be evaluated by a trained professional on an individual basis, since their roots can cause "piping" of impounded water, and a falling tree can remove substantial amounts of soil, weakening the dam and possibly causing failure. Simply cutting down the trees is unacceptable, as a rotting stump can leave voids, which create animal habitat and pathways for water. Some trees may require removal, and, depending on the location of the removed trees, may require a permit from the Bureau of Water.
- 2) Brush and weedy vegetation on the downstream and upstream slope of the dam make it difficult to monitor the area for seeps, erosion, and other signs of deterioration of the structure. Clearing the downstream and upstream face of low-growing vegetation will allow inspectors to better monitor the structure.
- 3) Accumulation of woody debris on the trash rack/spillway inhibits flow. Debris should be removed from the trash rack.

We suggest that a routine maintenance program be established for the dam. This should include removing the brush and small trees, repairing any areas of erosion, maintaining a good cover of grass on the slopes, and keeping the spillway system free from obstructions and in good operating condition. Please include periodic inspections of the dam and inform this office of any significant changes or problems that may affect the safety of the dam.

Any alteration or major repairs of the dam require a permit from this agency and must be made under the direction of a qualified engineer.

Provisions in the South Carolina Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days after transferring title or control of the dam. Notification forms (D-2605) are available from this office on request.

Please note that as of July 25, 1997, it is the responsibility of the dam owner to notify any downstream property owners in the event of a failure or near-failure of the dam. A copy of the Emergency

Notification and Action Plan is attached. **Please complete this form and submit a copy to our office no later than December 18, 2014.** The emergency contact for your area is Kershaw County Emergency Preparedness Agency. The KCEP office can be contacted by dialing 911 in an emergency or 803-425-1522 during normal business hours.

Please call if you require further assistance or have any questions.

Sincerely,



Kevin Kim  
Regional Engineer Associate  
SCDHEC  
PEE DEE EQC Region – Florence/Sumter  
803-778-6548

Attachments

cc: John Poole, SCDHEC Bureau of Water, Dams and Reservoirs Safety Program



**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 1145 & Hazard Class 1                      B. Name of Dam: MacDonald Willets

C. Inspection Date (11 / 06 / 20 14) & Time: 15:00                      D. Date of Last Inspection: (12 / 04 / 2012)

E. Location-County/City: Kershaw / Camden                      F. EQC Regional Office: Sumter

G. Inspector's Name: Kevin Kim

H. Owner's Name: McDonald Willets

I. Contact Person (if different from above): \_\_\_\_\_

J. Dam Owner's or Contact Person's Phone Numbers:                      Home (803) 432 - 8659  
Office (803) 318 - 6405  
Other (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

K. Dam Owner's or Contact Person's mailing address:

Address 1 1755 Springdale Drive

Address 2 (optional) \_\_\_\_\_

City Camden                      State SC                      Zip Code 29020 - \_\_\_\_\_

**Section II (Dam Condition)**

**General Condition Assessment (Select one of the following):**

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

**Section III (Dam Inspection Checklist)**

**A. Dam Crest**

- i. Vegetation (grass, trees weeds)? Grass should be kept under control.
- ii. Animal activity observed? None noted.
- iii. Any obvious alteration or repairs made? None noted.
- iv. Erosion noticed on crest? None noted.
- v. Any visible settlement, misalignment or cracks? None noted.



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

**B. Upstream Slope**

- i. Vegetation (grass, trees weeds)? Weeds and brush make it difficult for inspection.
- ii. Animal activity observed? None noted.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on upstream slope? None noted.
- v. Settlement or cracks visible in slope? None noted.

**C. Down Stream Slope**

- i. Vegetation (grass, trees weeds)? Small trees and brush heavily growing. Some large trees are present on toe of the dam, which could weaken the dam structure. Trees should be evaluated for removal by a trained professional.
- ii. Animal activity observed? None noted.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on down stream slope? None noted.
- v. Settlement or cracks visible in slope? None noted.
- vi. Toe drains flowing? N/A
- vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: None noted.

**D. Primary Spillway**

- i. Any visible deterioration of structure? None noted.
- ii. Is there an obvious need to repair or replace trash rack? None noted.
- iii. Any noticeable problems with debris? Large woody debris covers and blocks the opening. Should be cleared.
- iv. Is valve or gate present? Yes

**E. Outlet Pipe**

- i. Any water visibly flowing or leaking outside of the discharge pipe? None noted.
- ii. Describe any deflection or damage observed to the pipe: None noted.
- iii. Visible condition of outlet channel: Heavy vegetations around the outlet pipe make it difficult for an inspector to do his job.

**F. Auxiliary (Emergency) Spillway**

- i. Noticeable obstructions to flow? Large trees on upstream end and tall grass could collect debris and obstruct flow in a heavy rain event. Trees should be evaluated for removal by a trained professional.
- ii. Animal activity observed? None noted.
- iii. Any noticeable deterioration in the approach or discharge channel? None noted.
- iv. Any visible deterioration of structure's crest? None noted.

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

v. If applicable, any observed exposure of rebar reinforcement? N/A

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? None noted.

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

i. Emergency Action Plan provided by owner? Will be sent to the owner's home address. To be submitted at a later date.

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated?

iii. Does EAP contain specific actions to take if the dam has failed or is near failure?

**Section IV (Conclusions)**

**General comments and recommendations:**

1) The dam inspection notification letter was sent to the owner's business address. He did not receive it. Spoke with the owner after conducting an inspection. Another letter will be sent to the owner's home address.

2) Woody debris covers the opening of the primary spillway where trash rack is located. Should be cleared since this could prevent the water from flowing into the outlet pipe and result in overflowing.

3) Heavy vegetations are present throughout the dam structure. Low-growing vegetations on the crest, downstream and upstream slope should be removed. Some large trees on the emergency spillway and near toe of the dam should be evaluated by a trained and qualified professional. Any changes to the dam structure, including removal of trees, may require a permit from the Bureau of Water.

4) Monitor animal activity as the burrowing nature of some animals like rodents can be quite dangerous to the structural integrity and performance of a dam. The tunnels these rodents construct can serve as pathways for seepage. It is essential that these animals and their activities be controlled to insure proper functioning of a dam.

5) Outlet pipe and waterway should be periodically monitored for any blockage caused by debris and trees.

**Preliminary Dam Inspection Disclaimer:**

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**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 2523 & Hazard Class C1 B. Name of Dam: Upper Sunny Hill  
C. Inspection Date (12/04/2012) & Time: 1430 hrs D. Date of Last Inspection: (10/27/2010)  
E. Location-County/City: Kershaw / Camden F. EQC Regional Office: R4 Sumter  
G. Inspector's Name: Benjamin Gaston  
H. Owner's Name: FA Homeowners Association  
I. Contact Person (if different from above): South Lake Inc (218 Leonard Cir Camden SC 29020 per tax records)  
J. Dam Owner's or Contact Person's Phone Numbers: Home ( ) - - - -  
Office ( ) - - - -  
Other ( ) - - - -  
K. Dam Owner's or Contact Person's mailing address:  
Address 1 South Lake Inc.  
Address 2 (optional) 218 Leonard Cir  
City Camden State SC Zip Code 29020 - - - -

**Section II (Dam Condition)**

**General Condition Assessment (Select one of the following):**

a) Satisfactory  b) Fair  c) Poor  d) Unsatisfactory  e) Not Rated

**Section III (Dam Inspection Checklist)**

**A. Dam Crest**

- i. Vegetation (grass, trees weeds)? Paved
- ii. Animal activity observed? None noted.
- iii. Any obvious alteration or repairs made? None noted.
- iv. Erosion noticed on crest? None noted.
- v. Any visible settlement, misalignment or cracks? Clear evidence of subsidence of roadway (cracking and patching) in multiple locations along the crest of the dam.

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

**B. Upstream Slope**

- i. Vegetation (grass, trees weeds)? Heavily vegetated with weeds, brush, and trees.
- ii. Animal activity observed? None noted due to heavy vegetation.
- iii. Any obvious alterations or repairs made? None noted due to heavy vegetation.
- iv. Erosion observed on upstream slope? None noted due to lack of freeboard and heavy vegetation.
- v. Settlement or cracks visible in slope? None noted due to lack of freeboard and heavy vegetation.

**C. Down Stream Slope**

- i. Vegetation (grass, trees weeds)? Heavily vegetated with weeds, brush, and trees.
- ii. Animal activity observed? None noted due to heavy vegetation.
- iii. Any obvious alterations or repairs made? None noted due to heavy vegetation.
- iv. Erosion observed on down stream slope? None noted due to heavy vegetation.
- v. Settlement or cracks visible in slope? One large segment of the downstream slope has slumped, approximately at the midpoint of the dam/over pipe.
- vi. Toe drains flowing? N/A
- vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: None noted due to heavy vegetation and toe of dam is submerged by downstream water body.

**D. Primary Spillway**

- i. Any visible deterioration of structure? Spillway is rusted, undersized, and misaligned/leaning—clearly damaged.
- ii. Is there an obvious need to repair or replace trash rack? Yes. Lake needs to be drained and primary spillway needs to be inspected in detail.
- iii. Any noticeable problems with debris? Vegetation growing around spillway, trash rack is inadequate.
- iv. Is valve or gate present? None visible.

**E. Outlet Pipe**

- i. Any water visibly flowing or leaking outside of the discharge pipe? Discharge pipe is covered with a large tree and is below the surface of the downstream water body.
- ii. Describe any deflection or damage observed to the pipe: None noted, pipe not visible.
- iii. Visible condition of outlet channel: None noted, outfall not visible.

**F. Auxiliary (Emergency) Spillway**

- i. Noticeable obstructions to flow? No emergency spillway installed. The center of the dam's crest (roadway) is the emergency spillway
- ii. Animal activity observed? N/A
- iii. Any noticeable deterioration in the approach or discharge channel? N/A
- iv. Any visible deterioration of structure's crest? Clear evidence of past repair to roadway due to subsidence.

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

v. If applicable, any observed exposure of rebar reinforcement? N/A

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?       

None noted.

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

i. Emergency Action Plan provided by owner? No.

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated? Unknown.

iii. Does EAP contain specific actions to take if the dam has failed or is near failure? Unknown.

**Section IV (Conclusions)**

**General comments and recommendations:**

This dam is in extremely poor condition and requires immediate attention, as it is a direct threat to life and property  
downstream. The water level needs to be lowered immediately, and the structure evaluated by a qualified professional,  
including but not limited to: primary spillway standpipe and conduit through the structure, allowances for high water and/or  
emergency discharge (no emergency spillway), as well as the structure of the dam itself (slumping and subsidence).  
Finally, a responsible party will need to respond and submit an emergency action plan immediately.

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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.

SAVAGE ROYALL & SHEHEEN L.L.P.  
ATTORNEYS AND COUNSELORS AT LAW

EDWARD M. ROYALL  
ROBERT J. SHEHEEN  
MOULTRIE B. BURNS, JR.  
WILLIAM B. COX, JR.  
VINCENT A. SHEHEEN \*  
STEPHEN R. SMOAK

MICHAEL D. WRIGHT

HENRY SAVAGE, JR.  
1903 - 1990

\* CERTIFIED MEDIATOR & ARBITRATOR

1111 CHURCH STREET  
CAMDEN, S.C. 29020

P.O. DRAWER 10  
CAMDEN, S.C. 29021

TELEPHONE: (803) 432-4391  
FACSIMILE: (803) 425-4816

RECEIVED

OCT 23 2014

FLORENCE EQC OFFICE

October 21, 2014

Mr. Kevin Kim  
SCDHEC  
145 E. Cheves Street  
Florence, SC 29506

Re: Sunnyhill Northlake, Inc.  
Camden, SC

Mr. Kim:

I am returning the notice of the dam inspection that you sent to me. I represented the Stockholders of Sunnyhill Northlake, Inc. in a lawsuit in 2000 but have had not contact with them since then. I am not the appropriate party for receipt of this notification.

Each of the lot holders who surround the lake are stockholders in the corporation.

Sincerely,

  
Robert J. Sheheen



Catherine B. Templeton, Director

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

RECEIVED

OCT 23 2014

FLORENCE EQC OFFICE

October 16, 2014

Attn: Robert Sheheen  
F A Homeowners Association  
PO Box 10  
Camden, SC 29020

**RE: D-2523 Upper Sunny Hill Pond Dam Inspection Notification**

Dear Mr. Sheheen:

The above referenced dam is due for a routine inspection under the provisions of the South Carolina Dams and Reservoirs Safety Act.

Florence office staff plan to conduct this inspection during the week of **November 3, 2014**. If you or a representative would like to accompany our staff, we invite you to contact us to schedule a specific day and time.

Please note that as of July 25, 1997, it is the responsibility of the dam owner to notify any downstream property owners in the event of a failure or near-failure of the dam. The enclosed Emergency Notification Plan has been developed to assist the dam owner in managing an emergency involving the dam structure.

To streamline the inspection and review process, we ask that the updated Emergency Notification Plan be completed and a copy be provided to the inspector. Also, if you have not already done so, please have any thick vegetation or brush cleared from the dam slopes so a thorough inspection may be conducted.

If you cannot have someone meet our staff for the inspection, please contact this office regarding any special issues regarding access to the dam (locked gates, private drives, etc.) Further, please submit the completed copy of the Emergency Notification Plan to this office no later than **November 17, 2014**. If you need additional copies of the Emergency Notification Plan form, please contact this office or you can download at [www.scdhec.gov/library/D-2606.pdf](http://www.scdhec.gov/library/D-2606.pdf).

Provisions of the South Carolina Dam Safety Act require the owner to notify the Department within 30 days of transferring title or control of the dam. The enclosed notification form must include the name and address of the new owner when control of the dam is transferred. Also the name and address of the present owner(s) must be provided to the department.

Sincerely,

Kevin Kim  
SCDHEC  
Bureau of Environmental Health Services  
Florence Office

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

Region 4

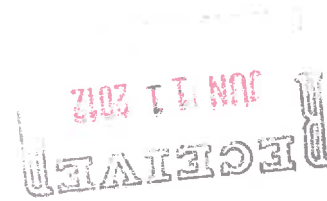
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C. Earl Hunter, Commissioner

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

**Certified Mail  
Return Receipt Requested**



June 11, 2012

South Lake, Inc.  
218 Leonard Cir.  
Camden, SC 29020

**Subject:** Inspection and Repair Order for Sunnyhill Upper Dam, D 2523, Class 1, High Hazard Dam, Kershaw County

Dear Sir or Madam:

The SC Dams and Reservoirs Safety Act confers upon the South Carolina Department of Health and Environmental Control (the Department/DHEC) the regulatory authority over dams within the state. Section 72-5 of the Dams and Reservoirs Safety Act Regulations provides the Department with the authority and responsibility to issue orders to dam owners mandating remedial measures as necessary to protect life or property from danger imposed by unsafe dams.

After a site visit conducted Thursday, May 31, 2012, it was confirmed that the dam is in need of substantial repairs. This situation violates the Dams and Reservoir Safety Act and was previously brought to your attention in a letter dated February 28, 2011 from DHEC signed by Steven Bradley. The previous letter states that you were given 90 days to submit plans for repairs to your dam, that timeline has expired. Additionally, you were informed that the water within the lake would have to be lowered to the invert elevation of the primary spillway if repairs were not made. The reservoir level should now be lowered to that level to ensure the safety of the downstream residents' lives and property.

Section 72-5.B outlines the process for issuing an Inspection and Repair Order. The Department requires that you, as an owner of a regulated dam which has been determined through preliminary inspections to be unsafe and a danger to property and life, make at your expense a detailed inspection of the dam and to submit plans and specifications to the Department in the form of a permit application to correct all problems found by the detailed inspection within sixty (60) days of the date of this letter. If this is not done, the matter will be turned over to the SC DHEC Bureau of Water Enforcement Division for possible fines and additional actions.

Detailed inspections shall be performed by professional engineers licensed in the State and be in sufficient detail so that appropriate plans and specifications correcting all deficiencies of the dam can be prepared by the engineer and submitted by the owner to the Department for approval. The following items for repair and/or the Department's information should be addressed during the inspection and repair plans:

1. The current spillway appears to be insufficient sized to pass the inflow design flood without overtopping. Provided hydrologic and hydraulic calculations assuring the dam meets the spillway design requirements of the above-mentioned regulations.



2. The barrel pipe servicing the primary spillway has been compromised by the intrusion of roots from woody vegetation. Submit plans and specifications for the repair or replacement of the corrugated steel primary spillway.
3. The stability of the dam's downstream slope appears to be unstable. Provide treatment or repair procedures for lining the back slope of the dam, as necessary, for erosion protection and stability during peak design flow conditions.
4. Develop and implement an acceptable operations and maintenance plan.
5. Establish an acceptable grass cover and remove the deleterious vegetation from the dam.
6. Provide an updated Emergency Action Plan.

The Notice of Appeal Procedure pursuant to S.C. Code Section 44-1-60 is enclosed. The information contained within the procedure is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

After the Department approves the application package, you will have one year to construct the improvements to the dam before the permit expires. An engineers list was enclosed with the letter dated February 28, 2011 for your convenience, however, you are not limited to the engineers listed.

If you have further questions or comments, please feel free to contact me by phone at (803) 898-4212 or email [pooleja@dhec.sc.gov](mailto:pooleja@dhec.sc.gov) (preferred).

Sincerely,



John A Poole, PE  
Engineering Associate  
Dams and Reservoirs Safety

Enclosure

cc. Harry Gaymon - Sumter EQC Field Office



Catherine B. Templeton, Director

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

10 January 2013

Fredericksburg Lake, Inc.  
1212 South Fredericksburg Drive  
Lugoff, SC 29078

**RE: D-2539 "Fredericksburg Lake Dam" PERIODIC RE-INSPECTION FOLLOWUP**

To Whom it May Concern:

On 4 December 2012, EQC Region 4 personnel (Benjamin Gaston) conducted a routine re-inspection of the Fredericksburg Lake Dam. This inspection was to determine that the above-mentioned dam is in compliance with the Dams, Reservoirs Safety Act Regulations (R.72-105 through R.72-145)

This dam is in generally good condition.

The following are areas of concern that were noted during the inspection:

- 1) Upstream slope has been reinforced with rip-rap. Continue to monitor for other areas of slumping/sloughing and add additional rip-rap as needed to protect against wave action.
- 2) The small ornamental trees on the downstream slope need to be removed. Due to their extremely small size, this will not require a permit.
- 3) Continue to monitor the seepage along the northeastern toe of the dam. Any changes in color, flow and/or turbidity should immediately be reported to this office.
- 4) The small tree growing in the spillway grate will need to be removed, along with whatever accumulated material that has given it a roothold.
- 5) The emergency spillways will need to be monitored and kept free of debris that could inhibit the flow of water in an extreme precipitation event.

We suggest that a routine maintenance program be established for the dam. This should include removing the brush and small trees, repairing any areas of erosion, maintaining a good cover of grass on the slopes, and keeping the spillway system free from obstructions and in good operating condition. Please include periodic inspections of the dam and inform this office of any significant changes or problems that may affect the safety of the dam.

Any alteration or major repairs of the dam require a permit from this agency and must be made under the direction of a qualified engineer.

Provisions in the South Carolina Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days after transferring title or control of the dam. Notification forms (D-2605) are available from this office on request.

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

Region 4

Serving Chesterfield, Clarendon, Darlington, Dillon, Florence, Kershaw, Lee, Marion, Marlboro and Sumter Counties  
Sumter EQC Office • PO Box 1628 • 105 N. Magnolia Street • Sumter, SC 29151 • Phone: (803) 778-6548 • www.scdhec.gov

Please note that as of July 25, 1997, it is the responsibility of the dam owner to notify any downstream property owners in the event of a failure or near-failure of the dam. A form has been previously provided with emergency response information. **Please complete the form and submit a copy to our office no later than March 10<sup>th</sup>.** The emergency contact for your area is Kershaw County Emergency Preparedness. As of the writing of this letter, the KCEP office can be contacted by dialing 911 in an emergency or 803-452-1522 during normal business hours.

Please do not hesitate to contact this office if you require further assistance or have any questions.

Sincerely,



Benjamin Gaston, EIT  
Environmental Engineer Associate  
EQC Region 4, Sumter

[gastonbg@dhec.sc.gov](mailto:gastonbg@dhec.sc.gov)  
803.778.6548

cc: Mr. John Poole, SCDHEC Bureau of Water, Dams and Reservoir Safety



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

**B. Upstream Slope**

- i. Vegetation (grass, trees weeds)? Good condition.
- ii. Animal activity observed? None noted.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on upstream slope? Some riprap placed to protect against wave action. Continue to monitor upstream slumping and caving, and add more riprap as needed.
- v. Settlement or cracks visible in slope? None noted.

**C. Down Stream Slope**

- i. Vegetation (grass, trees weeds)? Grass in good condition. Several small ornamental trees have been planted on the slope. These need to be removed.
- ii. Animal activity observed? Some minor game pathing, monitor for erosion.
- iii. Any obvious alterations or repairs made? None noted.
- iv. Erosion observed on down stream slope? Minor bare spots. Monitor and attempt to get some form of vegetative cover to hold soil.
- v. Settlement or cracks visible in slope? None noted.
- vi. Toe drains flowing? N/A
- vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: Minor seepage on NE toe of dam. Has been noted and monitored in numerous past inspections. No apparent increase in flow or turbidity at this time.

**D. Primary Spillway**

- i. Any visible deterioration of structure? None noted.
- ii. Is there an obvious need to repair or replace trash rack? None noted.
- iii. Any noticeable problems with debris? Small tree growing in spillway. Needs to be removed along with material providing it a footing.
- iv. Is valve or gate present? Yes--single valve handle and stem. Operation unknown.

**E. Outlet Pipe**

- i. Any water visibly flowing or leaking outside of the discharge pipe? None noted.
- ii. Describe any deflection or damage observed to the pipe: None noted.
- iii. Visible condition of outlet channel: Appears satisfactory. Monitor for erosion and/or displacement of reinforcing stone.

**F. Auxiliary (Emergency) Spillway**

- i. Noticeable obstructions to flow? Accumulated woody debris at the treeline could accumulate further debris and inhibit flow in an extreme precipitation event.
- ii. Animal activity observed? None noted.
- iii. Any noticeable deterioration in the approach or discharge channel? None noted.
- iv. Any visible deterioration of structure's crest? None noted.

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

v. If applicable, any observed exposure of rebar reinforcement? N/A

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? \_\_\_\_\_

None noted.

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

i. Emergency Action Plan provided by owner? To be provided at a later date.

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated? N/A

iii. Does EAP contain specific actions to take if the dam has failed or is near failure? N/A

**Section IV (Conclusions)**

**General comments and recommendations:**

Dam in good condition.

Continue to monitor upstream slope and add rip-rap as needed.

Remove small ornamental trees from downstream slope.

Continue to monitor the seepage on the NE toe for volume or color change, which could indicate an accelerating problem.

Remove small tree from spillway.

Keep emergency spillways clear of debris.

**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.